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Role Of Health Professions Faculty Leadership In Student Success: Exploring Student And Faculty Views

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ROLE OF HEALTH PROFESSIONS FACULTY LEADERSHIP IN STUDENT SUCCESS: EXPLORING STUDENT AND FACULTY VIEWS

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Abstract

High student achievement translates into high retention and graduation rates yet raising retention rates continues to be a challenge in U.S. health professions colleges. Institutions of higher education use a variety of program strategies to improve student success. Studies show that student success, although multi-factored, is most strongly influenced by faculty-student interactions. Radiologic technology programs have better retention rates compared to nursing programs but there is a lack of literature explaining this phenomenon. The purpose of this study was to explore how health professions faculty and students in radiologic technician and nursing programs understand faculty leadership behaviors related to the quality of faculty-student interactions and their impact on student success. Faculty and students from nursing and radiologic technology programs were interviewed to gather their views, and a cross-case analysis was used to compare similarities and differences between groups. Findings suggest that faculty and students of both divisions had similar understandings regarding the role of faculty leadership in student success. Both groups felt that faculty beliefs and faculty-student interactions were the most important factors in student success. Faculty noted that their perceptions, expectations, and prior experiences with students strongly influenced how they behaved towards students. Both faculty and student groups agreed that student self-efficacy was essential for student success and that it is vulnerable to fluctuation. Results indicated that negative experiences directly impacted student self-efficacy and success. Both student groups believed that faculty interactions impacted

student success but expressed marked differences in their academic experiences and in their opinions about the culture of their programs. Nursing students were predominantly negative while radiology students were predominantly positive. Improvement in student experiences and retention rates would require examining where negative experiences occur, and establishing a positive program culture and educational partnerships with healthcare facilities to promote a culture of collaboration and learning.

Keywords: Student success, self-efficacy, incivility, health professions education, faculty-student interactions, faculty-student relationship, negative experiences, positive experiences, faculty understanding, student understanding, nursing, radiologic technology, program culture

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

Student success is defined as academic achievement, satisfaction, acquisition of skills and competencies, persistence, attainment of learning outcomes, and career success (York et al., 2015), and is a topic of great relevance and concern in higher education (Education Advisory Board, 2017). High student achievement translates into high retention and graduation rates (Aljohani, 2016), which in turn strengthen a college's reputation and enhance the viability and longevity of the institution (Accreditation Commission for Education in Nursing, 2017; Huth, 2019; National Association of Student Nurses, 2019). Additionally, achieving these endpoints means the institution is meeting its obligation to its students (Joint Review Commission on Education in Radiologic Technology, 2014; New England Commission for Higher Education.org, 2019; Northwest Commission on Higher Education, 2020).

Due to low retention rates, colleges and universities allocate significant funding to the development and implementation of student support services (Education Advisory Board, 2017; U.S. Department of Education, Office of Postsecondary Education, Student Service, 2015). However, despite an 11% increase in spending per student for student support services, between 2005 and 2015, the average five-year graduation rates among public and private universities remain low, plateaued, and unchanged (52% in 2005 vs. 52.6% in 2015) (Education Advisory Board, 2017). According to the U.S. Department of Education, National Center for Education Statistics (2018), in all two-year post-secondary institutions, cohorts starting their programs between the years 2000 and 2014 had an average graduation rate of 29.76%.

Health professions colleges, and in particular nursing programs, are also concerned with retention and completion as nursing student attrition is a significant problem (Beauvais et al.,

2014; Jeffreys, 2015). Everett (2020) reports that “the average completion rate for students who enroll in nursing programs is 50%” (p.121). Furthermore, Jeffreys (2015) notes that student retention in nursing programs is not just an issue in the U.S. but is a global problem. In another health professions division, radiologic technology, retention is less problematic. Flores and Simonsson (2012) note that in 2011 the American Society of Radiologic Technologists reported attrition rates in U.S. radiologic technology programs at 23.3%. Although this is less of an issue in radiologic technology programs than in nursing programs, there is room for improvement. Despite the need to improve student success, and having high impact practices in place, higher education institutions and health professions programs still wrestle with achieving this goal (Everett, 2020; Flores & Simonsson, 2012).

Multiple factors influence college student success including the student’s individual characteristics (e.g., academic preparedness, finances, family support) and factors related to the college experience (e.g., culture, quality of instruction, faculty and peer interactions) (Horton, 2015, Trolian et al., 2016). Of these factors, one of the most critical is the quality of faculty-student interactions (Trolian et al., 2016). The direct relationship between the quality of faculty-student (F-S) interactions and student success is also seen in nursing programs (McEnroe-Pettite, 2011; O’Mara et al., 2014; Smith et al., 2016). Despite this, student-reported and faculty-reported incivility in nursing F-S interactions is widespread (Authement, 2016; Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015). Conversely, the literature is deficient in works focused on F-S interactions in radiologic technology programs. Of the few studies found, only one study indicates that negative F-S interactions occur in radiologic technology programs (Clark & Wagner, 2019).

Researchers studying higher education, including nursing programs, note that student support services are not enough by themselves to produce higher motivation and the sense of belonging that students need to be successful (Education Advisory Board, 2015; Everett, 2020; Means & Pyne, 2017). Without positive faculty interaction and engagement with students, it is unlikely that support services will have a positive impact on student achievement outcomes (Education Advisory Board, 2015; Everett, 2020; McEnroe-Petitte, 2011; Trolian et al., 2016). Even with abundant data which underscore that positive and meaningful faculty-student (F-S) interactions are necessary for student success, a retention problem remains. One possible explanation for this is that faculty do not fully comprehend the role they play and the impact of their leadership on student success (Everett, 2020).

