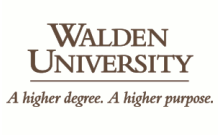

2021

Relationship Between Nursing and Nurse Practitioner Instructors' Online Teaching Self-Efficacy and Their Students' Online Academic Self-Efficacy

Pauline c. Stoltzner
Walden University

Walden University

College of Education

This is to certify that the doctoral dissertation by

Pauline Stoltzner

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Dennis Beck, Committee Chairperson, Education Faculty
Dr. Wellesley Foshay, Committee Member, Education Faculty
Dr. Nicolae Nistor, University Reviewer, Education Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
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Abstract

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by

Pauline Stoltzner

MSN, University of Nevada Las Vegas, 2016

BSN, University of Texas, 2014

ADN, Carrington College, 2012

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education With Specialization in Educational Technology and Design

Walden University

May 2021

Abstract

To meet the high demand for nurses and nurse practitioners (NPs) and address the national shortage of these professionals, nursing and NP schools are rapidly moving courses online. With this trend, and with the COVID-19 pandemic, many universities across the United States have been conducting classes in the online environment. The rapid transition from brick-and-mortar classes to online education has been a challenge for underprepared educators. The purpose of this correlational study was to investigate whether a relationship existed between potentially underprepared instructors' online teaching self-efficacy and their students' online academic self-efficacy. Bandura's self-efficacy theory served as the theoretical framework. The research questions addressed the relationship of the instructors' online teaching self-efficacy and the number of classes previously taught online, the online academic self-efficacy of students and the number of classes previously taken online, and the instructors' and students' respective self-efficacies in the online academic environment. Undergraduate and graduate nursing students ($N = 211$) and their instructors were recruited from one university. The instructors and students were given an online survey at the beginning of the course; students also completed a survey at the end of the course. Multiple regression was used to analyze the data. The number of classes previously taught predicted $R^2 = 0.58$ of the variance in teachers' online self-efficacy ($\beta = -0.56$, $p = .000$). The results of this study may contribute to positive social change by providing universities with data that can be used to inform decision making on what is important and not important for instructor and student self-efficacy and for promoting the graduation of more nurses and NPs who can enter the field.

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Dedication

This study is dedicated to my husband, Roy, for his patience and love during times when I was probably not the easiest person to be around. I also dedicate this to my daughters—Lillian, age 6, and Sophia, age 5—who, even though they didn't understand why I was on my computer so much, would still sit next to me and tell me they loved me, which helped push me through. Without the love and support of my family, these pages would still be blank.

Acknowledgments

I want to thank my friends Cameron and Andy, who are like my other two husbands, for always having my back and helping me with whatever I needed and pushing me through times when I wanted to give up. I want to thank my parents for their support and for watching the girls anytime I needed it. I also want to thank my sister, Lisa, who through these years has helped keep me from sinking from all of the stress of work and school. Lastly, I want to thank my chair and committee members a Dr. Beck and Dr. Foshay, for helping me through the countless revisions and for always getting my revisions with their comments back to me within days.

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Chapter 1: Introduction to the Study

The topic of this study was the relationship between nursing and nurse practitioner (NP) instructors' online teaching self-efficacy and their students' academic self-efficacy. To meet the nursing shortage, there has been substantial growth in nursing and NP programs offered online. Additionally, 4,234 universities and colleges across the United States have closed their doors and shifted all classes online due to COVID-19 (Entangled Solutions, 2020). With the growth of programs and the sudden shift of classes to online environments, instructors have needed to move their classes to platforms that they may not have mastered. On many occasions, teachers with little to no experience in online technologies have been thrown into virtual teaching (Cavanagh & Ma, 2018); the COVID-19 pandemic has provided a perfect example of this phenomenon.

The notion of online self-efficacy is an expansion of Albert Bandura's (1977) self-efficacy theory, which suggests that several factors influence individuals' perceptions of failure or success: social persuasion, vicarious experiences, physiological experiences, and most importantly, mastery (Bandura, 1997). If instructors are moving their curricula online and have not experienced these self-efficacy components in teaching online, their online self-efficacy may be affected. Researchers have conducted numerous studies to identify the relationship between teachers' self-efficacy and their students' self-efficacy (Abernathy, 2018; Aydın, 2015; Gonzalez & Maxwell, 2018; Koomen & Zee, 2016; Moosa & Shareefa, 2019). Based on the findings of such research, programs have been created to help build instructors' self-efficacy (Adebisi & Oyeleke, 2018; De la Rosa & Jun, 2015).

The study may help to create a better understanding of the relationship between nursing and NP instructors' online teaching self-efficacy and their students' self-efficacy. Having this understanding may promote the implementation of steps to improve self-efficacy before instructors teach online. This study is needed because of the gap in research identifying whether the online self-efficacy of nursing and NP instructors relates to their students' self-efficacy. Understanding the relationship of instructors' online teaching self-efficacy to the self-efficacy of their students can lead to more education in online technologies for teachers and an increase in their self-efficacy. This study makes an original contribution to existing research by providing empirical data on nursing and NP instructors' self-efficacy for online instruction and how it relates to students' self-efficacy.

Additionally, the study may help to create social change one person at a time. If students or instructors are discouraged from online instruction due to negative experiences, they may not continue because of their low self-efficacy. Furthermore, the findings may encourage a change in how teachers are precepted into instruction and the support they receive. In turn, more nursing and NP teachers may continue teaching online, and students may continue learning online. Subsequently, more students may graduate and become nurses and NPs, reducing the nursing and NP shortage.

In Chapter 1, I introduce the research topic and background information. Then the study's problem statement and the purpose of the study are described. The theoretical framework is introduced in this chapter, with a more in-depth discussion on the topic presented in Chapter 2. This chapter also includes the nature of the study, definitions,

assumptions, and the scope and delimitations of the study. The chapter concludes with the limitations and significance of the research and a summary.

Background

The nursing and NP shortage is expected to grow substantially from 2020 to 2030, with the anticipated shortage of registered nurses nationwide reaching 154,018 by 2020 and 510,394 by 2030 (Health Resources and Services Administration [HRSA], 2018). The national demand for NPs is currently 57,330. Among NPs, 89% practice in primary care; by 2025, there is expected to be an 8,200 primary care provider shortage nationwide (HRSA, 2018). The cause for this shortage has been cited as an insufficient number of faculty to educate nursing and NP students, as well as lack of classroom space, clinical sites, and preceptors. Upwards of 15% of students who start nursing and NP programs either fail or drop out of their programs (Lin et al., 2018). In response to these issues, universities have been increasing the number of online classes available to students in order to increase enrollment.

As of 2017, over 20 million students were taking online courses (Lederman, 2018). There are over 510 universities that offer NP programs. In 2016, approximately 45 universities offered NP programs online, and in 2019, that number increased 25%. Now, over 60 universities offer their NP programs online (Online FNP Programs, 2019). In 2011, there were 77,000 nursing students nationwide, but only 30% of those students were enrolled in universities that offered online courses. In 2017, the number of nursing students nationwide jumped to 137,000, and more than 50% of nursing students' universities offered online courses (Tate, 2017). Additionally, a deadly respiratory virus

named COVID-19 created pandemic-level infection that prompted containment measures worldwide. By the end of March 2020, the United States was locked down, and over 4,000 colleges and universities had moved their classes online (Abston, & Bryant, 2021).

With such a rapid increase of classes being offered and taught online, nursing and NP instructors have had to move their curricula to online platforms. Unfortunately, online teaching is different from traditional face-to-face instruction (Barczyk et al., 2011; Mandernach et al., 2015). Consequently, teaching online using the same methods and techniques as in face-to-face instruction does not work well (Gregory & Matindale, 2016). Because of the differences between teaching in a traditional classroom and teaching online, nursing and NP instructors may find that their self-efficacy in teaching online is different than in teaching face to face. Studies have demonstrated that the perceived self-efficacy of an instructor correlates to students' achievement in the face-to-face classroom (Bartimote-Aufflick et al., 2016; Hier & Mahony, 2018; Koomen & Zee, 2016; Yerli & Yerli, 2017). If nursing and NP instructors have a low self-efficacy for online instruction, then their students would potentially also create a low self-efficacy. When instructors suffer from low self-efficacy, their job satisfaction, attitudes, and motivation also suffer (Knežević Florić & Ninković, 2018), which in turn may encourage them to leave teaching and move to other fields in nursing. When students have low self-efficacy, it cultivates low achievement, a lack of confidence, and reduced motivation (Bartimote-Aufflick et al., 2016), which could potentially lead to students failing or dropping out of their programs.

Previous studies in other fields have found that addressing knowledge, skills, and self-efficacy in the online development of school leaders has been correlated to increased self-efficacy and retention of both educators and students (Abernathy, 2018; Adebisi & Oyeleke, 2018; Yoo, 2016). Upon an extensive review of the literature, I found there to be a research gap regarding a similar relationship between nursing and NP instructors' online self-efficacy and their students' self-efficacy. This study was needed because if a relationship between nursing and NP instructors' online self-efficacy and their students' self-efficacy is found to be present, then programs can be implemented to help nursing and NP instructors increase their online self-efficacy, thereby keeping them teaching and improving student self-efficacy. As stated above, an insufficient number of faculty and student dropout and failure are two of the causes for the nursing shortage; thus, by finding a potential problem that might be leading to instructors leaving and students failing, the challenges of the nursing shortage may be partially relieved.

Problem Statement

The nursing and NP shortage is expected to grow substantially from 2020 to 2030, with the anticipated shortage of registered nurses nationwide reaching 154,018 by 2020 and 510,394 by 2030 (HRSA, 2018). To alleviate the nursing shortage, there has been substantial growth in nursing and NP programs offered online. With the growth of such programs, instructors have needed to move their classes to a platform that they may not have mastered (Cavanagh & Ma, 2018). Additionally, on many occasions, teachers with little to no experience in online technologies are thrown into virtual teaching (Cavanagh & Ma, 2018). Teachers who lack technical skills and have poor online self-efficacy may

be lackluster instructors if their classes are moved online, and such instructors have poor online teaching self-efficacy (Mandernach et al., 2015)

Self-efficacy is a possible factor leading to an insufficient number of faculty, clinical sites, and preceptors for nursing and NP students (Brahm & Pumptow, 2020). Brahm and Pumptow (2020) found that instructors' self-efficacy influenced whether instructors were likely to persist and continue teaching despite adverse outcomes and experiences in teaching. Online teaching self-efficacy may be understood using Bandura's (1977) self-efficacy theory as an individual's perception of failure or success, which is influenced by several factors, including social persuasion, vicarious experiences, physiological experiences, and most importantly, mastery. Therefore, if an instructor is moving a curriculum online and has not experienced these self-efficacy components in teaching online, their online self-efficacy may be affected.

In four recent studies, researchers have identified the relationship of teachers' material knowledge self-efficacy and their students' academic self-efficacy (Abernathy, 2018; Aydın, 2015; Gonzalez & Maxwell, 2018; Koomen & Zee, 2016; Moosa & Shareefa, 2019). Results from these studies show that (a) a lack of mastery skills for instructors teaching online may impact instructors' online self-efficacy (Mandernach et al., 2015), (b) the material knowledge self-efficacy of instructors influences students' academic self-efficacy (Abernathy, 2018) and (c) students' academic self-efficacy influences their graduation rates (Alegre de la Rosa & Villar Angulo, 2016). The problem is that there is a lack of research or literature on whether nursing and NP instructors' online self-efficacy influences their students' academic self-efficacy (Alegre de la Rosa,

& Villar Angulo, 2016; Barnes, 2015; Brahm & Pumptow, 2020; Erdogan & Ozerbas, 2016; Thomas, 2014).

Purpose of the Study

The purpose of this study was to investigate whether a correlational relationship exists between nursing and NP instructors' online teaching self-efficacy and their students' academic self-efficacy. A quantitative correlational study was used to accomplish this purpose. In this study, the independent variable (IV), nursing, and NP instructors' online teaching self-efficacy were assessed using the Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) instrument (Anderson & Robinia, 2010) and then paralleled to the gain score of their students' academic self-efficacy (dependent variable [DV]) using The Online Academic Success Indicators Scale (OASIS) instrument. There were also two predictors: the number of classes that the instructor had taught online, which might affect the instructor's online self-efficacy through mastery, and similarly, the number of courses that the student had taken online, which might affect the student's academic self-efficacy through mastery, social persuasion, and vicarious experiences.

Research Questions and Hypotheses

RQ1—Quantitative: What is the relationship between the number of classes that a nursing and nurse practitioner instructor taught online previously and their online teaching self-efficacy?

H_1: There is no relationship between the number of classes taught online and the instructor's online teaching self-efficacy.

H_a: There is a relationship between the number of classes taught online and the instructor's online teaching self-efficacy.

RQ2—Quantitative: What is the relationship between the number of classes taken online previously by the students and their online academic self-efficacy?

H_2: There is no relationship between the number of classes taken online by the students and their online academic self-efficacy.

H_a: There is a relationship between the number of classes taken online by the students and their online academic self-efficacy.

RQ3—Quantitative: What is the relationship between nursing and nurse practitioner instructors' online teaching self-efficacy and their students' change in academic online self-efficacy from the beginning of the course to the end of the course?

H_3: There is no strong relationship between nursing and nurse practitioner instructors' online self-efficacy and their students' online academic self-efficacy gain/loss score.

H_a: There is a strong relationship between nursing and nurse practitioner instructors' online self-efficacy and their students' online academic self-efficacy gain/loss score.

The predictor variables were the number of online classes the student had taken and the number of online courses the instructor had taught. This was observed using a basic survey questionnaire asking the instructors and students to mark if they had taken or taught (depending on who was completing the survey) one to 10 classes, 10 to 20 classes,

or over 20 classes online. For the IV, the MNESEOT instrument (Anderson & Robinia, 2010) was given to nursing and NP online instructors at the beginning of the term. The students were given the OASIS instrument (Bong et al., 2000) at the beginning of the course and the end. The OASIS instrument is a survey that was designed to measure students' level of self-efficacy specific to online courses.

Theoretical Framework

The theoretical framework for this study was Bandura's (1977) self-efficacy theory. The theory explains how self-efficacy can be influenced and developed, positively and negatively affecting all facets of the human experience. Bandura's theory suggests that anyone, in any situation, can strengthen and exercise self-efficacy, resulting in positive outcomes. The central concept is that individuals' cognitive processes and social behaviors are influenced by actions that they have observed in others.

Bandura's theory relates to the current study's approach and questions, given that the main concept of the theory is that self-efficacy is developed through experiences and observation. If nursing and NP instructors' online self-efficacy is low or high, it theoretically has the potential to affect their students' self-efficacy. Bandura's theory is about how self-efficacy can be changed due to external factors, including other people, especially those who are potential influencers. Instructors are, for all intents and purposes, influencers, and if instructors' self-efficacy affects their students, there may be a positive or negative correlation.

Bandura's self-efficacy scale involves four categories—cognitive, motivational, emotional, and decisional—and was the framework for assessing the participants in the

study. Bandura's self-efficacy theory is explained in greater detail in Chapter 2 in terms of how it relates to online self-efficacy. The instructors were given a modified version of Bandura's self-efficacy scale at the beginning of the course, and the students were given a modified form of it at the beginning and the end of the course.

Nature of the Study

I conducted this correlative quantitative study by using online surveys. A correlative quantitative study design was chosen because it allowed me to assess the two groups (nursing and NP teachers and their students) and allow me to assess for a relationship between the two variables. The population for the study was NP and nursing instructors and students from one university. The number of full-time and adjunctive instructors at Papichula University (fictitious name) is currently 33, and the total number of undergraduate and graduate students attending at the beginning of the fall term was 377. Based on the potential pool of instructors and their students, it was possible to achieve adequate power using participants from one school.

In this study, the IV, nursing and NP instructors' online teaching self-efficacy, was assessed using the MNESEOT instrument (Anderson & Robinia, 2010). I then assessed the relationship of this variable to students' change in self-efficacy (DV) using OASIS (Bong et al., 2000) at the beginning and end of the course. In short, the study assessed the relationship between the teachers' online self-efficacy at the start of the course and their students' change in self-efficacy. The predictors were the number of classes that the instructor had taught online and the number of classes that the student had taken online. The volunteer instructors for the study had to have the entirety of their class

taught online, and the volunteer students needed to be enrolled in the instructors' course. Instructors who did not teach a nursing or NP class online at Papichula University were excluded. Students who were not enrolled in one of the volunteer instructors' online nursing or NP classes were omitted.