Most college faculty do not receive formal pedagogical education before beginning their career in teaching (Brownell & Tanner, 2012; Mangum, 2017). Many college faculty step into the role of the instructor with little to no understanding about to how to teach effectively, how to create a positive learning environment, and why this is important for student success (Ebert-May, 2015; Mangum, 2017). Health professions faculty are hired directly from their professional field(s), frequently with little to no teaching experience (Lucas & Murry, 2011; Smethers et al., 2018). This may contribute to faculty not fully comprehending the impact of faculty behavior on learning (Fressola & Patterson, 2017). Furthermore, when faculty transition from professions where incivility is frequently experienced within the teaching setting, those experiences may affect their mode of communication with students (Ballard, 2018; Bolding et al., 2020; Sanner-Stiehr & Ward-Smith, 2017). If faculty do not understand their leadership role and do not possess effective communication and teaching skills, their behaviors and practices could contribute to negative faculty-student interactions (Beck, 2015). Conversely, when faculty do

comprehend how they affect student success and when they possess effective communication and teaching skills they can positively impact student success (Tucker & Stronge, 2005, Chapter 1). Works by Barnett (2011), Rosenthal (1994), Rubie-Davies (2006), Tinto (2017), and Trolian et al. (2016) affirm that faculty expectations and behaviors have a significant effect on student self-efficacy and achievement. Ebert-May et al. (2015) note that an effective strategy for improving teaching is faculty self-reflection. By changing how faculty perceive their role in student learning, changes in teaching practice are achieved.

For meaningful change to occur in F-S interactions and student achievement it is essential to learn how faculty and students see the role of faculty leadership in student success (Everett, 2020; Tinto, 2017). If this vital role is not recognized as critically influential (having meaning) it could explain a lower sense of motivation and responsibility on the part of faculty to improve student success (Leontiev, 2012). If viewed to have excessive influence, it may explain why some students attribute their failure to succeed to faculty (Kuhn, 2016). This information is vital for developing ways of educating faculty about this important relationship to improve student achievement. It is therefore of great importance to explore how health professions faculty understand the role that faculty leadership behavior has on student success as it may provide (a) foundational information for structuring faculty professional development in pedagogy, (b) foster more self-reflection behaviors in faculty, and (c) improve faculty-student interactions and student success.

Statement of the Problem

Low student success rates create a problem for health professions colleges and for students who desire to earn an education in certain health professions fields (DeAngelo, 2014; Higher Learning Commission, 2020; New England Commission of Higher Education, 2019;

Northwest Commission on College and Universities, 2020). For some health professions students, education is their only means to escape low economic status and to provide for themselves and their families successfully. Nursing programs suffer from low retention rates and, like dental hygiene and occupational therapy programs, are additionally vexed with a high incidence of incivility in faculty-student/student-faculty interactions (Ballard, 2018; Bolding et al., 2020; Jeffreys, 2015; Muliira et al., 2017). Conversely, this incivility phenomenon is either under reported or does not exist at a similar level in radiologic technology programs.

The literature demonstrates that, like all students, health professions students need faculty support and encouragement to have a sense of belonging and to know that their faculty believe in their ability to succeed (Edgar et al., 2019; Everett, 2020; Tinto, 2017; Trolian et al., 2016). Studies also show that even though it is widely understood that faculty play a critical role in student success, and many excellent student support initiatives exist, student retention remains a challenge (Education Advisory Board, 2015; Everett, 2020). This study addresses a component of this problem by focusing on how the role of faculty (e.g. faculty-student interactions) in student success is understood in two divisions of a health professions college.

Purpose of the Study

The purpose of this study is to explore how health professions faculty and students understand faculty leadership behaviors related to the quality of faculty-student interactions and its impact on student success. Specifically, this exploration seeks to reveal how these individuals view the influence that faculty perceptions, expectations, and behaviors towards students have on student self-efficacy and academic success. The views of students versus faculty may be quite different. Likewise, the viewpoints among faculty and students of nursing and radiologic technology programs may also be different. Understanding these similarities and dissimilarities

can give insight into whether disconnections exist that contribute to the perception of positive and negative F-S interactions, and their ultimate effect on student success. Knowledge gained from this study may be used to develop faculty professional development programs aimed at understanding the F-S interaction from the vantage point of students and instructors.

Research Questions

A collective case study approach was utilized to address the purpose of this study. This design allows for an in-depth exploration of and comparisons between faculty and student understandings of the role faculty play in student success (Merriam, 2009). Research questions for a collective case study approach should seek to answer how or why questions (Yin, 2018). To that end, this study addressed the following research questions:

- How do health professions faculty understand the role that faculty leadership (including perceptions, expectations, and behaviors towards students (PEBs)) plays in student success?
    - How do health professions faculty understand student self-efficacy?
- How do health professions students describe how faculty leadership impacts their self-efficacy and success?

Conceptual Framework

A conceptual framework provides a broad understanding of the foundation and purpose of the study. It guides the researcher in developing research questions, choosing a study design, and keeps the study bounded and based upon a theoretical framework supported by the literature (Ravitch & Riggan, 2017). It also helps to connect elements of the study and gives the reader an overview of the current literature on the study topic (Ravitch & Riggan, 2017). The conceptual framework of this study is comprised of three elements: (a) researcher interest in improving F-S

interactions and student success in health professions programs, (b) a thorough literature review exploring aspects of faculty leadership behaviors, the impact of F-S interactions on student success, and specific factors of faculty leadership that influence student success, and (c) a theoretical framework underpinning the path and structure of the study.

The theoretical framework of this study is comprised of Rosenthal's (1994) four-factor theory and Bandura's (1977a) self-efficacy theory. Furthermore, Rubie-Davies' (2006) work on teacher expectations and their effect on student self-perceptions will be introduced to support the connection between these two theories. Rosenthal (1994) proposes that when a teacher has favorable expectations of a student, they will modify their behaviors to create a more positive learning environment for that student. Conversely, when a teacher has unfavorable expectations of a student, they modify behaviors that create a more negative learning environment for that student (Rosenthal, 1994). Rubie-Davies' (2006) work extends Rosenthal's theory by demonstrating that a student's self-efficacy is affected positively or negatively depending on their teacher's expectations of them. High expectations positively affect student self-efficacy, and low expectations negatively affect self-efficacy. Bandura's (1977a) self-efficacy theory states that high self-efficacy is crucial for individuals to take on a new challenge, persist in the engagement of that challenge, and be successful. These theories undergird the premise of this study by showing how faculty perceptions, expectations, and behaviors have modifying effects on student self-efficacy and success. These theories are discussed in further detail in chapter two.

Assumptions, Limitations, and Scope

The scope of this study is limited to North College (pseudonym); a single, private, not-for-profit health professions college in the United States. The scope is further narrowed to include faculty and students in two divisions of the college: nursing and radiologic technology.

Reasons for including individuals from these divisions are that (a) these make up the two largest divisions in the college, and (b) the gap this study seeks to address is a lack of information about how faculty and students in nursing and radiologic technology understand the impact of faculty leadership on student success.

An assumption in this study is that a realistic comprehension of faculty and student understandings of how faculty leadership impacts student success could be gleaned from utilizing semi-structured interviews and focus group interviews. This is a reasonable assumption as a case study is a superb way to gather personal experiences and understandings of phenomena (Merriam, 2009). Another assumption is that faculty and students are capable of and willing to answer questions honestly, openly, and comprehensively both during interviews and on demographic questionnaires.

Four delimitations exist in this study. First, this study only focuses on one health professions college in the United States. The reasons for this are that the site made itself accessible to this researcher and that the time available to conduct this collective case study constrains this to a single site. Second, this study includes faculty from the health professions divisions of radiology and nursing divisions. Third, only senior radiology and nursing program students were chosen. This is because seniors have nearly two years of academic experience at this site. Furthermore, only radiology and nursing students were chosen to ensure they experienced interactions with the faculty groups selected for this study. The fourth delimitation is that this study concentrates primarily on the role that faculty play in student success. Numerous factors contribute to student success (Horton, 2015); however, due to the significant impact faculty have on student achievement and the time constraints of this study the influence of faculty leadership is the primary consideration.

A potential limitation of this study is investigator bias and reflexivity influencing dynamics in the interviews, as well as influencing data interpretations during analysis (Bloomberg & Volpe, 2016; Creswell, 2015; Ortlipp, 2008). Placing reminders on the interview protocol to remain neutral and keeping a reflexive journal during data analysis are methods that reduce the insertion of research bias and enhance confirmability (Bloomberg & Volpe, 2016; Ortlipp, 2008). Credibility and validity are also potential issues and are bolstered through the use of triangulation (collecting multiple sources of data). Member checking was conducted to ensure data aligned with and represented the opinions and experiences of participants.

Although results from this study are unique to the participants at this single health professions college, other health professions colleges that are in similar situations may glean a deeper understanding of their unique phenomenon (Merriam, 2009). In this way, the results of this study can be used to add to academia's understanding of how F-S interactions are perceived to affect student success in health professions programs; however, the results from a single college are too limited to provide generalizable findings for all colleges (Merriam, 2009).

Rationale and Significance

Low student retention in higher education across the United States is an issue affecting institutions as well as the students who fail to complete their degrees (Education Advisory Board, 2017; U.S. Department of Education, Office of Postsecondary Education, Student Service, 2015). Nursing programs, in particular, are challenged with low retention (Everett, 2020; Harris et al., 2014). The problem of low retention in nursing education could be a function of program rigor, requisite high standards, student characteristics, or a failure of institutions and faculty to provide sufficient support (average retention rates in U.S. radiologic technology programs are not available). Research shows that one of the most important factors in student

persistence, self-efficacy, and student academic achievement, is the quality of faculty-student interactions (Barnett, 2011; Trolian et al., 2016). Numerous scholars report that a high incidence of perceived negative faculty-student interactions occurs in certain medical and health professions programs; specifically medical schools and nursing programs (Brewer-Smyth, 2017; Mott, 2013; Sanner-Stiehr & Ward-Smith, 2017; Scott et al., 2015; Seibel & Fehr, 2018; Smith et al., 2016). Incivility is also widely experienced in level-two fieldwork of occupational therapy students (Bolding et al., 2020) and is also reported in dental hygiene education (Ballard, 2018) and physical therapy education (Stubbs & Soundy, 2013; Whiteside et al., 2014). However, only a few studies were found showing incivility exists in radiologic technology education programs (Clark 2017; Clarke & Wagner, 2019).

The significance of this study is multifold. Discovering how health professions faculty understand their role in student success provides vital information as to underlying factors of perceived positive and negative F-S interactions. This information may be used to enhance faculty education through professional development programs about how to improve F-S communications and student self-efficacy. Tinto (2017) notes the importance of ensuring faculty understand the importance of their influence on student self-efficacy and student success to bring about meaningful change. Learning how students understand the role faculty leadership plays in student success provides insight that can inform faculty about the importance of their role related to student success. Awareness of how students view this faculty role can also provide information to supplement first-year programs in helping students attain realistic expectations of elements influencing student success.