For data collection, I used a survey system that the volunteer instructors and students accessed online. The instructors were given online access to the MNESEOT instrument (Anderson & Robinia, 2010). The students were given the OASIS instrument (Bong et al., 2000) at the beginning of the course, available only for the first 5 weeks (first third) of the course and again at the end of the course for the last 5 weeks (last third). RQ1 and RQ2 was addressed using frequency distribution. RQ3 required multiple regression analysis.

Definitions

Online teaching: Online instructors are usually postsecondary teachers who instruct in one or more classes over the internet. The teachers typically use a variety of tools to communicate with students, such as message boards, email, video chatting, and other online tools. Additionally, simulation and virtual classrooms may be used for instruction (Washburn & Zhou, 2018).

Online learning: Online learning is studying done outside the traditional "brick-and-mortar" classroom. Online students are students who are taking one or more of their classes online. Such students have the majority of their course material online and turn in all of their assignments in their online classroom (Bastiaens & Weidlich, 2019). Students are also considered online students if they are enrolled in a "hybrid" class where the vast

majority of their course material is done online, but some of their course meetings are held in person (e.g., meetings for midterms or finals). An online student may be enrolled either part time or full time (Bastiaens & Weidlich, 2019).

Self-efficacy: "People's beliefs about their capabilities to produce designated levels of performance that exercise influence over the events that affect their lives" (Bandura, 1994, p. 71).

Nursing student: A student currently enrolled in at least one class in an approved nursing education program that leads to certification and licensing to practice nursing. The nursing program in these instances leads to a diploma, an Associate of Science in Nursing (ASN) or a Bachelor of Science in Nursing (BSN; Peck & Terry, 2020). For this study, the term *nursing student* refers to a student enrolled in at least one nursing class who will graduate with a BSN.

Nurse practitioner (NP) student: A student currently enrolled in at least one class in an approved NP education program. Such a program leads to either a Master of Science in Nursing (MSN) or a Doctor of Nursing Practice (Peck & Terry, 2020). For this study, the term *NP student* refers to a student enrolled in at least one nursing class who will graduate with an MSN or a Doctor of Nursing Practice (DNP).

Assumptions

This study was conducted under several assumptions:

- The nursing and NP instructors are familiar with the material they were teaching.

- Nursing and NP students were participating in collaborative learning with the instructors.
- Students were competent in using computers, online websites, and mobile technology.
- The instructors answered the surveys honestly.
- The students answered the surveys honestly.
- The vast majority of the content that the students were participating in and learning was online.
- Students and faculty had a mixed self-efficacy level, which was assessed using frequency distribution.

The assumptions were necessary for the context of the study because they affected the inferences that I could draw from the study to sufficiently describe the phenomenon at hand.

Scope and Delimitations

I selected participants for this quantitative study from one school so that I could collect all data in the same time frame. Data collection from multiple schools would have been much more challenging because each school would have a time frame for Institutional Review Board (IRB) approval. Participating students were limited to those obtaining a BSN, MSN, or DNP who were taking classes online. I only included closed-ended Likert scale response surveys, which may have made instructors and students more willing to take and complete the surveys. Participating instructors had a range of teaching experience, and participating students had a variety of online learning experiences.

The findings from this study may be generalized to other nursing and NP schools. The school that served as the study site is based on the west coast and has students enrolled from all over the world. However, because the study involved convenience sampling, generalizability is limited (Bornstein et al., 2017).

Limitations

There were several limitations and challenges in this study. First, the study relied on self-reporting and ranking of self-efficacy from the instructors and the students. The analytical technique, as well as the use of a convenience sample, restricted the ability to infer causal relationships between the variables. Because the surveys were taken at the beginning and end of the courses, students could always choose to opt out at the end, which left their data inconclusive. Further, because the classes were not the same, there was a degree of variability in course difficulty that could have affected student self-efficacy scores. Additionally, universities have different policies and procedures that may have an unknown effect on students and/or instructors that could not be controlled. The year or class experience that students had in online classes could also have had an impact on the results.

Significance

The COVID-19 crisis brought many sudden changes to higher education. Nationwide, as schools converted their entire curriculum to online format, instructors and students were ill prepared for online learning (Walravens, 2020). This study may help to improve the understanding of the effects that nursing and NP instructors' online teaching self-efficacy has on their students and may prevent future issues when educators

transition to online teaching. This study helps to fill a gap in the literature by providing empirical data on nursing and NP instructors' self-efficacy for online instruction and how it relates to students' self-efficacy. The study may also help to create a better understanding of the relationship between online instructors' teaching self-efficacy and their students' self-efficacy. With this understanding, it may be possible to implement steps to improve self-efficacy for nursing and NP instructors before they teach online in the future.

Social change may come about through this research in a few ways. First, if more nursing and NP students graduate, the nursing and NP shortage may be alleviated. Although the goal of universities is for students to graduate, university leaders will not spend money on programs and training that they do not see as needed. The findings of this study may be influential in this regard. If it is found that there is a relationship between nursing and NP instructors' online teaching self-efficacy and their students' academic self-efficacy, then universities around the country may be encouraged to implement and grow online preservice training for instructors. If no such relationship is found, the leaders of universities may know that their money would be better spent elsewhere on development for student success.

Second, the study may help to create social change one person at a time. The study participants had to self-reflect and truthfully analyze their self-efficacy, which could encourage change. Further, this study's assessment of the relationship between teacher and student self-efficacy may inform change in how teachers are precepted into

instruction and the support that they are given, thereby keeping more teachers and students learning online.

Summary

This chapter introduced the problem of the knowledge gap concerning the effects of nursing and NP instructors' online self-efficacy on their students' self-efficacy. Because there is a nurse and NP deficit in the United States, it is of great importance to aid new nurses coming into the field by exploring this knowledge gap. This study assessed the potential relationship between nursing and NP instructors' online teaching self-efficacy and their students' academic self-efficacy. With knowledge from this study, steps can be taken to help instructors develop online teaching self-efficacy and, in turn, their students' academic self-efficacy. In this chapter, I also presented multiple definitions to help readers gain a full understanding of this dissertation. Additionally, I described the assumptions, scope, and delimitations of the study. This chapter presented a brief background on the topic, with more in-depth background information to be presented in Chapter 2.

Chapter 2: Literature Review

The nursing and NP shortage is expected to grow substantially from 2020 to 2030, with the anticipated shortage of nurses nationwide reaching 154,018 registered nurses by 2020 and 510,394 registered nurses by 2030 (HRSA, 2018). Due to this shortage, nursing schools are increasingly transitioning their curricula online—a change that may present a challenge to instructors who have low online self-efficacy. An individual's self-efficacy develops due to numerous factors, including emotional and physical stress, external environment, and life experiences and events. The self-efficacy of individuals governs their aspirations and goals and regulates their expectations (Bandura, 2001). People with high self-efficacy expect positive outcomes of their efforts, whereas those with low-self-efficacy expect adverse outcomes. As such, self-efficacy can affect an individual's functional aptitude (Bandura, 2001).

There is research on educators' self-efficacy in face-to-face instruction and its relationship to student achievement and student self-efficacy. However, there is a gap in research regarding nursing and NP instructors' self-efficacy in online instruction and its potential relationship to students' academic self-efficacy. The purpose of this quantitative correlational study was to assess the online self-efficacy of nursing and NP teachers and to discover any relationship that instructors' online self-efficacy has with changes in students' online academic self-efficacy. In short, the study assessed the relationship between teachers' online teaching self-efficacy and their students' change in online academic self-efficacy. As such, the following chapter contains a review of current literature on self-efficacy causes and effects. The analysis of pertinent studies exposes an

association between knowledge and skills obtained in a multitude of ways and individuals' self-efficacy.

In this chapter, the literature search strategies used for this study are identified, including keywords and databases that were utilized. Additionally, there is a discussion of the theoretical framework, Bandura's self-efficacy theory, which was the basis of this study. This chapter also includes a meticulous analysis of the current literature on self-efficacy and its impact on learners, factors that affect the self-efficacy of instructors and students, other influences that may affect student success, what instructors and students have found to be useful in building self-efficacy, and effective self-efficacy analysis surveys. I conclude by summarizing the chapter and transitioning to Chapter 3.

Literature Search Strategy

I collected studies and information for this literature review by using a multitude of resources. The databases used to locate academic and professional peer-reviewed studies included EBSCO Research Databases, Thoreau: Education, and Educational Resources Information Center (ERIC). I also used the archives of the publishers Science Direct, Elsevier, and Springer. Additionally, if I found a study that was referenced in multiple articles that I was analyzing, I located the research and evaluated whether it also was appropriate for this literature review.

The parameters set in each database limited the results to studies that were published from 2015 to 2020, were available in full-text format, were peer reviewed, and were available in the English language. The keywords used to refine the literature search were *self-efficacy, online instruction, online learning, mastery, social models, self-beliefs,*

experienced, novice, instructors, and *students*, as well as combinations of these words. Additionally, to aid in locating the most current peer-reviewed articles, I set an alert through Google to alert me if articles were published with my keywords in the title. A few of the sources that I used for the completed dissertation fell outside my set parameters, such as a chapter from a book on the topic of online instruction and secondary articles surrounding the history of the theory used in this study; however, these should be looked at as the exception and not the rule. The Bandura references that I used to establish the study's theoretical framework (Bandura, 1977, 1986, 1997) were also published outside the designated time frame.

Theoretical Foundation

The theoretical framework for this study was Bandura's self-efficacy theory (1997). This theory explains how self-efficacy can be influenced and developed, positively and negatively affecting all facets of the human experience. Bandura's theory suggests that anyone, in any situation, has the ability to strengthen and exercise self-efficacy, resulting in positive outcomes. The central concept is that individuals' cognitive processes and social behaviors are influenced by actions that they have observed in others. Bandura's self-efficacy scale involves four categories: cognitive, motivational, emotional, and decisional.

Self-Efficacy Theory

Bandura's theory suggests that self-efficacy is impacted by a variety of elements such as social persuasion, vicarious experiences, physiological and affective states, and mastery experiences (Bandura, 1994). These four components provide individuals with

the foundational appraisal of their skills that will ultimately influence the decisions to engage in or avoid tasks.

The first component, social persuasion, influences the development of self-efficacy by convincing individuals that they do, in fact, have the ability to accomplish a goal or a task. Individuals who are verbally persuaded that they will succeed are more likely to work harder and longer until they accomplish their goal or task than those who are convinced otherwise (Bandura, 1994). Chan and Lam (2017) found that students' self-efficacy improved or decreased based on the feedback that they received from their instructors and parents.

The second component, vicarious experiences through social models, impacts self-efficacy by way of observation. If individuals observe people whom they see as similar to themselves succeed, their belief in their capabilities to succeed will increase; conversely, if they see failure despite effort, they will doubt their skills and abilities (Bandura, 1994). Essentially, this means that if a person sees someone succeed who is similar to themselves, they will gain higher self-efficacy. Johnson (2017) found that female students with a female instructor showed an increased self-efficacy and student success. In contrast, male students who scored higher in self-regulation had greater success in a class taught by a female instructor than those who were taught by males.

The third component is how individuals interpret their own affective and physiological states to judge their capabilities. Individuals with high self-efficacy may see their stress reactions as energizing, whereas those who doubt themselves may see stress as a sign of impending failure (Bandura, 1994). An Iranian study demonstrated just

that there was a positive and negative correlation to student success based on emotional functioning, with recommendations for instructors to focus on social satisfaction and helping students with depression and loneliness (Brand et al., 2018).

Lastly, mastery experiences, considered the most influential factor in self-efficacy, affect the improvement of self-efficacy. Successfully completing a task strengthens individuals' feelings of self-efficacy, whereas failure destabilizes self-efficacy. Mastery gives concrete evidence to individuals that they have the capability to complete the task at hand (Bandura, 1994). Hier and Mahony (2018) found that students' writing self-efficacy improved once they participated in a writing intervention in which they all were successful. Additionally, mastery of skills obtained in a simulated event has also shown to increase self-efficacy if an actual event were to occur. For example, Issenberg et al. (2016) simulated a coding situation for nursing students, finding that even if the students failed initially, subsequent other simulated codes in which they were successful showed a marked improvement in students' self-efficacy and confidence in their ability to manage the situation if it were to occur outside a simulated environment.

Online Academic Self-Efficacy Theory

Online academic self-efficacy theory is grounded in self-efficacy theory (Bandura, 1977). *Online self-efficacy* refers to individuals' conviction (belief) that they have the ability to accomplish what they set out to do at a designated academic level of achievement and to obtain a set scholastic goal using online technologies (Bandura, 1997; Pajares & Schunk, 2002). In other words, online academic self-efficacy is the belief that individuals have about their overall online abilities and presence in the educational

setting. Bradley et al. (2017) noted that improving students' self-efficacy is an excellent way to enhance their performance on online academic tasks. Self-regulation is also a key feature for self-efficacy in online education (Bradley et al., 2017). Additionally, Bradley et al. found that self-regulation and self-efficacy need to be addressed more by online instructors than in traditional classrooms due to environmental differences.

Kundu (2020) found two predictors of self-efficacy in online student engagement to be the perception of learning and future interest. This relationship corresponded with one of Bandura's (1977) self-efficacy factors, mastery. Predictors of instructor self-efficacy are the perception of student learning and gender; this correlates with Bandura's (1977) factor of social persuasion.

Rationale for Choice of Theory

Teacher self-efficacy is a concept that signifies instructors' conviction in their aptitude to facilitate the growth of their students' abilities, knowledge, and values (Kundu, 2020). Bradley et al. (2017) acknowledged that previous research proposed that teachers' self-efficacy was primarily related to student outcomes in motivation and achievement. Studies have shown that the more experience that professors have, the higher their self-efficacy will be (Gonzalez & Maxwell, 2018; Moosa & Shareefa, 2019). There are important implications of studying students' online academic self-efficacy and how it relates to their nursing and NP instructors' online teaching self-efficacy, as well as the possible long-term effects of the latter on students' academic achievement. This is why Bandura's theory (1977, 1986, 1997) was chosen for this study. Studies have shown higher online academic self-efficacy improves students' overall academic success

(Aydın, 2015; Kirmizi, 2015). What makes Bandura's self-efficacy theory different from those that came before it is the "self-beliefs" component (Pajares, 2002). When instructors' self-beliefs and self-efficacy are higher, they have higher cognitive activation, have better management of their classroom, and provide a better support system for their students; the opposite is true for low self-efficacy (Aydın, 2015). As discussed above, the self-efficacy of instructors can impact their instruction, and the self-efficacy of individuals can impact their success. Therefore, it is essential to investigate whether there is a relationship between nursing and NP instructors' online teaching self-efficacy and their students' academic self-efficacy.

Literature Review Related to Key Variables and/or Concepts

Having already discussed that the self-efficacy of instructors impacts the way that they teach, it is important to note which factors can affect the self-efficacy of instructors and their students. The impact of self-efficacy on both instructors and students can be palpable. Positive self-efficacy is a fundamental quality for instructors, as their self-efficacy is meaningful to job satisfaction, instructional practices, and professional commitment (Chen & Chung, 2018). In this part of the chapter, I review previous research on such topics.

Student Self-Efficacy

Several studies involving students in face-to-face and online instruction have been done to examine the concept of self-efficacy in students (Johnson, 2017; Vayre & Vonthron, 2017). A study conducted on 250 bachelor's degree students by Vayre and Vonthron (2017) demonstrated that students' self-efficacy is related to better performance

and knowledge acquisition. However, a review conducted by Bartimote-Aufflick et al. (2016) found that student self-efficacy is higher under certain conditions than others. Regardless, many educators and researchers agree that students' sense of self-efficacy is associated with motivation, persistence, and academic success even when they are faced with challenges (Aydın, 2015; Bartimote-Aufflick et al., 2016; Jackson & McLellan, 2017; Johnson, 2017; Vayre & Vonthron, 2017).

College Level Face-to-Face Learning

Some believe that student challenges can be more easily managed in face-to-face instruction. Student achievement has been referred to as the "by-product" of classroom procedures and practices that teachers have implemented in the traditional face-to-face classroom; it has also been noted that conventional face-to-face instructors were able to appropriately address the student's needs (Koomen & Zee, 2016). However, a survey of 139 college students, 88 traditional and 51 online, demonstrated that ability attribution and the cost value variable were what predicted traditional students' academic achievement, as opposed to peer-personal support predicting online students' academic achievement (Breen et al., 2016).

College Level Online Learning

Peer support has typically been a factor in keeping students in the traditional setting rather than in online courses (Koomen & Zee, 2016). A study was conducted to gather feedback from students participating in online classes versus "traditional" classes. The results of the study demonstrated that 51% of students preferred the online classes

compared to the face-to-face classes (Douglas et al., 2016). However, a student already possessing high self-efficacy plays a large role in satisfaction with online learning.

Nursing and Nurse Practitioner Face-to-Face Learning

Certain professions and degrees rely on the setting of a traditional classroom to help build students' self-efficacy. Many classes in nursing schools contain a large amount of curriculum and hands-on, engaging course material to promote knowledge and confidence for effective, safe nursing practice (Brannan et al., 2016). A study of 223 undergraduate nursing students found that each student had mild to moderate feelings of being an "imposter" and lower self-efficacy at the thought of practicing independently as a registered nurse rather than a student (Aubeeluck et al., 2016). Baker and Vaughn (2008) wrote that properly pairing nursing students with preceptors can impact teaching, supervision, and mentoring skills.

Additionally, a study on 354 third-year bachelor's nursing students found that the type of class that students took in the traditional classroom versus online was impactful for the students' self-efficacy and the use of evidence-based practice (Bobridge et al., 2016). For instance, the study found that in classes requiring hands-on skills and training, students had better attitudes and skills acquisition in the traditional setting than they did in the online environment. Conversely, it was found that the students became more proficient and had better attitudes involving the course material in classes requiring research and critical appraisal tools when the classes were taken online rather than in traditional settings (Bobridge et al., 2016).

Nursing and Nurse Practitioner Online Learning

Medical education is rapidly transitioning from face-to-face to online settings. A vast majority of the nursing and NP classes offered online are graduate-level courses (Rice & Rojjanasrirat, 2017). As mentioned above, students find more success in online research classes. A study involving 63 online NP students enrolled in an introductory research/evidence-based practice course found that there was a significant improvement from beginning to end in the students' views of evidence-based practice.

The self-efficacy of nursing students going into a graduate NP program is especially important. Medical knowledge and skills are built upon in NP programs, so if students do not have high self-efficacy going into the program, they may struggle and have a low opinion of the online university program (Godfrey et al., 2016). Godfrey et al.'s (2016) systematic review of the literature found that students entering an online NP program had greater success in the class, learner satisfaction, knowledge acquisition, and skill performance.

Instructors' Self-Efficacy

Teacher self-efficacy has been an important topic of study in both online and traditional classrooms (Ali et al., 2017; Bozkaya & Ucar, 2016; Jackson & McLellan, 2017; Knežević Florić & Ninković, 2018). Teachers with higher self-efficacy tend to use a broader range of teaching methods than those with lower self-efficacy (Knežević Florić & Ninković, 2018) Moreover, Bozkaya and Ucar (2016) found that teachers with higher self-efficacy have multifaceted teaching capabilities and increase student learning, engagement, and desired outcomes. Conversely, self-efficacy has been connected with

satisfaction, stress, and instructor burnout (Abernathy, 2018). Still, instructors with higher perceived self-efficacy adjust their actions and thought process to avoid emotional fatigue (Ali et al., 2017), whereas instructors with low self-efficacy have lower emotional intelligence, may feel powerless, and may be unable to identify or help a struggling students (Jackson & McLellan, 2017).

Face-to-Face Instructors

A number of studies examine instructors in the traditional setting and their self-efficacy as it relates to students (Barbaranelli et al., 2006; Li et al., 2017; Yerli & Yerli, 2017). One such study of teachers in the traditional setting examined the teacher's self-efficacy beliefs and the relationship to student academic achievement. The study found the teacher's personal self-efficacy beliefs affected their job satisfaction and students' academic achievement (Barbaranelli et al., 2006). Yerli and Yerli (2017) conducted a study on traditional classroom novice teachers' self-efficacy compared to experienced teachers and compared the students' achievement. The findings showed that teachers' self-efficacy did have an impact on student achievement and instructional approaches. For instance, the different instructional approaches, flipped classroom (Dickenson, 2016), massive open online course, (Armellini & Rodriguez, 2017), or digital library instruction (Li et al., 2017) have different teaching models and strategies to utilize, which can affect the instructors' self-efficacy in different ways. The flipped-classroom approach, for instance, has been shown to increase teacher self-efficacy by allowing them to utilize several different teaching strategies and promote student creativity, whereas, the massive

open online course (MOOC) and digital library instruction imparts more self-directed learning (Dickenson, 2016)

Online Instructors

Online instructors face a different set of challenges than those in the traditional face-to-face setting. Adebisi and Oyeleke (2018) describe the various roles an online instructor must take to be successful, stating that pedagogical and andragogical models should be blended. The online instructor must be a master of technical, social, and managerial skills. It has been found that instructional approaches do influence teacher efficacy (Dickenson, 2016). A study conducted by Calkins et al. (2019) explored the long-term effects of professional technology development on teacher self-efficacy and found a positive correlation to professional technology development and long-term positive self-efficacy in the technologies. Another study conducted by De la Rosa and Jun (2015) assessed if training educators in online course design had a positive effect on course delivery. The research concluded that the treatment group who received the training exhibited a higher amount of teaching satisfaction and self-efficacy, as well as control over their classes, than those who didn't receive the training (De la Rosa & Jun, 2015). If teacher self-efficacy has shown to impact learner outcomes and performance, it is meaningful to understand how the instructors' and students' online self-efficacy develops and is changed.

Factors That Affect Online Self-Efficacy for Teachers and Students

Social Networking

Social Network Services (SNS) has become a staple of online communication and skill to allow users access to the technological infrastructure (Kim et al., 2020). Sharing of knowledge through technical infrastructure enables the knowledge to reach individuals so they can master the shared technological aspect (Kim et al., 2020). Furthermore, becoming part of a learning community on sites such as Facebook or LinkedIn improve an individual's understanding of shared interest and help achieve common learning goals (Kim et al., 2020). Additionally, social media and community sites are places where individuals can find others similar to themselves with attributes in common and those to learn from (Kim et al., 2020). Kim et al. (2020) found that individuals with high social skills, greater creativity, and tighter friendships in social media sites are more likely to have an increase in knowledge self-efficacy and share their knowledge in a SNS based community. There are indications teacher self-efficacy can be improved by observing instructor models and getting constructive advice online (Chen & Chung, 2018; Yoo, 2016). As such, providing opportunities for instructors to communicate with one another and receive advice and suggestions for their course is an important factor for positive teacher self-efficacy (Chen & Chung, 2018). Engaging in social support through social media and discussion groups is likely to provide instructors with social persuasion and vicarious experience that, as discussed above, helps to improve individual self-efficacy (Bandura, 1977).

Emotional Intelligence

Social media is not the only factor that can affect self-efficacy in instructors and students. Emotional intelligence (EI) is also a key feature for self-efficacy in faculty and students alike (Ali et al., 2017). EI is the capability of recognizing regulating and monitoring emotions in interactions and being able to facilitate those emotions appropriately (Ali et al., 2017). Instructors with high EI are able to empathize with their students' emotions and act appropriately, redirect students' responses and help a student become aware of their own emotions and work on their triggers to help mediate any negative emotions, molding their self-concept (Ali et al., 2017). Student learning behaviors relate to their self-concept (Hanson et al., 2016). Self-concept is the way students view their role as a student and interpret their learning experience (Hanson et al., 2016). A student's self-concept is closely related to their feeling of autonomy and capability of self-regulation in online education (Hanson et al., 2016).

Self-Regulation

Self-regulation is representative of the behaviors and perceptions that overlay the achievement of personal goals (Bradley et al., 2017). Self-regulation is a critical concept in individuals' motivation; it involves planning, monitoring, and modifying their perceptions and behaviors to achieve their personal goals (Kirmizi, 2015). A student's attitude is a key component of self-motivation and regulation and has an impact on their perceived self-efficacy (Bradley et al., 2017). Student attitude can have a significant effect on their learning behavior and EI (Vayre & Vonthron, 2017). For instance, a

student who performs at a lower level has shown to have poor attitudes (Jackson & McLellan, 2017).

Attitudes

Student attitudes include an underlying set of values and interests, including their beliefs about the effectiveness and credibility of their instructors (Besser et al., 2016). Additionally, student's beliefs about their instructors are tied to instructor presence (Hanson et al., 2016). Factors that affect an instructor's presence and engagement and the tone initially set at the beginning of the term including the online environment, communication strategy and feedback, and instructor participation in designing the course (Besser et al., 2016). Instructor presence, engagement, and self-efficacy may also be related to years of experience of the instructor (Kundu, 2020). Yerli and Yerli (2017) studied professors' years of experience and how it related to self-efficacy perceptions, classroom management, and students' academic achievement. They found that instructors with more than 20 years of experience had a substantially higher perceived self-efficacy, better-perceived classroom management, and higher student achievement than their colleagues with less experience. Conversely, Alexander et al. (2017) evaluated instructors' self-efficacy and perceptions about the internet. They found that teachers with more teaching experience had lower levels of self-efficacy and perceptions of teaching online than those with more experience using the internet.

Mastery

Bandura (1977) claimed that mastery experiences were the most influential factor of positive self-efficacy. He asserted that if an individual completes a task and has a

positive experience, they will see future similar tasks as obtainable and see they will succeed, resulting in a sense of high self-efficacy. Armellini and Rodriguez (2017) studied the use of MOOC to improve study skills and increase self-efficacy. They found that the instructors and students who utilized the MOOC due to their low cost and low risk, were successful, finished with a higher self-efficacy, and had new goals for higher achievement. Researchers are continually evaluating and discovering new ways to aid instructors to enhance their abilities and improve their self-efficacy. A study using a dialogic video cycle (DVC), essentially video self-reflection, found that instructors who were able to have video-based reflection were able to change their practice (Alles et al., 2018).

Additionally, Calkins et al. (2019) studied the long-term effects of technology training had on self-efficacy; he found that those who received the training had an improved self-efficacy and control over their classroom. Another similar study evaluated if training educators in online technologies and design would affect their course delivery and self-efficacy. They found that not only was the self-efficacy higher in the treatment group but so was their satisfaction and self-control over the classroom (De la Rosa & Jun, 2015).

Measuring Self-Efficacy

Bandura (1997) designated self-efficacy as a non-universal belief due to the knowledge and skills required to accomplish tasks. Instruments were developed by several different pieces of research to measure teacher and student self-efficacy (Anderson & Robinia, 2010; Bandura, 1997; De Smul et al., 2018; Hoy & Tschannen-

Moran, 2001; Koslowsky et al., 2018; Wyatt, 2015). Hoy and Tschannen-Moran (2001) developed the Teachers' Sense of Efficacy Scale (TSES) based off of scale created by Bandura (1997) with an expanded list of teacher capabilities. Anderson and Robinia (2010) expanded on the TSES scale by changing the wording and adding certain topics to focus the scale online study. There were 24 words and items changed from the original TSES scale. Among the items altered were changing wording such as "in your classroom" to "in your online classroom" and adding questions to assess if the instructor's confidence in technology, online copyright law, perceptions and ability in using online modalities and perceptions, and ability on online collaboration strategies. Anderson and Robinia named this new scale The Michigan Nurse Educators Sense of Efficacy for online Teaching (MNESEOT) instrument. Since the MNESEOT scale has a focus on online instruction rather than the traditional setting of the TSES, the MNESEOT is the scale the instructors were given for this study.

Summary and Conclusion

Self-efficacy has shown to be an important determinant of student learning behaviors (Bandura, 2001; Yoo, 2016). Studies tend to emphasize the selective and cognitive process outcomes of self-efficacy. The self-efficacy of instructors has shown to be an influential element to student achievement and classroom practices; therefore, it is important to understand and expand our knowledge of what impacts online teacher self-efficacy and if the teacher self-efficacy has a relation to the students online self-efficacy. Four themes emerged in the development of online self-efficacy; social networking, emotional intelligence, self-regulation, and attitude. A greater understanding of these

themes could reveal the main influences of self-efficacy on certain learning behaviors and thus on student self-efficacy. In Chapter 3, the method of the study is discussed while determining the relationship instructors online self-efficacy has on their students.

Chapter 3: Research Method

The purpose of this study was to investigate if a relationship exists between nursing and NP instructors' online self-efficacy and their students' academic self-efficacy. In this chapter, I discuss the research design and the rationale for studying this topic. Additionally, I describe the methodology, including data collection, population, sampling, and sampling procedures. Lastly, I examine the threats to the study's validity and ethical procedures.

Research Design and Rationale

Variables

The IVs were the nursing and NP instructors' online teaching self-efficacy, the DV was the nursing and NP students' change in academic self-efficacy, and the predictors were the number of classes that the students had previously taken online and the number of classes that the instructor had taught online previously. The predictor variables were assessed by the students' and instructors' self-reports.

Research Design

An observational study draws interpretation from a dependent group where the IV is not under a control (Rosenbaum, 2002). A correlational design was best suited for this study because the goal of the study was to assess whether there is an association of the DV (student's academic self-efficacy) to the IV (instructor's online teaching self-efficacy).

The student's academic self-efficacy was assessed at two points in time: in a pre- and posttest analysis. The instructors continued teaching in their usual way without any

changes. Within this study design, students and instructors were required to complete surveys at the beginning of the course, and students completed a survey again at the end of the course, revealing a time constraint. Because each course was 16 weeks long, the students and instructors had 5 weeks to complete the surveys during each time frame: the beginning of the course (first third of the term) and the end of the course (last third of the term).

Design Choice

The-study used a convenience sample. Because I relied on volunteer instructors and students to participate in the study, it is possible that those with very low self-efficacy did not volunteer. A quantitative design provides data that can be expressed in numbers that have objectivity (Madrigal & McClain, 2012), making the results harder to misinterpret. Researcher bias becomes less of a worry because the quantitative measures are objective and thus not vulnerable to researcher bias. This type of study allows for some modest generalization of the study findings beyond the participant group, which helps in making decisions with confidence and promotes the advancement of knowledge in nursing and NP education.

Methodology

Population and Setting

The study was nursing education focused; therefore, the population of the study consisted of nursing and family NP instructors who were teaching online, and nursing and NP students enrolled in a program that was holding classes online. The university chosen for the study is referred to in this dissertation with a pseudonym, Papichula

University. Each instructor had to hold a valid Nevada Registered Nursing license. At the time of the study, Papichula had a total of 33 full-time instructors for BSN, MSN, and DNP courses. Additionally, there were 225 graduate-level students and 152 undergraduate students.

Sampling and Sampling Procedures

Due to the limited time available to conduct the study, one university was chosen to seek participants. After receiving IRB approval from the university, I sent an email seeking participation to the dean of the nursing school. The dean then forwarded the email to all employed BSN, MSN, and DNP instructors at the university. Each instructor who opted to participate in the study completed an online survey. Additionally, the participating instructors were asked to post in their class announcement a provided letter to their students asking for participation. The letter had a link for the students to click on, which brought them to the survey. The method of sampling was a convenience method, as it was based on participants' availability and willingness to take part in the study. Each participant clicked on a survey link to take the survey. The instructors and students had until the end of Week 5 of the term to complete the surveys. The students also had the last 5 weeks of the term to complete the posttest survey.

Inclusion and Exclusion Criteria

To be included in this study, participants had to be employed by Papichula or enrolled in Papichula classes. Additionally, the instructors needed to have their BSN, MSN, or DNP classes online. The students needed to be enrolled in one of the participating instructor's courses and be doing course work in the class during the 16-

week study. Even though Papichula University offers many other types of educational programs, only the BSN, MSN, and DNP instructors and their students were included; other programs were not contacted for participation and were excluded from the study. I ensured that only BSN, MSN, and DNP instructors were included in the study by having the dean forward my letter only to those instructors.

Power Analysis

A power analysis is conducted to determine the smallest possible sample size that is appropriate to detect the effect given the desired significance level (Moerbeek & Teerenstra, 2015). There are five types of power analysis: a priori, compromise, criterion, post hoc, and sensitivity (Buchner et al., 2009). A priori power analysis was selected to determine an appropriate sample size for this study.

It is recommended that researchers use a power of 80% and an alpha of 0.5 (GPower, 2017). Multiple regression effect size is depicted by Cohen's f^2. Cohen (1988) suggested that for multiple regression, an effect size of .02 should be considered small, .15 should be considered medium, and .35 should be considered large. Studies similar to this one had effect sizes ranging from 0.06 through 0.10 (Barczyk et al., 2011; Bartimote-Aufflick et al., 2016; Koslowsky et al., 2018; Kundu, 2020; Vilkas, 2017). Therefore, an effect size of 0.07 was chosen, which was the average effect size of the similar studies. There was a total of three predictors, which were the IV, the number of classes the instructor had previously taught online, and the number of classes that the student had previously taken online. A power analysis was completed utilizing GPower 3.1 (GPower, 2017) and the above stated data. The resulting minimum sample size was 160 students.