Employing a collective case study design with thematic and cross-case analysis allows for exploration of the unique understandings of faculty and students in the nursing and radiologic

technology programs, concerning the role faculty leadership plays in student success (Yin, 2018). Thematic analysis may reveal common concepts and views regarding this phenomenon. Furthermore, pattern matching and cross-case analysis allows for the identification of similarities and dissimilarities between students and faculty, among and between students and faculty of different divisions (Merriam, 2009). These data provide rich detail which aid in the creation of a full and comprehensive representation of the perceptions of faculty and students about the influence of faculty leadership on student success.

Definition of Terms

The following is a list of terms defined to assist the reader in understanding these terms within the context of this study:

Attrition: Attrition is defined as a departure from an institution of higher education before the completion of a degree. This is based on the definition used by Adusei-Asante and Doh (2016) for attrition rate, "… the proportion of students in a year who neither complete nor return in the subsequent year" (p. 2).

Faculty leadership/leadership behaviors: Faculty leadership/leadership behaviors refer to behaviors of faculty demonstrated toward students in faculty-student interactions and teaching practices (Lumpkin et al., 2014).

Incivility (faculty): Incivility is defined as disrespectful or rude actions or language, and actions that create a negative learning environment (Berger, 2000; Feldmann, 2001).

Medical imaging: "Medical imaging refers to several different technologies that are used to view the human body in order to diagnose, monitor, or treat medical conditions" (U.S. Food and Drug Administration, n.d., para. 1).

Retention: Retention refers to the continuation of undergraduate student enrollment from year one to year two, at the school in which they first enrolled.

Retention rate: Retention rate is defined as "the percentage of first-time undergraduate students who return to the same institution the following fall" (National Center for Education Statistics, n.d., Undergraduate retention and graduate rates section).

Self-efficacy: Self-efficacy is defined as the belief one has in their ability to complete a task or succeed in a given situation (Bandura, 1977a).

Student success: Student success is defined as academic achievement, satisfaction, acquisition of skills and competencies, persistence, attainment of learning outcomes, career success (York et al., 2015).

Conclusion

Student success and retention continue to be high-interest endpoints for institutions of higher education. Research demonstrates that a primary component of student success is the possession of self-efficacy (Bandura, 1977a, 1982; Rubie-Davies, 2006). Furthermore, scholars of various disciplines note that the quality of faculty-student interactions is one of the key influencers of student self-efficacy and achievement (Barnett, 2011; Trolian et al., 2016). Even so, in some academic fields perceived negative F-S interactions abound. Despite the allocation of resources to create tools and programs to improve student self-efficacy and success, retention rates in the United States have remained relatively flat (Education Advisory Board, 2015). One proposed reason for this failure of student support services is that faculty have yet to become meaningfully and positively engaged in these initiatives (Education Advisory Board, 2015).

Answers as to why faculty engagement falls short in this work may be found by exploring how they see the role of faculty leadership in enhancing student achievement.

Additionally, learning how students understand this role of the faculty may facilitate faculty's more profound understanding of the F-S interaction and its impact on students. The literature presents numerous studies about positive and negative behaviors within F-S interactions, and their effects on student learning, yet is scarce on studies that explore faculty and student understanding of this phenomenon. Comparisons of these understandings among faculty of different healthcare professions, and between faculty and students of nursing and radiologic technology programs, are also lacking. This study explores these understandings to better comprehend how faculty and students from different health professions understand the role of faculty in student success. The data bring meaningful insights to promote faculty clarity on their role in student achievement. Furthermore, information from this study will be useful in creating effective professional development programs to foster improved F-S interactions and increased student success.

CHAPTER 2: LITERATURE REVIEW

This literature review provides a summary of current knowledge regarding the influence faculty-student relations have on several key factors related to college student success. The information discussed draws from scholarly works that investigate the effect of faculty-student relationships on student motivation, sense of belonging, engagement, and self-efficacy. Furthermore, this review examines the influence of these internal characteristics of the student on a student's ability to succeed. The purpose of this review is to provide an in-depth understanding of these elements upon which an inquiry can be based that explores how faculty and students understand the role of faculty perceptions, expectations, and behaviors (PEBs) on student academic success in a health professions college.

Understanding faculty-student relations is important because they impact student achievement, student satisfaction, and persistence in postsecondary education (Barnett, 2011; Cardoso et al., 2011; Scarbrough, 2013). Student satisfaction, persistence, and success are essential to the student who is expending effort, sacrificing family and social time, and often spending considerable dollars to secure their education. These endpoints (student satisfaction, student persistence, and student success) are similarly important to institutions of higher education as they speak to the quality of its product, and they can impact its reputation and accreditation status (Higher Learning Commission, 2020; DeAngelo, 2014; New England Commission of Higher Education, 2019; Northwest Commission on College and Universities, 2020). Although general elements of faculty-student interactions, such as quality and frequency, are important, this review will primarily focus on the perceptions, expectations, and behaviors

(PEBs) of faculty related to these interactions, the effects these PEBs have on student mindset, motivation and belonging, and their impact on student achievement.