The study involved a total of $N = 378$ undergraduate and graduate nursing and NP students at Papichula University.

Procedures for Recruitment, Participation, and Data Collection

As mentioned above, I recruited participants from one university by sending an email to the dean asking for participation, who then forwarded it to all of the nursing and NP instructors (see Appendix Q for a step-by-step table indicating what data were collected, from whom, and at what times). The plan was that if I did not get enough participation in the first term, I was going to try again during the next term. The instructors who chose to participate then posted provided letters in their weekly course announcements. The only demographic information that was asked from the instructors was their name and the number of classes that they had previously taught online. The demographic information that was asked from the students were the last six numbers of their identification card (ID) or driver's license (DL) number, their email address, their instructor's name, and the number of online classes that they had previously taken online. Because I was not able to email the instructors individually to give them their own survey link, one general link was provided for the instructors and one link was provided for the students.

Informed Consent

The informed consent was provided on the entry page of the survey. I advised participants to print or take a screenshot of the consent for their records. To continue to the survey, the participants had to acknowledge that they had read and understood the informed consent and still wished to participate.

Data Collection Procedure

The surveys were completely internet-based and were created and administered through Survey Monkey. Access to surveys on Survey Monkey was only permitted through a secure connection (e.g., VPN, Secure Shell Protocol) and required multifactor authentication (Survey Monkey, 2020). Survey Monkey encrypts data in transit using secure Transport Layer Security cryptographic protocols as well as having the data encrypted at rest (Survey Monkey, 2020). Permissions were obtained to use the modified OASIS as a survey from the copyright holder (Appendix N). Permissions were also obtained from the creator of the MNESEOT to use the survey in this study (Appendix O). The students provided their six-digit identification number, email address, instructor's name, and the number of online classes that they had previously taken.

I was the only person who had access to the information, and the information was immediately destroyed after the data sets were created. The instructors and students logged in with the provided web address links. The students identified themselves only using the last six numbers of their DL or ID. The students needed to provide their numbers so that the pre- and posttest surveys could be paired. There is a pause and save feature on Survey Monkey, so students and instructors could pause and save their survey if they created a login. After analysis, the data sets were securely archived and will be saved for 5 years using a thumb drive, which will be kept in a 2900-lb reinforced steel fireproof safe.

I contacted the Papichula University IRB, whose staff advised me that they would refer to Walden University's IRB and that there was no need for Papichula's IRB to

review the study. After receiving approval from the Walden University IRB, I emailed the dean of Papichula University asking for permission and IRB approval for the study to be conducted with instructors and students (see Appendix C). After receiving approval from the dean, I sent the study invitation via email (see Appendix D) to the dean, who then forwarded it to all full-time instructors in the online BSN, MSN, and DNP tracks. The instructors were asked to complete the informed consent and survey any time from the receipt of the email to the last day of Week 5. The dean was also given the invitation for the students to participate, along with the email to the instructors. She forwarded the students' invitation to the instructors for the instructors to post in their class announcements (Appendix E). The students had from Day 1 of the term through the last day of Week 5 to complete the survey. The informed consent was on the first page of the survey; only when participants clicked "agree" were they allowed access to the survey. If they did not click "agree," no access was granted. In Week 11 of the term, the students who participated received an email from me asking for them to complete the postsurvey any time from receipt of the email to the last day of the term. The survey was again open for 5 weeks (i.e., for the last third of the term).

Preparation of Data

Each question from the OASIS was entered into Survey Monkey for the student survey, proofread, and test run to make sure that it worked. Before the students were allowed to access the survey, they had to read the informed consent on the first page and click "agree"; only then they could continue onto the survey. On the first page of the survey, the students were asked to enter the last six numbers of their DL or ID, their

teacher's name, and how many classes they had previously completed online. Then, the students answered each question using a Likert scale ranging from 1 (*not confident*) to 7 (*very confident*). There was a total of 23 questions, which took an average of 4 minutes to complete. The total at the end of the scale was the self-efficacy score. A lower score indicated lower self-efficacy, and a higher the score indicated higher self-efficacy. Once the pre- and postsurveys were complete, I subtracted the pretest score from the posttest score. A positive number indicated increased self-efficacy, a negative number indicated decreased self-efficacy, and zero indicated no change.

For the survey that the instructors took, each question from MNESEOT was entered into Survey Monkey. Before instructors were allowed to take the survey, they had to read the informed consent on the first page and click "agree"; only then could they continue. The instructors answered each question using a Likert scale ranging from 1 (*not confident*) to 7 (*very confident*). There was a total of 32 questions. The score was totaled, with lower scores indicating lower online self-efficacy and higher scores indicating higher online self-efficacy. The predictor variable was obtained at the beginning of the survey by the instructors self-reporting the number of online courses they had taught. The data were entered into SPSS for analysis. The instructors' self-efficacy scores were placed in a data set, and the students' self-efficacy gain scores were entered as a data set.

Exiting the Survey and Follow Up

Students who volunteered for the study were asked to take an initial survey at any time in Weeks 1-5 and then again at any time in Weeks 11-16; this was the only "follow-up" required for any of the participants. The participants were also informed that they

could exit the survey at any time. The dean was emailed the final study to distribute to the instructors who participated. I also made the completed study available at the Papichula University Library for the students to access.

Instrumentation and Operationalization of Constructs

This study used two Likert-type scale surveys via the online platform Survey Monkey. The instructors took the MNESEOT instrument (Anderson & Robinia, 2010). The students took the modified OASIS instrument (Bradley et al., 2017).

MNESEOT

The MNESEOT instrument was developed by Kristi Robinia in 2008 (Anderson & Robinia, 2010) and measured the IV. The IV was the instructors' online teaching self-efficacy score. The MNESEOT is a modified scale based on the Teachers' Sense of Efficacy Scale (TSES) originally created by Hoy and Tschannen-Moran (2001). The alteration included a modification of the language for applicability to higher education, specifically for the online environment in the context of teaching. The MNESEOT has eight more questions than the TSES; the questions are in regard to efficacy in computer usage. The MNESEOT was originally developed to assess the effect of online teaching self-efficacy on nurse faculty teaching in public. The total number of questions that was used from the MNESEOT was 32. Since its initial publication, the MNESEOT has been tried and tested in numerous other studies as well as published in books as a valid and effective tool (Hodges, 2018; Kundu, 2020; Vilkas, 2017). The studies assessed instructors' online self-efficacy in different settings.

Permission to use the MNESEOT scale was given by Dr. Robinia (Appendix O). The validated Likert MNESEOT was chosen for this study rather than older instruments such as the TSES because it has a focus of online instruction. Online education is a relatively new construct, and many of the older instruments are only valid and reliable for use with instructors teaching in the traditional face-to-face environment. Additionally, the MNESEOT scale was modified to be more appropriate for the assessment of higher education instructors. This study had two elements: higher education and online instruction, which the MNESEOT was modified to address. The MNESEOT was tested for validity and reliability with Cronbach's alpha, with a reliability coefficient for the instrument as a whole being equal to .926. The MNESEOT was used to measure the instructor's online teaching self-efficacy. A higher score on the MNESEOT indicates higher online teaching self-efficacy, and a lower score indicates lower online teaching self-efficacy.

OASIS

The OASIS was created by Bradley et al. (2017). The OASIS measured the DV, which was the students' online academic self-efficacy. The scale consists of a total of 23 questions (Appendix B) and was originally developed from three separate scales (Bong et al., 2000; Kulikowich & Zimmerman, 2016). The OASIS was an appropriate choice for this study because its primary focus is on students enrolled in online courses and the confidence that they have in themselves to complete their course successfully (self-efficacy). Explicit permission was obtained from the copyright holder of the study (Appendix I). The OASIS has been shown to be a highly reliable self-efficacy scale with

a Cronbach's alpha of .91. The score was totaled, with a higher score indicating higher self-efficacy and a lower score indicating lower self-efficacy.

Data Analysis Plan

To analyze the data, a linear regression analysis was used. The gain score from the students were the DVs. The instructor's self-efficacy score was the IV and the number of classes the students have previously taken online and the number of classes the instructor had previously taught online were entered in as the predictor variables.

It was planned that in the event the instructor or student did not answer a question(s), the question(s) would be excluded from the total points and would not be counted negatively or positively towards the score providing the questions were missing completely at random (MCAR) or missing at random (MAR) (Cheema, 2014). To determine MCAR versus MAR, I used the frequency command in SPSS, and then after determining if there were any missing values, I did a frequency distribution, I then assigned a dummy value to the variable for each case with missing values. If the data was not missing at random (NMAR), I found more data on the cause for the missing data and performed "what-if" scenarios to assess how sensitive the results were under different situations.

Additionally, I checked for data entry errors by looking for illogical data such as outliers or impossible numbers. A data set was created for each student, which included the pre and posttest scores, the gain score, the number of online classes previously taken. A data set was also created for each instructor, which included their efficacy score, and the number of classes they had previously taught online. The following are the research

questions and hypotheses tested; the predictors were also analyzed using linear regression analysis.

Threats to Validity

The validity of a study is essentially how sound the research is, specifically the design and methods used for the research (McLeod, 2020). Different factors can impact and influence the results, which can invalidate the findings. It should be the primary responsibility of researchers to predict and control for the threats to external and internal validity.

Threats to External Validity

External validity is the generalizability to larger groups or settings beyond the experiment context (McLeod, 2020). Threats are factors that reduce generalizability. One such threat to this study was volunteer bias, which is the risk that all those who volunteer to participate may not create a balanced sample. For instance, with this study, all the instructors who volunteered to participate may have a high online self-efficacy score because they are confident navigating online and getting to the survey, whereas, those with a low online self-efficacy may not have participated in the study because they were not confident in their online skill and do not want to take the extra effort to learn a new online platform. I helped address this by making the surveys very easy to access and uncomplicated by having a link that only needed to be clicked to access the survey. I also made the survey so the participant did not have to look around or figure out the system. I assessed for example bias by assessing which instructors and students participated, and if

the entire sample is from the same instructor. I also tested my distribution for sampling bias, as described above.

Threats to Internal Validity

Internal validity is the extent to which a study establishes a cause and effect or relationship between the variable. It is also a reflection on if there are alternative explanations for a finding. Numerous factors can negatively impact the internal validity, which decreases how confident findings can be. One such factor I had to monitor for in this study was attrition. The concern was the students would not do the posttest survey since it was the end of the term, and they were working on completing their final work and studying for exams. To deter the attrition, I sent out the reminder in Week 11 to remind and encourage students to complete the brief survey. If I detected by the end of Week 15, there is a low completion rate; I write another email to the students asking them to complete the survey. In multiple regression, a linear correlation between the IV and DV can be seen in checking the assumptions (Moerbeek & Teerenstra, 2015). To test the assumptions, I did a scatter plot to check for linearity.

Threats to Construct Validity

Construct validity is often thought to be one of the most important forms of validity because it determines if a test or scale measures the construct effectively (D'Innocenzo et al., 2020). To avoid any threats to construct validity, the scales used for the study had been tested for reliability and validity in numerous studies and had been shown to be good scales in their respective measurement.

Ethical Procedures

It is important to keep the trust of the participants. I did this by ensuring to keep the information confidential. Participants of the study could choose to exit the survey at any time, ensuring their confidentiality. The student participants were asked to provide the last six digits of their DL or ID number, their instructors name and the number of online classes previously completed. The instructors were only asked to provide the number of online courses they had taught and their name. I needed the last six numbers of the DL or ID so that I could correctly match the student's pre and posttest responses to the data collected. All replies were kept confidential. Please see chapter one for the total ethical review, which includes a response to each IRB question.

Summary

Effective instruction and learning in the online environment can be a challenging aspect of education. Self-efficacy can be developed and influenced both positively and negatively by experiences and social models (Bandura, 1994). Learning and teaching online is still a relatively new construct that takes a period of acclimation. By assessing the relationship between nursing and NP instructors' online self-efficacy to their students' academic self-efficacy, there was a contribution to the ongoing knowledge in instructor and student development in online education. This research study utilized a correlational, observational approach. Next, Chapter 4 will further develop the analytical techniques used for the collected data. The chapter has the main focus of organizing data collection, reviewing results, and summarizing the findings.

Chapter 4: Results

The purpose of this study was to investigate whether a correlational relationship exists between nursing and NP instructors' online teaching self-efficacy and their students' online academic self-efficacy. The national demand for nurses and NPs is growing, creating a shift of programs to online platforms that gained added urgency due to a sudden nationwide shift of classes online when the COVID-19 pandemic started. Previous studies in the face-to-face classroom have found that the perceived self-efficacy of an instructor correlated to students' achievement (Bartimote-Aufflick et al., 2016; Hier & Mahony, 2018; Koomen & Zee, 2016; Yerli & Yerli, 2017). The aim of this study was to determine whether the same was true for instructors' online self-efficacy and their students' academic online self-efficacy. For this study, the IV was the instructors' online self-efficacy, and the DV was the students' online academic self-efficacy gain score. The predictors were how many classes the instructor had previously taught online and how many classes the students had previously taken online.

In this chapter, the results are thoroughly discussed, including the demographic characteristics of the sample, external validity, statistical assumptions of the study, analysis and findings, descriptive statistics, and statistical analysis of the hypothesis. The chapter concludes with a chapter summary and a brief introduction to Chapter 5. All data was collected with online surveys, converted into data sets, and entered into SPSS. The following is an overview of data collection and analysis.

Data Collection

I received IRB approval on September 2, 2020, approval number 09-02-20-0739698. The surveys were opened on Survey Monkey and the links were created. Due to getting approval after the term started, data collection started when the students were in their 2nd week of a 16-week term. I initiated an email to the dean on September 3, 2020, asking for a list of instructor emails. The dean was apprehensive about providing confidential instructor information and rather kindly emailed the invitation to all of the instructors instead on September 4. The first to participate did so on September 5. On September 16, 2020, I had not yet reached the calculated sample size needed, so I emailed the dean once more to ask her to email the invite again to the instructors. The presurvey was open until the end of Week 5 of the semester. On November 9, I started the long process of emailing all of the student participants, which had to be done in individual emails to ensure that there would not be an error allowing other students see who else had participated. The email contained an invitation with a link to participate in the postsurvey. The postsurvey was open from Week 11 through the end of Week 16 on December 10. A total of 211 out of 348 nursing students responded, and 18 out of 33 full-time nursing instructors responded.

Data Collection Discrepancies

The nursing school dean emailed the invitation to the instructors herself; the email also included a request to the instructors to post the invitation for their students in their class with a students' general link. One survey link was sent to all the instructors where they were asked to state their name and post the student survey in their class

announcement. This resulted in one instructor posting the invitation to their students but then the instructor not taking their survey. Upon realizing this, I emailed the dean to thank her for her help in recruitment and to ask that she email the instructor who did not complete the survey; fortunately, the instructor promptly completed the survey.

Data Management

Demographics

There were 378 undergraduate and graduate nursing students in total enrolled in Papichula at the beginning of the fall semester, of which $N = 211$ participated in the presurvey, resulting in 55.8% of the available students participating. Of the students who participated in the presurvey, $n = 137$ of them participated in the postsurvey, resulting in 64.9% participation. Of the $n = 33$ full time instructors, $n = 18$ participated, resulting in 54.5% who participated in the study. Other demographic questions such as sex, age, grade level, and so forth were not asked.

Data Preparation

The data collected from the participants needed to be organized and prepared to create logical datasets prior to analysis. First, I created an Excel spreadsheet that held the students' pretest and posttest scores, number of classes that they had previously taken online, as well as the self-efficacy scores of the instructors, which had an ordinal scale of 0-18. Next, I tallied up the gain/loss score of each student (Appendix B). Finally, I checked for any missing data—in this case, an absence of postsurveys. Because there were 74 missing posttests, which would have resulted in a lower effect size, I instead chose the imputation method "imputing the mean for missing data" to resolve missing

data (Cheema, 2014). I placed the mean gain score of the students from each class into the missing variables. The data sets were then imported into SPSS and analyzed. Linear regression was used to analyze the data. Using functions (collinearity diagnostics, part and partial correlations) in SPSS, I analyzed the assumptions, checked for multicollinearity, and checked to see if there was at least some relationship (Tables 1 and 2) between the IVs and the DV. Additionally, using the functions in SPSS (model fit, normal probability plot, casewise diagnostics with outliers set to 3 and checking the distances with Cook's and Mahalonobis function), I was able to check for normality, linearity, and outliers, which are discussed below (see Tables 3 and 4 and Figures 1 and 2).