The current literature on faculty-student interactions is the result of early studies on student retention in higher education (Barnett, 2011; Tinto, 1975). According to Barnett (2011), the first studies to emerge focused mainly on student engagement in academics and extracurricular college-related activities as influencers of retention. Later studies explored the impact of finance, socioeconomic status, and the first-year experience on retention (Britt et al., 2017; Horton 2015; Witkow et al., 2015). More recent works focus less on academics and general engagement, and instead are directed toward faculty-student interactions and the specific internal characteristics of the student that are impacted by this relationship (Ingraham et al., 2018; Trolian et al., 2016). Findings from these studies suggest that many factors contribute to student success; however, faculty-student relations are one of the most significant influences (Trolian et al., 2016).

Student success, satisfaction, and persistence are of special interest to post-secondary institutions because these outcomes can affect their ability to attract new students, maintain enrollment numbers and continue to thrive (Accreditation Commission for Education in Nursing, 2017; Aljohani, 2016; Connelly, 2016; Higher Learning Commission, 2020; Huth, 2019; Joint Review Commission on Education in Radiologic Technology, 2014; National Association of Student Nurses, 2019; New England Commission for Higher Education.org, 2019; Northwest Commission on College and Universities, 2020). Understanding how faculty-student interactions affect student motivation and academic success is therefore important to these institutions. The factors contributing to the internal characteristics (motivation, persistence, belonging) in the student that determine academic success are also of interest to the faculty member who wishes to

help improve student success. Furthermore, students experiencing more positive interactions will presumably have a more satisfying and successful post-secondary experience (Kim & Sax, 2009), something important to the student but also the faculty and the institution.

The literature supports that student retention and student success are outcomes garnering significant attention in higher education (Aljohani, 2016). Health professions colleges, particularly those offering nursing programs, struggle to produce high retention and graduation rates (Beauvais et al., 2014; Jeffreys, 2015; Harris et al., 2014). Various factors can influence retention such as student characteristics, admissions standards, and rigor of the program. However, because the faculty-student interaction is identified as one of the most important factors in student satisfaction and student success (Barnett, 2011; Cardoso et al., 2011; Komarraju et al., 2010; Scarbrough, 2013), it is imperative to examine aspects of these interactions that lead to both positive and negative student outcomes. This chapter provides a conceptual framework to provide context for this research, a review of the literature focusing on elements of faculty-student interactions noted above, and the theoretical framework that structures and undergirds this study.

Conceptual Framework

A conceptual framework informs the researcher and the audience about the topic of study and its relationship to the literature. It also outlines the relevance of the study and defines the path taken to conduct the study (Ravitch & Riggan, 2017). The conceptual framework supports the researcher's formation and defense of their argument for the study, and helps to glue together and elucidate the interconnections between the beginning, middle, and end of the research story (Ravitch & Riggan, 2017). Further, a conceptual framework helps the researcher refine their

research questions and choose their methodology and analysis of data so that all components make sense within the scope of the study (Ravitch & Riggan, 2017).

The conceptual framework of this study is the culmination of (a) personal interest in faculty-student interactions and the welfare and success of students; (b) research contributed by numerous scholars offering invaluable insight on the topics of student success, retention, faculty-student interactions and the relationships between perception, expectations and behavior; and (c) scholarly theories derived from this body of works that provide a valid foundation and conduit within which this study is guided.

The ultimate goal of academic institutions and of the students they enroll is for students to gain a quality education and complete their chosen academic program. Research shows that many factors play a role in student success including student preparedness, intelligence, socioeconomic status, work and family obligations, and constraints (Horton, 2015; Terriquez & Gurantz, 2015). Additionally, a student's sense of belonging, academic self-perception (their belief regarding their ability to achieve), and the quality of faculty-student interactions also have a significant effect on a student reaching their academic goals (Tinto, 2017; Trolian et al., 2016). Although faculty might be aware of many of these factors, some may not realize just how much influence the quality of their interactions with students has on the individual student's success. Likewise, students may experience these interactions differently, and therefore, faculty behaviors may have a variable impact on student success (Chan et al., 2017; Stork & Hartley, 2009).

Much research exists on faculty-student (F-S) interactions, and findings show that this is one of the most influential factors in student success (Trolian et al., 2016). Despite these findings, certain faculty-student interactions continue to occur which negatively impact students (Ingraham et al., 2018; Siebel & Fehr, 2018). In higher education, this is predominantly reported

as an issue in health professions colleges, specifically in nursing programs (Ingraham et al., 2018; O'Mara et al., 2014; Siebel & Fehr, 2018; Smith et al., 2016). However, reports of negative faculty-student interactions are uncommon in radiologic technology programs. Identifying positive faculty-student interactions and finding ways to improve on these interactions can reduce student and faculty frustration and discouragement, and ultimately improve student success.

The health professions college in this study has a history of less than optimal completion rates in nursing (average 5-year retention rate for 2015-2019 is 75%, average graduation rate during this time was 71.6%) (personal communication, January 25, 2021). Retention and graduation rates have been less of a challenge in the radiologic technology program (average 5-year retention rate for 2015-2019 is 84.4%, completion rate for 2015-2019 is 88%) (personal communication, January 25, 2021). Despite the low retention and graduation rates in nursing, these are similar or better than other nursing programs in the United States (Beauvais et al., 2014; Everett, 2020; Flores et al., 2012; Jeffreys, 2015). Although there are potential reasonable explanations for the lower retention and graduation rates in nursing, such as rigor of the programs and professional standards, it is also possible that faculty-student interaction contributes to this, as it is the chief contributing factor to student success (McEnroe-Pettite, 2011; Trolian et al., 2016).