Sample Representation

Over half of the pregraduate through postgraduate nursing students participated from Papichula University, which is a good ratio of the population from the nursing school. However, due to the inherent limitations of a convenience sample, external validity (i.e., generalizability) is difficult to ascertain.

Data Analysis

Descriptive Statistics

The instructors' online teaching experience ranged from having taught no classes online to having taught over 50 classes online. A fourth of the instructors who participated had previously taught more than 20 classes, whereas nearly half of the instructors who participated had taught either zero to five classes or 11-15 classes (Table 1). The students' online class experience ranged from zero classes previously taken

online to over 20 classes previously taken online. The majority of students had previously taken over five classes online, and only a fraction had little to no experience with online classes (Table 2).

Table 1

Instructor Statistics

Number of classes previously taught online	Number of instructors	Percentage
0-5	4	23%
6-10	3	18%
11-15	4	23%
16-20	1	1%
> 20	6	34%

Table 2

Student Statistics

Number of classes previously taken online	Number of students	Percentage
0-4	34	16%
5-9	82	39%
10-14	46	22%
15-19	26	12%
>20	23	11%

Statistical Assumptions

The first assumption that I checked was the multicollinearity assumption. My data set met all of the underlying assumptions to use the Pearson's correlation coefficient (i.e., continuous scale, paired, independence, linearity, normal distribution, homoscedasticity). Based on the guidelines for interpreting the Pearson's correlation coefficient (Demidenko, 2019), the results indicate that the instructors' self-efficacy, number of

classes previously taught, and number of classes previous taken do not correlate or correlate poorly to the student's gain/loss score. However, a large correlation was found between the number of classes previously taught online and the instructors' self-efficacy (Table 3).

Table 3

Pearson Correlations

	Number of classes previously taught online	Number of classes previously taken online	Instructor self-efficacy
Gain/loss score	.004	.085	.026
Number of classes previously taught online		.295	.764
Number of classes previously taken online			.310

To further assess for multicollinearity, tolerance and variance inflation factor (VIF) were reviewed. The tolerance is an indicator of how much of the variable of the predictor variables (Table 4) are not explained by the other predictor variables in the model. The independent and predictor variables are all well over .10, so I can say that, at least in this measure, there is no multicollinearity (Table 4). The VIF is the inverse of the tolerance value. The independent and the predictor values are all under 10, indicating that there is no multicollinearity (Table 4).

Table 4

Regression Coefficients

Model		Correlations			Collinearity statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	Instructor self-efficacy	.026	.036	.036	.416	2.403
	Number of classes previously taught online	.004	-.036	-.036	.409	2.443
	Number of classes previously taken online	.085	.086	.086	.963	1.039

Outliers

To assess for normality, linearity, and outliers, P-P plot, scatterplot, Mahalanobis distances, and Cook's distance were all reviewed. The P-P plot lines follow reasonably close to the line of best fit (Figure 1), and the scatterplot looks to have a roughly rectangular distribution (Figure 2), with a couple of spots approaching or going over the standardized residual, as displayed in the scatterplot of more than 3.3 or less than -3.3. To further assess the apparent outliers, Mahalanobis distance was checked. To identify which of the cases were outliers, I determined the level of critical value using the number of IVs as the degrees of freedom. The scores that exceeded the critical value were then considered outliers. I took the number of IVs (three) and associated them with the critical value of chi squared, resulting in a total critical value of 16.27. When reviewing Mahalanobis distance (Table 4), the total was 14.759, which does not exceed the critical

value of 16.27. I then ran a casewise diagnostic to show which cases are above the standardized residual value above 3.3 or below -3.3. The diagnostic showed four outliers that were above the value of 3.3 (Table 6). I did not want to just remove the outliers from the dataset without cause, so I assessed whether they had any undue or oversized influence on the results of the model as a whole; to do this, I checked the Cook's distance (Table 5). For Cook's distance, anything over 1 is typically a problem (Demidenko, 2019). The maximum on the data sheet was .263, which is much less than 1, indicating that the outliers were not having any undue influence on the ability to predict the outcome; therefore, I did not erase them from the dataset. Ultimately, all assumptions were met.

Figure 1

Normal P-P Plot

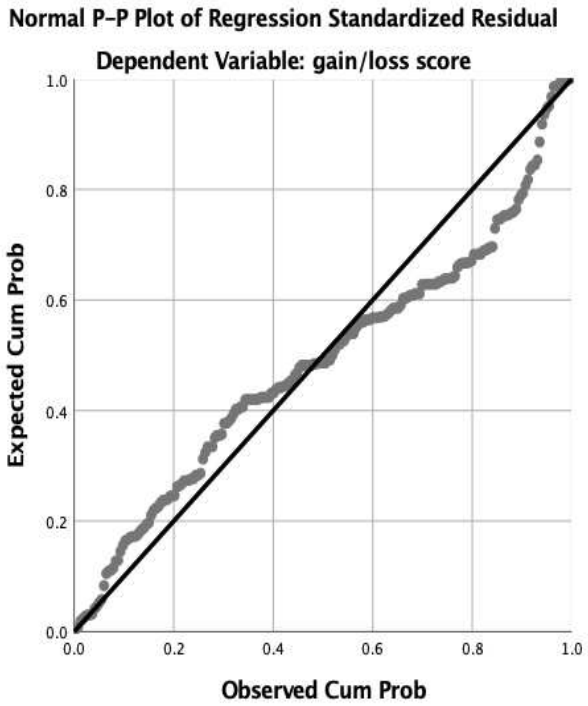


Figure 2

Scatterplot

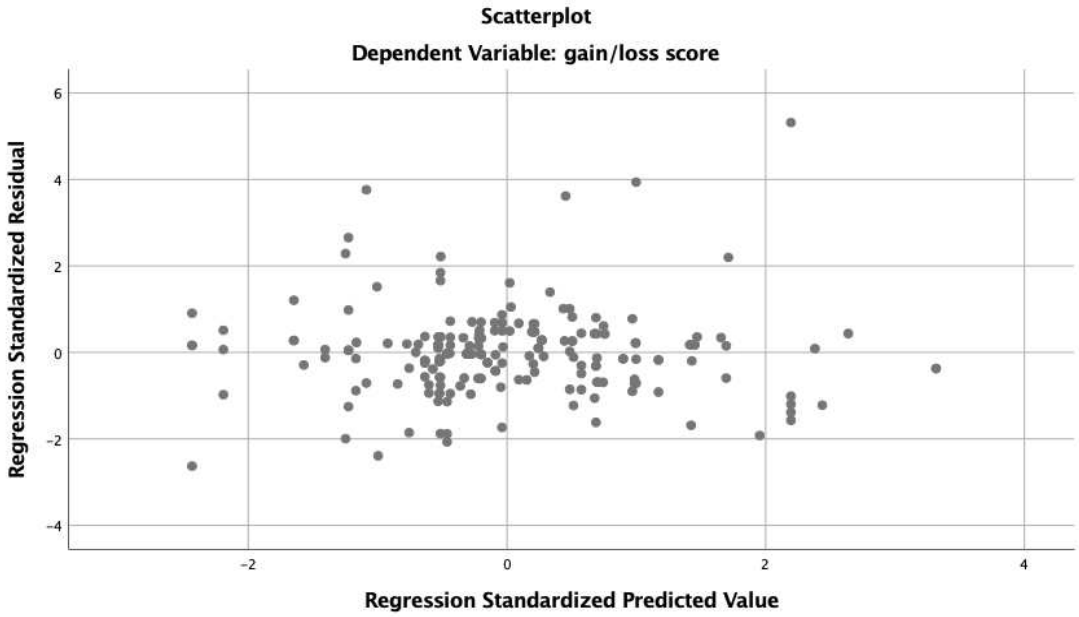


Table 5

Residual Statistics

	Minimum	Maximum	*M*	*SD*	*N*
Mahalanobis distance	.181	14.759	2.986	2.866	211
Cook's distance	.000	.263	.006	.021	211

Table 6

Casewise Diagnostics

Case number	Std. residual	Gain/loss score	Predicted value	Residual
1	3.759	20	-.20	20.197
44	5.316	30	1.44	28.561
65	3.938	22	.84	21.158
208	3.617	20	.57	19.429

To analyze the data systematically, I review the results and how they pertain to each research question below.

Research Question 1

In order to test the null hypothesis of RQ1, I performed a linear regression analysis with the instructors' self-efficacy as the DV and the number of classes previously taught as the predictor variable. The first thing that I assessed was the model summary. More specifically, I reviewed the variance explained by the regression model. Additionally, I checked the statistical significance; in other words, I checked whether the model was a statistically significant predictor of the outcome and whether it made accurate predictions regarding what would happen in the population. To do this, I looked to the analysis of variance (ANOVA), which tested the null hypothesis. The ANOVA demonstrated that there was statistical significance ($p < .000$), which means that the model can be accurately used to predict the outcome better than just chance. The R^2 statistic indicates how much of the variance in the DV can be explained by the predictor variable (Demidenko, 2019). The value was $R^2 = .58$, which means that the number of classes previously taught online can explain about 58% of the instructors' self-efficacy variance. Therefore, I rejected the null hypothesis and accepted the alternative hypothesis.

Research Question 2

For RQ2, I again performed a linear regression so that I could assess the model summary for *R* square. The $p = .219$ indicated that the data was not statistically significant. The *R* square ($R^2 = .002$) indicated that only .2% of the classes that the

students had previously taken online could explain the variance in their gain/loss score. Therefore, I failed to reject the null hypothesis and cannot accept the alternative hypothesis.

Research Question 3

Finally, to test the null hypothesis of RQ3, I again ran a linear analysis. The gain/loss score was the DV, the teacher self-efficacy was the IV, and the number of classes previously taught and the number of classes previously taken were the predictor variables. The *p* value ($p = 0.61$) found in the ANOVA table (Table 7) was substantially higher than the predetermined 0.05 cutoff, which indicated that the data is not statistically significant.

Table 7

Research Question 3 Analysis of Variance

	Sum of squares	*df*	Mean square	*F*	*p*
Regression	52.133	3	17.378	.602	.614b
Residual	5974.136	207	28.861		
Total	6026.269	210			

Even though the data is not statistically significant, I further assessed the data to learn each variant's influence on the student's gain/loss score. To do this, I assessed the standardized coefficients beta to compare the different variables as far as their beta levels. Mainly, I looked for the largest beta level, which means the variable that had the strongest contribution to explaining the outcome. The variable found to have the highest correlation coefficient was the number of classes previously taken online ($\beta = 0.88$). However, in the same table (Table 8), I also found that none of the variables were

statistically significant. R^2 in the model summary is $R^2 = .009$, indicating that the model using the predictor variables (teacher self-efficacy, number of classes previously taught, and number of classes previously taken) explains about 1% of the variance in the students' gain/loss scores. Thus, if a student's self-efficacy score goes up or down, 1% of it can be explained by the IVs, which means that 99% can be explained by other factors. It can be concluded that none of the independent or predictor variables made a significant unique contribution to the prediction of the outcome.

Table 8

Research Question 3 Correlation Coefficients

	Unstandardized coefficients		Standardized coefficients		
	β	*SE*	β	*t*	*p*
(Constant)	-2.355	3.896		-.605	.546
Instructor self-efficacy	.029	.056	.055	.514	.608
Number of classes previously taught online	-.019	.038	-.056	-.513	.608
Number of classes previously taken online	.121	.097	.088	1.242	.216

Exploratory Data

Additionally, I assessed each variable's contribution to the total of R^2. In other words, I assessed what the total variance in the outcome was uniquely explained by that variable, and how much R^2 would drop/gain if that variable were removed. I did this by reviewing the 'part' in the coefficients table (table 4). The instructors' self-efficacy and the number of classes previously taught calculated to a total of 0.03. The number of

classes previously taken totaled 0.08. So, after the totals were squared, I found that the teacher self-efficacy and number of classes previously taught uniquely explains about 0.13% of the variance in the total gain loss score, whereas number of classes previously taken explains 0.74%. Lastly, I reviewed the standard error, which let me know how much of the prediction might be off. I found that if I made a prediction of student's gain loss score using the IVs, their score might be off by (SD = 5.37). Ultimately, however, without statistical significance, I could not reject the null hypothesis and cannot accept the alternative hypothesis.

Summary

I performed three linear regressions to determine the if there was a relationship between the number of times the instructors had previously taught online and their online teaching self-efficacy, to assess for a relationship between the number of classes the student had previously taken online to their academic online self-efficacy, and assess for a relationship between the instructors online self-efficacy, the number of classes previously taught and the number of classes previously taken to the students online academic self-efficacy. Ultimately, I found there was a statistically significant relationship between the number of classes the instructor had previously taught and their online teaching self-efficacy. There were no other statistically significant findings so the null hypotheses could not be rejected for question two and three. In Chapter 5, I will introduce a summary of the questions and the results from the study. I also give a detailed interpretation of the findings. Further limitations of the study as well as recommendation is discussed. Lastly, the social change implications are described.

Chapter 5: Discussion, Conclusions, and Recommendations

My goal for this study was to investigate whether a correlational relationship existed between nursing and NP instructors' online self-efficacy and their students' academic self-efficacy. To be able to accomplish this goal, three questions were asked. The first question concerned whether there is a relationship between the number of classes that nursing and NP instructors taught online previously and their online teaching self-efficacy. The second question addressed whether there is a relationship between the number of classes taken online previously by the students and their online academic self-efficacy? The final and most important question addressed the strength of the relationship between nursing and NP instructors' online self-efficacy and their students' change in academic self-efficacy from the beginning of the course to the end of the course (gain/loss score). The questions were designed to address whether a relationship existed, and if so, whether an understanding of this relationship could lead to social change by indicating the need for additional training for nursing and NP instructors.

To answer the above questions, I conducted a comparative quantitative study using surveys. I used the Pearson correlation coefficient to test my hypotheses. The key findings included statistical significance in the number of classes that an instructor had previously taught and the instructor's online teaching self-efficacy. RQ2 and RQ3 had no statistical significance. Therefore, the only question for which I was able to reject the null hypothesis and accept the alternative hypothesis was RQ1; for RQ2 and RQ3, I failed to reject the null hypothesis and could not accept the alternative hypothesis.

Interpretation of the Findings

The purpose of RQ1 was to discover whether a relationship existed between the nursing and NP instructors' online teaching experience and their online teaching self-efficacy. The findings revealed that there was indeed a relationship. Research conducted by Calkins et al. (2019) partially supported the findings of this study. Calkins et al. studied the self-efficacy profiles of Southern Nevada University professors who were teaching general education courses (i.e., math, English, history), including determinants, outcomes, and generalizability across each teaching level. The study also explored long-term effects of professional technology development on teacher self-efficacy. Their study evaluated various predictors of teacher-self efficacy. The predictors were teaching experience, gender, mentoring experiences, and professional development provisions and needs. Somewhat like my study, Calkins et al.'s study revealed that teacher experience predicted professional development provisions and needs and that those with more teaching experience had higher self-efficacy and required less development provisions and needs. However, I extended their study past general education to nursing and NP instructors. Essentially, my findings were similar to theirs, in that teacher experience predicted teacher self-efficacy, but in nursing and NP instructors instead of general education professors. Further, the Calkins et al.'s study revealed a positive correlation to professional technology development and long-term positive self-efficacy in the technologies. Exploring technology development and positive self-efficacy was beyond the scope of this study but could be an area for future research in relation to nursing and NP instructors.

Additionally, in my study, I found there to be relationship between nursing and NP instructors' number of classes previously taught online and their online teaching self-efficacy, which is not unheard of. Kundu (2020) had similar findings. He studied university instructors teaching in Asian countries and found that instructor presence, engagement, and self-efficacy may also be related to years of experience as an instructor. Additionally, Kundu found six other factors that that had a significant relationship with teacher self-efficacy. The other variables found were future interest in teaching online, satisfaction with teaching online, semesters taught online, gender, and academic discipline. My study expanded Kundu's results to a different population. While his study involved instructors teaching any field in Asia, my study focused on nursing and NP instructors who could theoretically be teaching from anywhere in the world. Kundo's study also differed from mine because the participants in our studies worked literally on opposite sides of the planet. However, the study environment was the same—online. Kundo also asked questions regarding gender, teacher satisfaction with teaching online, and academic discipline, which added to the knowledge contributed by the findings. This information could be beneficial to studies such as mine because the results provide guidance for interventions for the development of educators, such as training and support.

The finding of teacher self-efficacy being positively related to online teaching experience is an important one because teacher self-efficacy has been demonstrated to influence teaching satisfaction (Yerli & Yerli, 2017). This relates to my study because if the goal is to reduce the nursing and NP shortage, and with Lin et al. (2018) citing a faculty shortage as one of the causes of a shortage of nurses and NPs, keeping teachers

satisfied is important in keeping them teaching. Yerli and Yerli (2017) conducted a study on novice and experienced instructors teaching university "prep" classes in the traditional classroom, and they found that the novice instructors had lower self-efficacy and lower teaching satisfaction in comparison to experienced teachers. My study did not evaluate teacher satisfaction, but it is possible that the findings in this regard would be similar in relation to the online platform as those of Yerli and Yerli. Yerli and Yerli also found that years of experience influenced a teacher's self-efficacy. My study assessed the number of classes that an instructor had taught online; however, it should be noted that many classes are shorter than a year or even a semester, and online instructors may be learning something new with each set of students, which could be only 8 weeks apart from one another. My study expanded on the Yerli and Yerli study, in that they studied university prep class instructors in the traditional classroom, whereas I studied university nursing and NP instructors in the online classroom.

The findings concerning the relationship between instructors' online teaching self-efficacy and the number of classes previously taught online align with Bandura's (1977) theory. One of the components of self-efficacy is mastery. Instructors who have taught many classes previously have "mastered" the online component of teaching, so their self-efficacy is expected to be higher than those who have not. There are likely other components that went into experienced online instructors' higher self-efficacy, such as social persuasion, as they had convinced their classes that they had the ability to effectively teach a class online. Moreover, accomplishing the task of teaching online each term may have improved their self-efficacy. Additionally, they likely had many vicarious

experiences teaching alongside other instructors and observing their teaching styles. Lastly, seeing their students succeed may have positively affected how they interpreted and judged their own capabilities.

For the second question (concerning whether there is a relationship between the number of classes students had previously taken online and their online academic self-efficacy), the findings of no statistical significance appeared to contradict a few studies noted above. For example, Breen et al. (2016), studying 88 traditional and 51 nontraditional university students, found that previous ability and achievement was a main predictor of student self-efficacy. However, Koomen and Zee (2016), who studied university students in the traditional classroom, found that peer support was a key factor in keeping students engaged in classes, which subsequently showed improved student self-efficacy. The Kooman and Zee study was done in a traditional classroom where peer support was a much more available source; online learning does not have as much peer communication by its nature. The fact that both of these studies involved students in the traditional classroom may be the cause for the difference in results compared to my study.

Douglas et al. (2016) found that 51% of students preferred online classes when compared to the traditional classroom. However, that study was conducted with students who chose to take online classes when given the option. Douglas et al.'s study also demonstrated that students who preferred online classes excelled in them. My study involved students who were both given and not given the option of online coursework. The students who chose online classes were already enrolled in online classes, whereas

students who did not choose online instruction were originally enrolled in traditional classes until the COVID-19 pandemic occurred, leading their classes to be converted to an online format. The significant mix of students may be a factor in why there was no statistical significance found for RQ2 when compared to other studies that did find statistical significance for similar questions.

I was expecting some statistical significance for RQ2 based on Bandura's theory (1977) of the components of self-efficacy. Because of Bandura's theory and Bobridge et al.'s (2016) finding that nursing students who mastered skills in person had higher self-efficacy than nursing students who learned skills online, I figured that at least one of the elements, mastery, would be built into the number of classes that the students had previously taken online, and that there would be a relationship to students' online academic self-efficacy. However, I did not consider many factors in the study design. Although there was not a relationship between the number of classes previously taken online and the student's online academic self-efficacy, the study did not exclude other components that Bandura's theory would cover. An examination of the elements of physiological and affective states, vicarious experiences, and social persuasion and how they pertain to nursing and NP students' online academic self-efficacy could be beneficial in future studies.

For RQ3, I sought to determine whether there is a relationship between nursing and NP instructors' self-efficacy and their students' online academic self-efficacy. Again, I did not find statistical significance. I cannot say that this was surprising or not surprising, seeing as there were so few studies to compare my study to for this kind of

assessment. Ali et al. (2017) found that a student's emotional intelligence was a factor that influenced student online academic self-efficacy more than any individual instructor characteristic. Kim et al. (2020) found that the social networking of the instructor was of significant importance for instructor self-efficacy and its influence on students' academic self-efficacy. They also found that social networks such as LinkedIn and Facebook improved instructors' and students' community, helped them develop shared interests, and helped them achieve common teaching and learning goals, indicating that social persuasion is a factor in self-efficacy for teachers and on their students. Likewise, Koomen and Zee (2016) reported that peer support was a big influence on self-efficacy. Knežević Florić and Ninković (2018) found that different teaching styles had a major influence on students' academic self-efficacy.

Bandura's (1977) theory suggesting that mastery, physiological and affective states, vicarious experiences, and social persuasion are influencers of self-efficacy still applies to the findings for RQ3. Even though no statistical significance was found, the students likely still received vicarious experiences and some mastery of their technical and online skills over the length of the term. However, assessing for those changes was beyond the scope of this study, and such changes were not reflected in the data analysis results.

Limitations of the Study

There were multiple limitations to the study. The study involved a convenience sample, which inherently limited it. The issue that may have arisen was that only instructors and students who had higher self-efficacy chose to take part in the study.

Additionally, the study was conducted at only one university on the west coast, so the generalizability of the findings to other parts of the nation or world may be limited. Furthermore, the difficulty of the classes varied. Class difficulty may have had an effect on students' academic online self-efficacy, which could have skewed the results; however, controlling for class difficulty was beyond the scope of this study. Finally, the surveys relied on self-reporting; thus, I relied on the participants being honest with themselves and the survey. The analytical technique, as well as the convenience sample nature of the study, restricted the causal relationship between the variables. Because the surveys were taken at the beginning and end of the course, the students could choose to opt out at the end, which created missing data that had to be added in by "imputing the mean for missing data" (Cheema, 2014).

Recommendations

Future studies regarding the impact that instructors' training has on their online self-efficacy will important for nursing and NP schools seeking to develop and promote their programs. Bozkaya and Ucar (2016) found that teachers with higher self-efficacy have multifaceted teaching capabilities and have increased student learning, engagement, and desired outcomes.

Additionally, further research investigating whether the difficulty of a class influences students' online academic self-efficacy may be warranted. Given that this study did find a relationship between the number of classes that the instructor had previously taught online and the instructor's online self-efficacy, future studies should focus on the specifics of what other factors may increase instructors' online self-efficacy.

As discussed in the literature review, studies have found that students in undergraduate programs have feelings of being an "imposter," with lower self-efficacy (Aubeeluck et al., 2016); it is possible that harder classes can exacerbate those feelings. Because no relationship was found to be present between students' online academic self-efficacy and the number of classes that they had taken previously, further studies would be beneficial to assess what other elements contribute to student online academic self-efficacy.

For future studies, I recommend against using the methodological approach of a pre- and postterm analysis. This made for a much longer, more involved study that had significant risk of participants dropping out. A better approach may be to assess the instructors self-efficacy and the final grades of the students, with the students completing a survey on their academic online self-efficacy and where they rate their instructor's influence on it. Researchers should continue to investigate the balance between pedagogical and technological knowledge that supports the development of teacher self-efficacy. Researchers should also continue to investigate the role of learners' self-efficacy in relation to teachers' self-efficacy, and whether teachers' self-efficacy in online education differs fundamentally from teachers' self-efficacy in the traditional classroom.

Implications

In this study, I assessed the relationship between the number of classes taught and instructor self-efficacy, and the number of classes previously taken by the student and their self-efficacy and compared it to the instructor's self-efficacy. Although I rejected the null hypothesis for only one of the research questions, I did find a relationship between the number of classes previously taught and the instructors' online teaching self-

efficacy. The literature has shown that higher teacher self-efficacy leads to a broader range of teaching styles (Knežević Florić & Ninković, 2018); an increase in student learning engagement and desired outcomes (Bozkaya & Ucar, 2016); and higher job satisfaction, lower stress, and lower instructor burnout (Abernathy, 2018). The findings of this study showed a relationship between number of classes previously taught and teacher self-efficacy, so if instructors are given special training and possibly mock classes, they may be able to reach higher self-efficacy with less classes taught. Helping instructors reach higher self-efficacy sooner may result in them being more satisfied with their jobs, using multiple teaching styles, and continuing to teach. The insufficient number of nurse and NP faculty nationwide has been cited as one of the reasons for the shortage of nurses and NPs (Lin et al., 2018). If instructors can be helped in reaching higher self-efficacy sooner by giving them mock classes and increasing the total number of classes previously taught, it may be possible to keep them teaching, as they will have greater job satisfaction. This could help to reduce the nurse and NP shortage.

Conclusion

My study found a statistically significant relationship between how many classes a nursing or NP instructor had previously taught online and the instructor's online teaching self-efficacy. This finding demonstrates one of the components of Bandura's theory, mastery, and its influence on self-efficacy. I was unable to reject the null hypothesis for RQ2 and RQ3, as no relationship was found between the students' online academic self-efficacy and the number of classes that they had previously taken online,

and no relationship was found between the nursing and NP instructors' online teaching self-efficacy and their students' online academic self-efficacy.

With many programs moving online, this study is beneficial to the nursing education field because it contributes to knowledge of what does and does not influence nursing and NP students' online self-efficacy. Universities can use this knowledge to develop their online programs directing their resources away from instructors' online self-efficacy. Additionally, leaders of universities and schools can consider using their resources to research alternative influences on students' online self-efficacy.

References

Abernathy, D. F. (2018). Addressing skills, knowledge and self-efficacy in the online development of school leaders. *Journal for the Advancement of Educational Research International, 12*(1), 47–57. https://eric.ed.gov/?id=EJ1209444

Abston, K. A., & Bryant, P. C. (2021). Compensation and benefits in a pandemic and post pandemic world: Introduction to *Compensation & Benefits Review*, Volume 53, Issue 1. *Compensation & Benefits Review, 53*(1), 3–7. https://doi.org/10.1177/0886368720953347

Adebisi, A., & Oyeleke, O. (2018). Promoting effective teaching and learning in online environment: A blend of pedagogical and andragogical models. *Bulgarian Journal of Science and Education Policy*, *12*(1), 153–172.

Alegre de la Rosa, O., & Villar Angulo, L. (2016). Student success, self-efficacy, degree completion, dropout, attainment, and swot analysis for the University of La Laguna quality system. *Journal of Education Research, 10*(2), 109–129. https://luis-miguel-villar-angulo.es/wp-content/uploads/2017/04/Student-Success.pdf

Alexander, J., Grover, K., Turner, R., & Walters, S. (2017). Faculty perceptions related to teaching online: A starting point for designing faculty development initiatives. *The Turkish Online Journal of Distance Education*, *18*(4), 4–19. https://doi.org/10.17718/tojde.340365

Ali, N., Ali, O., & Jones, J. (2017). High level of emotional intelligence is related to high level of online teaching self-efficacy among academic nurse educators.

International Journal of Higher Education, *6*(5), 122–130. https://doi.org/10.5430/ijhe.v6n5p122

Alles, M., Groeschner, A., Holzberger, D., Schindler, A.-K., & Seidel, T. (2018). How systematic video reflection in teacher professional development regarding classroom discourse contributes to teacher and student self-efficacy. *International Journal of Educational Research*, *90*, 223–233. https://doi.org/10.1016/j.ijer.2018.02.003

Anderson, M. L., & Robinia, K. A. (2010). Online teaching efficacy of nurse faculty. *Journal of Professional Nursing, 26,* 168–175. https://doi.org/10.1016/j.profnurs.2010.02.006

Armellini, A., & Rodriguez, B. C. (2017). Developing self-efficacy through a massive open online course on study skills. *Open Praxis*, *9*(3), 335–343. https://doi.org/10.5944/openpraxis.9.3.659

Aubeeluck, A., Craft, J., Christensen, M., Fergusson, D., Knight, J., Stupple, E., & Wirihana, L. (2016). Do student nurses experience imposter phenomenon? An international comparison of final year undergraduate nursing students readiness for registration. *Journal of Advanced Nursing, 72*(11), 2784–2793. https://doi.org/10.1111/jan.13034

Aydın, S. (2015). An analysis of the relationship between high school students' self-efficacy, metacognitive strategy use and their academic motivation for learn biology. *Journal of Education and Training Studies, 4*(2), 53-59. https://doi.org/10.11114/jets.v4i2.1113

Baker, R., & Vaughn, L. (2008). Do different pairings of teaching styles and learning styles make a difference? Preceptor and resident perceptions. *Teaching and Learning Medicine*, *20*(3), 239-247. https://doi.org/10.1080/10401330802199559

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Prentice Hall.

Bandura, A. (1994). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, *28*, 117-148. https://doi.org/10.1207/s15326985ep2802_3

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Bandura, A. (2001). Social cognitive theory: An agentive perspective. *Annual Review of Psychology*, *52*, 1-26. https://doi.org/10.1146/annurev.psych.52.1.1

Barbaranelli, C., Caprara, G., Malone, P., & Steca, P. (2006). Teachers' self-efficacy beliefs as determinants of job satisfaction and students' academic achievement: A study at the school level. *Journal of School Psychology*, *44*(6), 473-490. https://doi.org/10.1016/j.jsp.2006.09.001

Barczyk, C., Buckenmeyer, J., Feldman, L., & Hixon, E. (2011). Mentoring university faculty to become high quality online educators: A program evaluation. *Online Journal of Distance Learning Administration, 14*(5). https://www.westga.edu/~distance/ojdla/winter144/hixon_Barczyk_Buckenmeyer_feldman144.html

Barnes, H. (2015). Exploring the factors that influence nurse practitioner role transition. *The Journal for Nurse Practitioners, 11*(2), 178-183. https://doi.org/10.1016/j.nurpra.2014.11.004

Bartimote-Aufflick, K., Bridgeman, A., Sharma, M., & Smith, L., & Walker, R. (2016). The study, evaluation, and improvement of university student self-efficacy. *Studies in Higher Education, 41*(11), 1918-1942. https://doi.org/10.1080/03075079.2014.999319

Bastiaens, T. J., & Weidlich, J. (2019). Designing sociable online learning environments and enhancing social presence: An affordance enrichment approach. *Computers & Education, 142*, 103622. https://doi.org/10.1016/j.compedu.2019.10362

Besser, E., Koehler, A., Lim, J., Richardson, J., & Strait, M. (2016). Instructors? perceptions of instructor presence in online learning environments. *International Review of Research in Open and Distributed Learning*, *17*(4). https://doi.org/10.19173/irrodl.v17i4.2330

Bobridge, A., Hofmeyer, A., & Leach, M. (2016). The impact of research education on student nurse attitude, skill and uptake of evidence-based practice: a descriptive longitudinal survey. *Journal of Clinical Nursing,* (12), 194-205. https://doi.org/10.1111/jocn.13103

Bong, M., Choi, H. J., & Joo, Y. J. (2000). Self-efficacy for self-regulated learning, academic self-efficacy, and internet self-efficacy in web-based instruction. *Educational Technology Research and Development, 48*(2), 5-17. https://doi.org/10.1007/BF02313398

Bornstein, M. H., Jager, J., & Putnick, D. L. (2017). II. More than just convenient: The scientific merits of homogenous convenience samples. *Monographs of the Society for Research in Child Development*, *82*(2), 13–30. https://doi.org/10.1111/mono.12296

Bozkaya, Y., & Ucar, H. (2016). Pre-service Efl teachers' self-efficacy beliefs, goal orientations, and participations in an online learning environment. *The Turkish Online Journal of Distance Education, 17*(2), 15-30. https://doi.org/10.17718/tojde.66088

Bradley, R. L., Browne, B. L., & Kelley, H. M. (2017). Examining the influence of self-efficacy and self-regulation in online learning. *College Student Journal, 51*(4), 518–530.