Student success and factors that influence student success have been widely studied and remain active subjects in education research. Foci such as motivation (Neto, 2015; Seibel & Fehr, 2018), Pygmalion effect (self-fulfilling prophecy) (Good et al., 2018), socioeconomic status and the first-year experience (Britt et al., 2017; Horton 2015; Witkow et al., 2015), belonging and engagement in the classroom (Baumeister & Leary, 1995; Tinto, 2017), the effect

of faculty perceptions and expectations on their behavior towards students (Rosenthal, 1994), and the effects on student's academic self-perceptions (Rubie-Davies, 2006) have taught us much about factors influencing academic achievement. Furthermore, all of these have some relationship connected to the faculty-student interaction and its effect on student success (Trolian et al., 2016).

Literature focused on F-S interaction challenges within nursing education in particular gives additional relevance to this study of health professions faculty and their interactions with students. Articles from several nursing and nurse education journals (the *Journal of Nursing Education,* the *Journal of Professional Nursing*, *Nurse Education Today*, the *Journal of Nursing Scholarship*, and *Nursing Management*) reveal what seems to be an embedded culture of incivility in nursing and nursing education (Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015). Findings from these studies demonstrate that nursing students experience perceived negative faculty-student interactions and that these incidences negatively affect student achievement (O'Mara et al., 2014; Scarbrough, 2012; Smith et al., 2016). These studies provided information that was invaluable for understanding the nursing F-S interaction at a deeper and more comprehensive level.

The discovery of these nursing studies catalyzed a specific search for faculty incivility occurring in medical imaging education. Given that medical imaging and nursing are both health professions and that degree programs are often offered at shared institutions, it seemed reasonable to expect a similar situation occurring in medical imaging education. Surprisingly, this search returned only a few studies reporting incivility in radiologic technology programs (Clark, 2017; Clark & Wagner, 2019). The scarcity of studies on this subject in medical imaging education reveals a gap in the literature and further supports the inclusion of radiologic

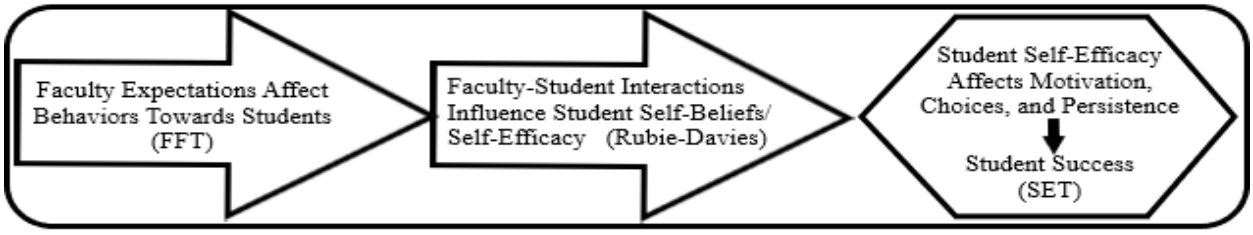
technology education in this study. This study prioritizes the gap related to the lack of research exploring how faculty of different divisions in health professions colleges understand their role in student success. To address these gaps, this study explores how faculty and students of nursing and medical imaging divisions understand the role of faculty leadership in student success.

Theoretical Framework

The theories utilized in framing this collective case study come from works by Rosenthal (1994), Rubie-Davies (2006), and Bandura (1977a) (Figure 1). Rosenthal's (1994) four-factor theory focuses on the effect that teacher expectations have on teacher behavior and how teacher behavior influences the learning environment. Rubie-Davies' (2006) work explores the effect of teacher expectations on student self-perceptions. Lastly, Bandura's (1977a) self-efficacy theory centers on how an individual's beliefs about their ability to succeed will directly affect their judgments (choices), motivation, level of effort, and persistence on task, which impact their ability to succeed. The theories proposed by these authors underlie the overall model of this study (Figure 2).

Figure 1.

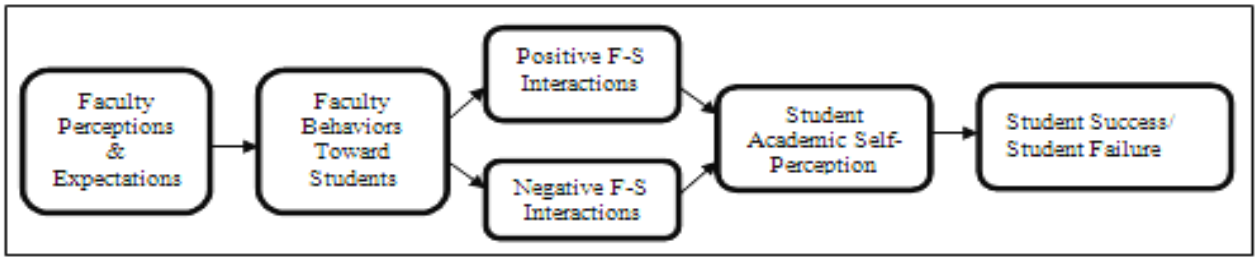
Theoretical Framework



Note: Rosenthal's four-factor theory (FFT) shows how faculty perceptions and expectations affect their behavior towards students, which in turn creates either positive or negative F-S interactions. According to Rubie-Davies (2006), faculty expectations (embedded in the F-S interaction) modify student self-expectations and beliefs about their academic ability, which in turn affects student success as noted in Bandura's self-efficacy theory (SET) (1977a).

Figure 2.

Study Model



Note: Based on works by Rosenthal (1994), Rubie-Davies (2006) and Bandura (1977a), faculty expectations and perceptions of students affect how they behave towards students. These behaviors affect the quality of the F-S interaction, which in turn affects the student's beliefs about their ability to succeed. Student academic self-perception influences their academic success.