Brahm, T., & Pumptow, M. (2020). Students' digital media self-efficacy and its importance for higher education institutions: Development and validation of a survey instrument. *Technology, Knowledge and Learning*. https://doi.org/10.1007/s10758-020-09463-5

Brand, S., Faraji, P., Faraji, R., Lang, U. E., Holsboer-Trachsler, E., & Sadeghi Bahmani, D. (2018). Is emotional functioning related to academic achievement among university students? *Brazilian Journal of Psychiatry*, *40*(3), 290–295. https://doi.org/10.1590/1516-4446-2017-2434

Brannan, J. D., Long, J., & White, A. (2016). Learning styles: Impact on knowledge and confidence in nursing students in simulation and classroom. *International Journal of Nursing Education Scholarship, 13*(1), 63-73. https://doi.org/10.1515/ijnes-

2015-0052

Breen, M., Clark, L., Howell, L., Johnson, M. L., & Taasoobshirazi, G. (2016). Motivations of traditional and nontraditional college students: From self-determination and attributions, to expectancy and values. *Journal of Continuing Higher Education, 64*(1), 3–15. https://doi.org/10.1080/07377363.2016.1132880

Buchner, A., Erdfelder, E., Faul, F., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160. https://link.springer.com/article/10.3758/BRM.41.4.1149

Calkins, C., Part, R., & Perera, H. N. (2019). Teacher self-efficacy profiles: Determinants, outcomes, and generalizability across teaching level. *Contemporary Educational Psychology, 58*, 186–203. https://doi.org/10.1016/j.cedpsych.2019.02.006

Cavanagh, M. S., & Ma, K. (2018). Classroom ready? Pre-service teachers' self-efficacy for their first professional experience placement. *Australian Journal of Teacher Education, 43*(3), 134–151. https://doi.org/10.14221/ajte.2018v43n7.8

Chan, J. C. Y., & Lam, Y. Y. (2017). Effects of social persuasion from parents and teachers on Chinese students' self-efficacy: an exploratory study. *Cambridge Journal of Education*, *47*(2), 155–165. https://doi.org/10.1080/0305764x.2016.1143448

Cheema, J. R. (2014). A review of missing data handling methods in education research. *Review of Educational Research, 84*(4), 487-508.

https://doi.org/10.3102/0034654314532697

Chen, Y., & Chung, T. (2018). Exchanging social support on online teacher groups: Relation to teacher self-efficacy. *Telematics and Informatics, 35*(5), 1542-1552. https://doi.org/10.1016/j.tele.2018.03.022

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Lawrence Erlbaum Associates.

De la Rosa, R., & Jun, S. (2015). Faculty training and student perceptions: Does quality matter? *Internet Learning Journal, 4*(1), 56-71.

Demidenko, E. (2019). Advanced statistics with applications in r. John Wiley & Sons. 255-290. https://doi.org/10.1002/9781119449195

De Smul, M., Devos, G., Heirweg, S., Van Keer, H., & Vandevelde, S. (2018). How competent do teachers feel instructing self-regulated learning strategies? Development and validation of the teacher self-efficacy scale to implement self-regulated learning.*Teaching & Teacher Education,71*, 214–225. https://doi.org/10.1016/j.tate.2018.01.001

Dickenson, P. (2016). The flipped classroom in a hybrid teacher education course: Teachers' self-efficacy and instructors' practices. *Journal of Research in Innovative Teaching*, *9*(1), 78.

D'Innocenzo, L., Klock, E. A., LePine, J. A., Luciano, M. M., & Mathieu, J. E. (2020). The Development and Construct Validity of a Team Processes Survey Measure. *Organizational Research Methods, 23*(3), 399–431. https://doi.org/10.1177/1094428119840801

Douglas, T., Dowlman, M., Eri, R., Iglesias, M., & Salter, S. (2016). The feedback process: Perspectives of first- and second-year undergraduate students in the disciplines of education, health science and nursing. *Journal of University Teaching and Learning Practice*, *13*(1). http://dx.doi.org/1541

Entangled Solutions. (2020). *COVID-19: Higher education resource center*. https://www.entangled.solutions/coronavirus-he/

Erdogan, B. H., & Ozerbas, M. A. (2016). The effect of the digital classroom on academic success and online technologies self-efficacy. *Journal of Educational Technology & Society*, *19*(4), 203–212. https://www.learntechlib.org/p/192663/.

GPower. (2017). GPower manual. https://stats.idre.ucla.edu/other/gpower/multiple-regression-power-analysis/

Godfrey, C., Luctkar-Flude, M., Lukewich, J., & Warren, J. N. (2016). A systematic review of the effectiveness of simulation-based education on satisfaction and learning outcomes in nurse practitioner programs. *Nurse Education Today, 46*, 99-108. https://doi.org/10.1016/j.nedt.2016.08.023

Gonzalez, K., & Maxwell, G. M. (2018). Mathematics teachers' efficacy, experience, certification and their impact on student achievement. *Journal of Instructional Pedagogies*, *21*. https://eric.ed.gov/?q=source%3A%22Mathematics+teachers%E2%80%99+efficacy%2C+experience%2C+certification+and+their+impact+on+student+achievement.%22%22

Gregory, R., & Matindale, T. (2016). Faculty development for online instruction in

higher education. *thannual,* 213-230. https://members.aect.org/pdf/Proceedings/proceedings16/2016i/16_08.pdf

Hanson, J., Heaslip, G., Mazanov, J., Meacheam, D., & Prior, D. (2016). Attitude, digital literacy and self-efficacy: Flow-on effects for online learning behavior. *The Internet and Higher Education, 29*(1), 91-97. https://doi.org/10.1016/j.iheduc.2016.01.001

Health Resources and Services Administration. (2017). *Long-term services and supports nursing workforce demand projections, 2015-2030*. https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/hrsa-ltss-nursing-report.pdf

Health Resources and Services Administration. (2018). *National center for health workforce analysis*. https://bhw.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/technical-documentation-health-workforce-simulation-model.pdf

Hier, B. O., & Mahony, K. E. (2018). The contribution of mastery experiences, performance feedback, and task effort to elementary-aged students' self-efficacy in writing. *School Psychology Quarterly, 33*(3), 408–418. https://doi.org/10.1037/spq0000226

Hodges, C. B. (2018). Self-efficacy in instructional technology contexts. Springer International Publishing. https://doi.org/10.1007/978-3-319-99858-9

Hoy, A. W., & Tschannen-Moran, M. (2001). Ohio state teacher efficacy scale. *Psyctests*. https://doi.org/10.1037/t11400-000

Issenberg, S. B., Lima, E. J., & Roha, Y. S. (2016). Effects of an integrated simulation-based resuscitation skills training with clinical practicum on mastery learning and self-efficacy in nursing students. *Collegian Royal College Of Nursing, Australia*, *23*(1), 53–59. https://doi.org/10.1016/j.colegn.2014.10.002

Jackson, D. L., & McLellan, C. K. (2017). Personality, self-regulated learning, and academic entitlement. *Social Psychology of Education: An International Journal, 20*(1), 159–178. https://doi.org/10.1007/s11218-016-9357-7

Johnson, I. (2017). Female faculty role models, self-efficacy and student achievement. *College Student Journal*, *51*(1), 151–172.

Kim, H., Lee, J., & Oh, S. E. (2020). Individual characteristics influencing the sharing of knowledge on social networking services: Online identity, self-efficacy, and knowledge sharing intentions. *Behaviour & Information Technology, 39*(4), 379-390. https://doi.org/10.1080/0144929x.2019.1598494

Kirmizi, O. (2015). The interplay among academic self-concept, self-efficacy, self-regulation and academic achievement of higher education l2 learners. *Journal of Higher Education and Science, 5*(1), 32-45. https://doi.org/10.5961/jhes.2015.107

Knežević Florić, O. Č., & Ninković, S. R. (2018). Transformational school leadership and teacher self-efficacy as predictors of perceived collective teacher efficacy. *Educational Management Administration & Leadership, 46*(1), 49-64. https://doi.org/10.1177/1741143216665842

Koomen, H. M., & Zee, M. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40

years of research. *Review of Educational Research, 86*(4), 981-1015. https://doi.org/10.3102/0034654315626801

Koslowsky, M., Lev, S., & Tatar, M. (2018). Teacher self-efficacy and students' ratings. *International Journal of Educational Management*, *32*(3), 498-510. https://doi.org/10.1108/ijem-10-2016-0206

Kulikowich, J. M., & Zimmerman, W. A. (2016). Online learning self-efficacy in students with and without online learning experience. *American Journal of Distance Education*, *30*(3), 180–191. https://doi.org/10.1080/08923647.2016.1193801

Kundu, A. (2020). Toward a framework for strengthening participants' self-efficacy in online education. *Asian Association of Open Universities Journal*, *15*(3), 351–370. https://doi.org/10.1108/AAOUJ-06-2020-0039

Lederman, D. (2018). Online education ascends. *Inside Higher Ed.* https://www.insidehighered.com/digital-learning/article/2018/11/07/new-data-online-enrollments-grow-and-share-overall-enrollment

Li, Z., Jiang, T., Qin, L., Yan, Y., Zha, X., & Zhang, X. (2017). Decision quality and satisfaction: The effects of online information sources and self-efficacy. *Internet Research, 27*(4), 885-904. https://doi.org/10.1108/intr-04-2016-0089

Lin, V. W., Pforsich, H., Tai, D., & Zhang, X. (2018). United States registered nurse workforce report card and shortage forecast: A revisit. *American Journal of Medical Quality, 33*(3), 229–236. https://doi.org/10.1177/1062860617738328

Madrigal, D., & McClain, B. (2012). Strengths and weaknesses of quantitative and

qualitative research. https://www.uxmatters.com/mt/archives/2012/09/strengths-and-weaknesses-of-quantitative-and-qualitative-research.php

Mandernach, J., & Taylor, A. H., & Tobin, T. J. (2015). Evaluating online teaching: Implementing best practices. Jossey-Bass.

McLeod, S. (2020). Intelligibility in context scale: Cross-linguistic use, validity, and reliability. *Speech, Language and Hearing, 23*(1), 9-16. https://doi.org/10.1080/2050571X.2020.1718837

Moerbeek, M., & Teerenstra, S. (2015). *Power analysis of trials with multilevel data*. CRC Press. https://doi.org/10.1201/b18676

Moosa, V., & Shareefa, M. (2019). The impact of teachers' experience and qualification on efficacy, knowledge and implementation of differentiated instruction. *International Journal of Instruction*, *12*(2), 587–604. https://doi.org/10.29333/iji.2019.12237a

Online FNP Programs. (2019). https://www.onlinefnpprograms.com

Pajares, F. (2002). Overview of social cognitive theory and of self-efficacy. *Emory University.* http://people.wku.edu/richard.miller/banduratheory.pdf

Peck, B., & Terry, D. (2020). Academic and clinical performance among nursing students: What's grit go to do with it? *Nurse Education Today*, *88*. https://doi.org/10.1016/j.nedt.2020.104371

Rice, J., & Rojjanasrirat, W. (2017). Evidence-based practice knowledge, attitudes, and practice of online graduate nursing students. *Nurse Education Today, 53*, 48-53. https://doi.org/10.1016/j.nedt.2017.04.005

Rosenbaum, P. R. (2002). Observational studies. *Springer Series in Statistics*, 1-17, Springer. https://doi.org/10.1007/978-1-4757-3692-2_1

Survey Monkey. (2020). Security statement. https://www.surveymonkey.com/mp/legal/security

Tate, E. (2017). Addressing the nursing shortage. *Inside Higher Ed.* https://www.insidehighered.com/digital-learning/article/2017/04/26/online-programs-offer-academic-progression-nurses

Thomas, D. (2014). Factors that influence college completion intention of undergraduate students. *Asia-Pacific Education Researcher, 23*(2), 225–235. https://doi.org/10.1007/s40299-013-0099-4

Vayre, E., & Vonthron, A. (2017). Psychological engagement of students in distance and online learning: Effects of self-efficacy and psychosocial processes. *Journal of Educational Computing Research, 55*(2), 197-218. https://doi.org/10.1177/0735633116656849

Vilkas, B. J. (2017). A quantitative study of online faculty members' self-perceived teaching efficacy. Retrieved from ProQuest Dissertations & Theses Global.

Walravens, S. (2020). *Coronavirus Forces Millions of Students Online, But Not All May Benefit.* Forbes. https://www.forbes.com/sites/russellflannery/2020/04/15/act-globally-chinas-fosun-international-guo-guangchang-on-lessons-from-covid-19-pandemic/#3f047f077bde

Washburn, M., & Zhou, S. (2018). Teaching note—technology-enhanced clinical simulations: Tools for practicing clinical skills in online social work programs.

Journal of Social Work Education, 54(3), 554–560. https://doi.org/10.1080/10437797.2017.1404519

Wyatt, M. (2015). Using qualitative research methods to assess the degree of fit between teachers' reported self-efficacy beliefs and their practical knowledge during teacher education. *Australian Journal of Teacher Education*, *40*(1). https://doi.org/10.14221/ajte.2015v40n1.7

Yerli, S., & Yerli, K. (2017). The differences between novice and experienced university prep-class teachers' classroom management, self-efficacy perceptions and students' academic achievement level. *International Journal of Language Academy*, *5*, 123–133. http://dx.doi.org/10.18033/ijla.3646.

Yoo, J. H. (2016). The effect of professional development on teacher efficacy and teachers' self-analysis of their efficacy change. *Journal of Teacher Education for Sustainability, 18*(1), 84-94. https://doi.org/10.1515/jtes-2016-0007

Appendix A: Michigan Nurse Educators Sense of Efficacy for Online Teaching Instrument

Scale of 1-9. 1 means nothing 3 is very little 5 is some 7 is quite a bit and 9 is a great deal

1. How much can you do to help your students think critically in an online class?
2. How much can you do to get through to disengaged students in an online class? (e.g. passive learners who might lurk online, but fail to actively contribute to their own learning.)
3. How much can you do to control disruptive behavior (e.g. disrespectful posting or failure to adhere to outline policies for posting) in an online environment?)
4. How much can you do to motivate students who show low interest in online work?
5. To what extent can you make your expectations clear about student behavior in an online class?
6. How much can you do to get students to believe that they can do well in an online class?
7. How well can you respond to difficult questions from online students?
8. How well can you establish routines (e.g. facilitate or moderate student participation) in coursework to keep online activities running smoothly?)
9. How much can you do to help online students' value learning?
10. How much can you gauge student comprehension of what you have taught in an online course?
11. How well can you craft questions or assignments that require students to think by relating ideas to previous knowledge and experience?
12. How much can you do to foster individual student creativity in an online course?
13. How much can you do to get students to follow the established rules for assignments and deadlines during an online class?
14. How much can you do to improve the understanding of a student who is failing in an online class?
15. How much can you do to control students dominating online discussions?
16. How well can you establish an online course (e.g. convey expectations; standards; course rules) with each group of students?
17. How much can you do to adjust your online lessons for different learning styles?
18. How much can you do to use a variety of assessment strategies for an online course?
19. How well can you develop an online course that facilitates student responsibility for online learning?
20. To what extent can you provide an alternative explanation or example when students in an online class seem to be confused?

21. How well can you respond to defiant students in an online setting?
22. How well can you structure an online course that facilitates collaborative learning?
23. How well can you structure an online course that provides good learning experiences for students?
24. How well can you provide appropriate challenges for very capable students in an online environment?
25. To what extent can you use knowledge of copyright law to provide resources for online students?
26. How well can you navigate the technical infrastructure at your institution to successfully create an online course?
27. How well can you navigate the technical infrastructure at your institution to successfully teach an established online course?
28. To what extent can you use asynchronous discussions to maximize interactions between students in an online course? (Asynchronous means not online at the same time)
29. To what extent can you use synchronous discussions (e.g. same time chat rooms) to maximize interaction between students in an online course?
30. How well can you use computers for word processing, internet searching and e-mail communication?
31. To what extent does your comfort level with computers facilitate participation in online teaching?
32. How well can you navigate the internet to provide links and resources to students in an online course?

Appendix B: Online Academic Success Indicators Scale

Select a score of 1-7 while answering the questions about your ability to navigate an online course.

A score of 1 is not confident a score of 3 is not too confident a score of 5 is pretty confident and a score of 7 is very confident.

In regard to taking an online collegiate class, how confident are you that you could successfully...

1. Effectively use a calendar/planner to organize your online classwork.
2. Manage your time on the computer.
3. Maintain focus on an assigned task (ex: not surfing other webpages while working on an assignment).
4. Learn material presented in an online class.
5. Eliminate distractions that interfere with a suitable learning environment.
6. Upload an assignment.
7. Post a comment on a discussion board.
8. Post a reply on a discussion board.
9. Compose an email.
10. Meet online deadlines for course requirements.
11. Download and save files posted for course.
12. Communicate/network with classmates via email.
13. Communicate/network with classmates via discussion boards.
14. Problem solve when experiencing technical difficulties.
15. Ask for help from your online teacher.
16. Ask for help from your online peers.
17. Take notes on presented material during an online class.
18. Take a test or quiz online.
19. Motivate yourself to persevere throughout the length of the online course.
20. Use external resources to gather information for class (ex: library).
21. Recall information presented in the online course at a later date.
22. Receive a good grade.
23. Understand material presented in the online course.

Appendix C: Letter of Intent

To: Head of Nursing Department

My name is Pauline Stoltzner and I am a Ph.D. student in the education track and am specializing in educational technology and design at Walden University. I am conducting a research study regarding the relationship between nursing and nurse practitioner instructors' online self-efficacy to their students' academic self-efficacy.

The study will be conducted as a quantitative correlational cohort design, as a convenience sample. Instructors will be contacted via email and those who participate will be asked to post a provided letter to their weekly announcement asking for student volunteers for the study. The study will consist of Likert-type scale surveys that the participants will easily be able to access online. The instructors' online self-efficacy will be assessed using the Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) Instrument (Anderson & Robinia, 2010), the survey will be taken at the beginning of the course and will take approximately five to ten minutes to complete. The student students' academic self-efficacy will be assessed using a modified Online Academic Success Indicators Scale (OASIS) instrument (Bradley, Browne, & Kelley, 2017) at the beginning and end of the course, the survey will take approximately five minutes to complete. I have obtained permissions to use both surveys (written permissions attached).

There are no perceived risks to students or the instructors. The student will be asked to provide the last six numbers of their drivers license or identification card and the number of online classes they have previously taken so that I can correctly match the pre and posttest responses to the data collected the student responses will be paired to their instructor via a unique link given to the instructor to post. The consent form and surveys will be internet based through Survey Monkey. Survey Monkey does not retain any collected data, participant identity, or any rights to the information collected during the study. The study will contribute to the ongoing knowledge base about online instruction and learning.

I am asking permission to conduct this study with the participation of UNR faculty and students, and also that you encourage faculty to participate to increase participation. It would also great appreciate if you would send out a letter to the instructors to inform them I will be sending them an email to ask for participation.

Thank you for your time.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix D: Email to Instructors

Dear nurse and nurse practitioner educators,

My name is Pauline Stoltzner and I am a Ph.D. student in the education track and am specializing in educational technology and design at Walden University. I am writing to invite you to participate in a research study regarding the relationship between nursing and nurse practitioner instructors' online teaching self-efficacy to their students' academic self-efficacy.

If you agree to be in this study, you will be asked to complete an online survey that takes approximately 7-10 minutes. I would ask that you complete the study any time from now until the 14th day of the fall term. I would also ask that you post a letter I will provide you in your announcements asking your students to also participate in the study, their survey takes approximately 5-7 minutes to complete. All replies are confidential, and you may choose to exit the survey at any time. Your name will not be needed on the survey because the link I send you to post will be unique to your class so that I can correctly match your students to you for the data set. To have a good effect size and get statistical significance I need a high degree of participation so would deeply appreciate your time. If you have any questions or concerns, please feel free to contact me at xxx-xxx-xxxx or at myemailaddress.com. To begin the survey, please click the survey link:

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix E: Initial Letter to Students

Dear Students,

My name is Pauline Stoltzner and I am a Ph.D. student in the education track and am specializing in educational technology and design at Walden University. I am writing to invite you to participate in a research study regarding the relationship between nursing and nurse practitioner instructors' online self-efficacy to their students' academic self-efficacy. The study will contribute to the ongoing knowledge base about online instruction and learning.

If you agree to be in this study, you will be asked to complete an online survey, that takes approximately 5-7 minutes, by day seven of week two and again by day seven of week sixteen. The survey will be open for fourteen days each time and I will write a letter to remind/ask that you complete the survey again in week fifteen. I ask that if participate in the study that you commit to completing the survey twice, otherwise the data may end up being inaccurate and incomplete which could skew the results.

All replies are confidential, and you may choose to exit the survey at any time. You will only be asked to provide the last six numbers of your driver's license or identification card and the number of the classes you have previously completed online so that I can correctly match your pre and posttest responses to the data collected. Your survey will be paired to your instructor by accessing the link posted. To have a good effect size and get statistical significance I need a high degree of participation so I would deeply appreciate

your time. If you have any questions or concerns, please feel free to contact me at xxx-xxx-xxxx or at myemailaddress.com. To begin the survey, please click the survey link:

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix F: Email to Instructors with Second Letter to Students

Dear Nursing and Nurse Practitioner instructors,

First, let me take the time to express my deepest gratitude in your participation in the study. It is week seven of the term and with next week being the conclusion of the term I ask that you place the attached letter to the students in your week fifteen announcement. The survey will only be open for fourteen days, so it is time sensitive, and completion by the students who participated is vital to obtain the most accurate complete data for the study.

Again, I very much appreciate your help and participation in the study. I will provide a copy of the completed study to all instructors who participated via email and will make the study available to the UNR library for the students to access.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix G: Second Letter to Students

Hello students!

Congratulations on your completion of this term. It is week fifteen, which means the end of the term. I want to thank all those who are participating in the study regarding the relationship between nursing and nurse practitioner instructors' online teaching self-efficacy to their students' academic self-efficacy. For complete and accurate data for the study, I ask that all those who completed the survey in week one and two, take the five minutes to complete the survey again.

As before, all replies are confidential, and you may choose to exit the survey at any time. You will only be asked to provide the last six numbers of your drivers license or identification card and the number of classes you have completed online previous to this class so that I can correctly match your pre and posttest responses to the data collected. Your name and your instructors name is for correct data set creation only and once the data sets are completed the names will be completely disposed of and not be part of the study keeping the responses and data confidential.

The survey will only be open for fourteen days, from day one of week fifteen to day seven of week sixteen. I know you are all very busy, especially at the end of the term, and I greatly appreciate your time. At the completion of the study the results and paper will be made available in the UNR library online. If you have any questions or concerns, please feel free to contact me at xxx-xxx-xxxx or at myemailaddress.com. To begin the survey, please click the survey link:

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix H: Reminder Letter to Instructors 2 Weeks Before Term

Dear Nursing and Nurse Practitioner instructors,

It is approaching the start of the next term and is only two weeks away. I know you are all very busy grading and preparing for the final exams, however, I am still in need of your help in the participation of my study. As a reminder the research study is regarding the relationship between nursing and nurse practitioner instructors' online teaching self-efficacy to their students' academic self-efficacy. If you agree to be in this study, you will be asked to complete an online survey that takes approximately 5-10 minutes. I will also ask you post an announcement, which I will send you, to post in your class asking for student participation. I really appreciate all of your time and effort helping me complete my study. Please click this link ---------- and read the informed consent, if you agree click agree and the survey will begin.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix I: Reminder Letter to Instructors 1 Week Before Term

Dear Nursing and Nurse Practitioner instructors,

It is approaching the start of the next term and is only one week away. I know you are all prepping for the next term while also trying to relax. So far, I have had a decent amount of the instructors respond, however, I am still findings myself falling short of the number of instructors needed for this study to be strong. As a reminder the research study is regarding the relationship between nursing and nurse practitioner instructors' online self-efficacy to their students' academic self-efficacy. If you agree to be in this study, you will be asked to complete an online survey that takes approximately 5-10 minutes. I will also ask you post an announcement, which I will send you, to post in your class asking for student participation. I really appreciate all of your time and effort helping me complete my study. Please click this link ---------- and read the informed consent, if you agree click agree and the survey will begin.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix J: Reminder Letter to Instructors to Post the Student Announcement

Dear Nursing and Nurse Practitioner instructors,

I cannot express how appreciative I am that you are helping me complete my study and have taken the survey. The start of the term is tomorrow, and I ask that you post the announcement to the students asking for their participation as well. I know this can be a busy time, and I truly value the time you are taking to post these announcements in your classes.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix K: Midweek Student Reminder

Dear Nursing and Nurse Practitioner instructors,

I appreciate all of your time you have put into helping me complete my study, I ask that you post this letter to the students in your announcements today:

> Hello Students!
>
> I hope you are all familiarizing yourselves with the course and the contents. I have had some students take the survey so far but am still very short of my goal to have an applicable and strong study. I know doing one more thing in the midst of you week one can be daunting, but it is to help advance the nursing field with research, something you are all working to achieve within yourselves. I ask that you take the five minutes to complete the survey Please click this link ---------- and read the informed consent, if you agree click agree and the survey will begin.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix L: End-of-Week Student Reminder

Dear Nursing and Nurse Practitioner instructors,

I appreciate all of your time you have put into helping me complete my study, I ask that you post this letter to the students in your announcements today:

> Hello Students!
>
> It is the last day of week two, for all of you who have taken the survey THANK YOU!!! I have had a good number of students take the survey so far but am still just shy of my goal to have an applicable and strong study. I know doing one more thing in the midst of you week one can be daunting, but it is to help advance the nursing field with research, something you are all working to achieve within yourselves. I ask that you take the five minutes to complete the survey. Please click this link ---------- and read the informed consent, if you agree click agree and the survey will begin.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix M: Email to Instructor, Beginning of Week 8

Dear Nursing and Nurse Practitioner instructors,

My study is nearly complete, I now only need the students who took the initial survey (pretest) to now take the second survey (posttest). I just need your help a little bit more. If you could please post the attached letter to the students in your announcements, I would greatly appreciate it.

Sincerely,

Pauline Stoltzner APRN, FNP-BC

Appendix N: Permission to Use Online Academic Success Indicators Scale

Permission to use OASIS tool for study
Inbox x

Pauline Stoltzner Feb 1, 2020, 7:54 PM (1 day ago)
toeditor

To Whom it may concern:
I am in the midst of completing my dissertation for my Ph.D. in education with a specialization in technology and design. My dissertation is assessing if there is a relationship between nursing and nurse practitioner instructors online self-efficacy to their students academic self-efficacy taking online classes. I came across the OASIS scale in the article "Examining the influence of the self-efficacy and self-regulation in online learning" written by Rachel Bradley, Blaine Browne, and Heather Kelley, and believe this would be the perfect scale for my study. I am writing to ask for permission to use this scale for my study.

Thank you,
Pauline Stoltzner

EDITOR 2:17 AM (20 hours ago)
to me

Approved.

Phillip Feldman, Ed.D.
Editor in Chief

Project Innovation
Publishers of COLLEGE STUDENT JOURNAL, READING IMPROVEMENT and EDUCATION
PO Box 8508
Mobile, AL 36688

Appendix O: Permission to Use Michigan Nurse Educators Sense of Efficacy for Online Teaching Instrument

survey use permission
Inbox x

Pauline Stoltzner Sun, Feb 2, 12:28 PM

to krobinia

Dear Dr. Kristi Robinia,

I am a nurse practitioner and I am in the midst of completing my dissertation for my Ph.D. in education with a specialization in educational technology and design. My dissertation is assessing if there is a relationship between nursing and nurse practitioner instructors' online self-efficacy to their students' academic self-efficacy taking online classes. After completing a thorough literature review, I am convinced the Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT) survey created by you in your study titled Online teaching and efficacy of nurse faculty would be the perfect scale for my study to assess the instructors. I am writing to ask for permission to use this survey for my study. You would be completely credited for the scale. Your permission would also confirm that you own the copy right to the MNESEOT survey. Please let me know if these arrangements meet with your approval to use the survey. I can be reached at any of the below-provided emails, address, or phone number.

Sincerely,
Pauline Stoltzner, APRN, FNP-BC, MSN

Kristi Robinia Mon, Feb 3, 7:27 AM

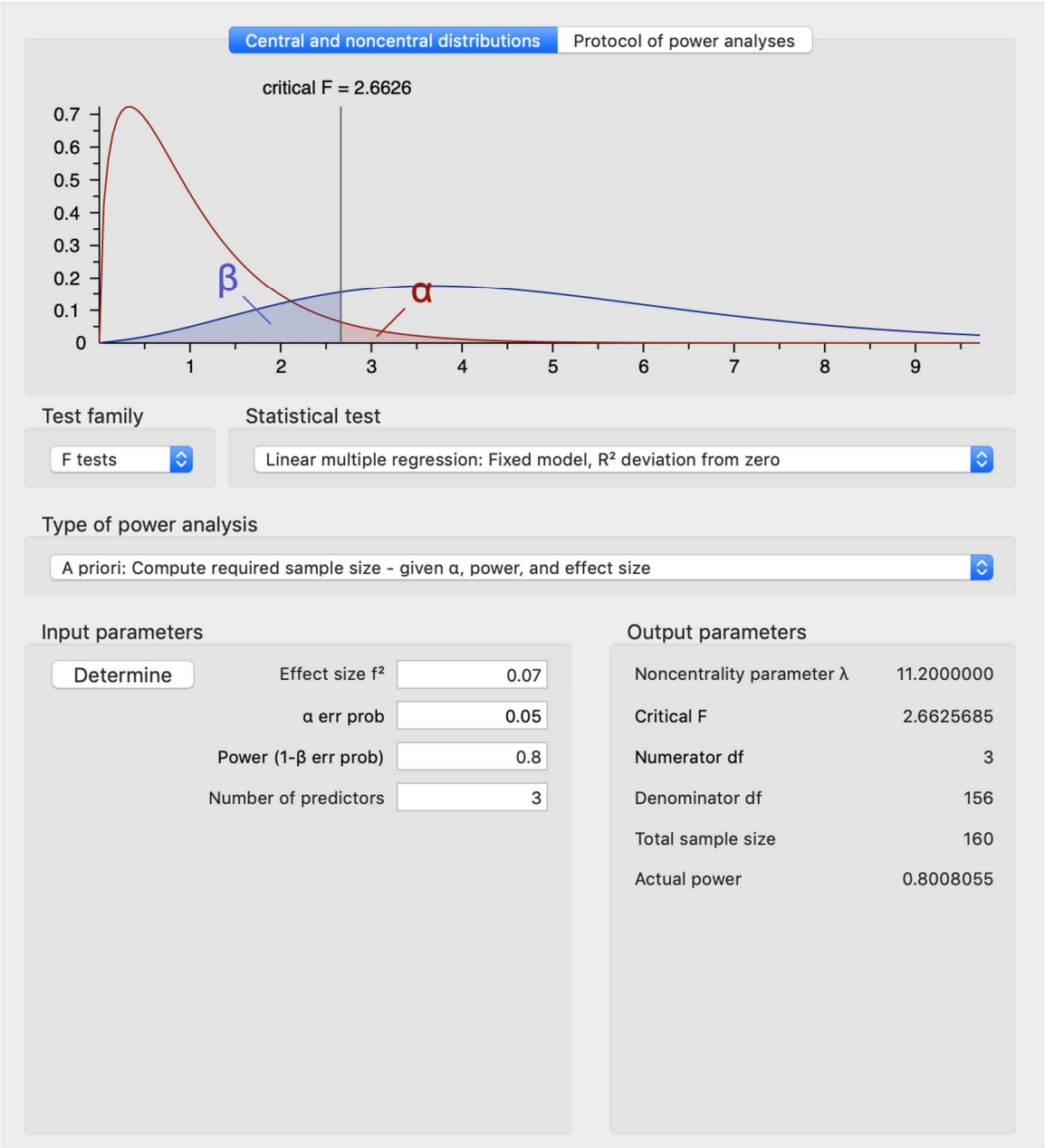
to me

Dear Pauline:

You are welcome to use and/or modify the tool for your own research. Good luck with your work!

Sincerely,
Kristi Robinia PhD, RN
Associate Dean and Director | School of Nursing

Appendix P: Power Analysis



Appendix Q: Week-by-Week Process of Study

Step One	IRB proposal approval
Step Two	Send email to instructors asking for participation
Step Three	Two weeks before term start, I will look in survey monkey and see what instructors have taken the survey and who has not. I will send the letter for the students (Appendix E) to the instructors who have taken the survey to post in their class in the week one announcement. I will also send an email to the instructors who have not done the survey yet (Appendix H).
Step Four	One week before term start, I will look in survey monkey and see what instructors have taken the survey and who has not. I will send the letter for the students (Appendix E) to the instructors who have taken the survey to post in their class in the week one announcement. I will also send an email to the instructors who have not done the survey yet (Appendix H).

Step Five	The day before the term starts, I will send an email to all of the instructors who have taken the survey reminding them to post the letter to their students (Appendix E) in the announcements.
Step Six	I will send a letter (Appendix K) fourth day of the first week to the instructors asking them to post it in their announcements.
Step Seven	Last day of the first week, I will send a letter (Appendix L) to instructors asking them to post final week one announcement to students.
Step Eight	I will enter the student's, who have taken the survey, email into the Survey Monkey and will set up email reminders directly to the students with links they can click on to access their posttest.
Step Nine	Day before the first day of week eight, I will send an email to the instructors (Appendix M) with an attached letter to

	the students asking them to take the posttest (Appendix G).
Step Ten	End of week eight, data collect ends and data analysis begins.