Four-factor Theory

Rosenthal's (1994) four-factor theory (FFT) divides teacher behaviors into four categories: (a) climate, which is the socioemotional environment created by the teacher, typically by non-verbal communication (more or less smiling and eye contact, paying attention/ignoring); (b) feedback, which refers to teachers moderating how informative and helpful their feedback is to students depending on their favorable/unfavorable expectations of the student; (c) input, which refers to the amount and rigor of teaching provided to students, and is dependent on the teacher's favorable/unfavorable expectations of students, and (d) output which refers to how much opportunity teachers give students to respond in the learning environment. Output is increased when teachers have favorable expectations of students but is decreased when teachers have unfavorable expectations of the student. Rosenthal (1994) found that in all categories when teachers have favorable expectations of their students their behavior is modified in a manner that creates a positive learning environment for that student, and when teachers have unfavorable expectations, their behaviors produce a negative learning environment for the

student. This theory underscores the importance of positive faculty-student interactions, and that faculty perceptions and expectations of students can have an impact on student learning.

Rubie-Davies Work

Building from the theory that faculty expectations and behaviors affect the learning environment, Rubie-Davies' (2006) work demonstrates how faculty expectations (which exist in the faculty-student interaction) affect student self-beliefs. Rubie-Davies (2006) showed that a student's self-expectations about their ability to succeed can be altered as a result of positive or negative faculty expectations of the student. In other words, when faculty have high expectations of, and believe in, their students, the student's self–efficacy rises. When faculty have low expectations and do not have faith in their students to succeed, student self-efficacy declines (Rubie-Davies, 2006).

Self-Efficacy Theory

Bandura's (1977a) self-efficacy theory states that an individual's beliefs about their ability to succeed will directly affect their judgments (choices), motivation, their level of effort and their ability to persist at completing a task. This theory originated in studies centered on personal agency (Bandura, 1977a), but over the years has been used to further explain individual motivation to take on new challenges and persist in reaching goals (Bandura, 1982; Bandura, 1993; Bandura, 1999; Bandura 2003). Bandura (1993) states that self-efficacy is important because "[p]ersonal goal setting is influenced by self-appraisal of capabilities. The stronger the perceived self-efficacy, the higher the goal challenges people set for themselves and the firmer is their commitment to them" (p. 118). According to Bandura (1977a), self-efficacy derives from four sources: performance accomplishments (mastering experiences), vicarious experiences (seeing others achieve makes an individual believe they can also), verbal persuasion (being

persuaded by influential people that achievement is possible), and physiological states (emotional/psychological states) such as depression, which can alter self-efficacy.

In the learning environment, each of these sources are available and able to affect the student's self-efficacy. Students who master, or fail to master, course content experience a boost or a dip, respectively, in their belief that they can be successful. Students who see classmates excel may feel an increase in their belief that they can excel as well. Conversely, if they see classmates fail, they may doubt their own ability to succeed. One area where verbal persuasion comes into play is in the interaction between faculty and students. Here faculty are the influential entity who can either behave in ways that persuade or dissuade a student from believing that success is possible. Finally, students who are in either a positive/ hopeful emotional state or negative/depressed state may find their self-belief to achieve or fail impacted. Furthermore, the student's emotional/psychological state may be positively or negatively affected when they receive positive or negative feedback from the first three sources. This is where the faculty-student interaction has great influence. The faculty is the influencer and has numerous opportunities throughout a semester to interact with students. If these interactions are repeatedly encouraging, the student's psychological state may become more positive and hopeful; thus having a positive impact on the student's self-efficacy (Guo et al., 2017). If instead, interactions are repeatedly discouraging, or unsupportive, the student may become depressed or unhopeful and experience a decline in their self-efficacy (Guo et al., 2017).

Combining concepts from these three studies creates a logical pathway in understanding how faculty expectations/perceptions of students can ultimately affect student success. Understanding aspects of the F-S interaction, how the quality of this interaction affects student self-efficacy, and how the level of self-efficacy impacts student success provides a fundamental

framework for this study. These theories also provide an informational base from which to conduct an exploration of faculty and student understandings about the role faculty play in student success.

Review of the Literature

Defining Student Success

It is important to define student success to fully understand the concepts discussed in this review, however, landing on one commonly accepted definition can be challenging. Different institutions of higher learning may have certain outcomes that they value or focus on more than others (Lane et al., 2019; York et al., 2019). Some may see academic success (based on grades), persistence in college, and graduation as being the most important dimensions of student success. Others may see moral and social development, or self-efficacy and personal empowerment equally important. Although all dimensions mentioned are valued and each carries innate importance concerning the student, in this review, student success is defined according to York et al.'s (2019) definition of academic success: Academic achievement, career success, attainment of learning outcomes, persistence, acquisition of skills and competencies, and satisfaction.

Internal Student Characteristics that Facilitate Student Success

Many factors contribute to whether a student excels, persists, and ultimately graduates from college. Horton (2015) identifies 20 different risk factors to student success grouped into four main categories: perseverance, academic mindset, learning strategies, and social skills. A number of the risk factors are environmental (i.e., financial constraints, lack of a support system), but many are individual (i.e., attitudes, beliefs, behaviors) (Horton, 2015). Depending upon the personal characteristics of the student, each of these factors can help or hinder a student's ability to succeed in higher education (Christenson et al., 2012). Schunk and Muller

(2012) propose that self-efficacy significantly influences student motivation to learn and student engagement, arguing that students must believe in their ability to improve their learning to be motivated and engaged in the learning process. Results from the studies by Horton (2015), and Christenson et al. (2012) reveal three internal factors that appear to be critical for student success: (1) student mindset/self-efficacy, (2) intrinsic motivation, and (3) sense of inclusion/belonging. This review will explore these internal factors of students, the influence of faculty perceptions, expectations, and behaviors on these factors, and the impact of faculty perceptions, expectations, and behaviors on student success.

Student Mindset/Self-Efficacy

The mindset of college students is a key factor in their academic success (Han et al., 2017; Ng, 2018). According to Horton (2015), a student who possesses a success-oriented mindset and self-efficacy embodies the following traits. He or she has an internal locus of power, understands that they have the power and capability to change their situation, believes in their ability to grow and learn, feels empowered, thinks positively of oneself, and has a hopeful and positive outlook regarding academic success (Horton, 2015). The idea that a student must have strong self-efficacy to succeed is further supported by Gutierrez and Tamos (2019), who suggest that this mindset along with engagement are two primary criteria for academic success. Believing in one's capability to change conditions for personal betterment is a mindset forged from experiences with family, social interactions, and experiences in the school environment (Stephanou, 2014; Williams et al., 2017). Although mindset develops as individuals mature into and through adolescence, it is not so embedded that it cannot be manipulated by educational intervention and interpersonal interactions (Powers, 2015; Schmidt et al., 2017). Challenges

faced in the college environment require a growth mindset (strong self-efficacy) to maintain the intrinsic motivation to learn and achieve academic goals (Cook & Artino, Jr., 2016).

Student Intrinsic Motivation

Motivation is broadly characterized as either intrinsic or extrinsic. Intrinsic motivation refers to the drive to do things that are inherently enjoyable, meaningful, and interesting for their own sake (Cook & Artino, Jr., 2016). Based on Maslow's (1943) work on motivation, the basis of intrinsic academic motivation can be described as finding interest and /or meaning in what is being learned (to better the world, to enter a higher paying profession, and working toward self-actualization). Scholars support that intrinsic motivation is the most influential of the two types in bringing about long-term goal attainment (Deci, 1975; Ng, 2018); however, extrinsic motivation can also contribute to this process.

Extrinsic motivation refers to the drive to do something that brings about a reward or helps one avoid negative consequences (Cook & Artino, Jr., 2016). In academics, extrinsic motivation can include the reward of grades, pleasing parents, gaining a degree, and avoiding punishment or negative outcomes (Ng, 2018). When coupled with intrinsic motivation, extrinsic motivation can contribute to student success, however, some researchers have found that extrinsic motivation can work against intrinsic motivation (Deci, 1975; Deci et al., 1999). Deci's 1975 seminal work points out that when material reinforcers are given to subjects, their intrinsic motivation decreases. He states, "Rewards can motivate behavior extrinsically, but at the same time they will very likely be decreasing intrinsic motivation" (p. 208). Deci et al.'s (1999) later work which was a meta-analysis on motivation studies further supported this but noted it depends upon the type of rewards a person receives or anticipates receiving. Findings reveal that when a person receives tangible rewards it negatively impacts intrinsic motivation, but when

verbal rewards (positive feedback) are given it enhances intrinsic motivation – as long as it enhances the recipient's confidence (Deci et al., 1999). Although both types of motivation can be used alone to reach goals, Neto (2015) points out that they work best when coupled together to achieve a common objective. Even though certain types of extrinsic motivation can provide the drive to succeed, many scholars agree that intrinsic motivation is the most significant mediator in pushing a student to persevere through the inevitable challenges faced during college and of long-term student success (Augustyniak et al., 2016; Deci 1975; Deci et al., 1999; Neto, 2015; Ng, 2018).

Students can have varying levels of intrinsic motivation, and it is affected by several factors such as student interest in what they are learning, student's self-efficacy, and a student's sense of belonging at college (Gore, 2016; Tinto, 2017). Cook and Artino (2016) note that when students are interested in a topic, motivation to learn increases. They further state that this high level of interest and motivation enhances their engagement in the process of learning (Cook & Artino, Jr., 2016). Self-efficacy, also known as growth mindset, is strongly coupled to a student's intrinsic motivation to succeed (Cook & Artino, 2016; Neto, 2015). When a student's self-efficacy is high, he or she believes they have the power to be successful regardless of the challenges placed before them (Horton, 2015), which fuels motivation. Finally, a student's intrinsic motivation is modulated based on how connected he or she feels with their peers and faculty, and his or her sense of inclusion in the college classroom (Neto, 2015; Seibel & Fehr, 2018; Tinto, 2017). Tinto (2017) articulates this by stating that when students feel a part of their college community, a "bond, often expressed as a commitment" forms (p. 258). This serves to bind the individual to the group or community and motivates them to persist even when challenges arise.

Student Sense of Inclusion/Belonging

The seminal work by Baumeister and Leary (1995) on the need to belong demonstrates that this is a deep and innate requirement of all humans. These researchers suggest that when humans form bonds with other humans (i.e., increase their belongingness), there is a resulting positive emotion created, and when their level of belongingness decreases, it produces negative emotions. They further state that "social exclusion may well be the most common and important cause of anxiety" (Baumeister & Leary, 1995, p. 506). This not only applies to personal relationships outside of college, but also those within the academic environment, and can be particularly significant to student success (Tinto, 2017).

Different factors influence whether a student feels included or excluded in academic settings. Students belonging to a particular socioeconomic status, culture, gender group, or ethnic group that is different than that of the majority of classmates and faculty can be at greater risk for feeling they do not fit in (BrckaLorenz et al., 2017; Bryan, 2018; Johnson et al. 2011; Kim & Sax, 2009; Wu et al., 2017). Likewise, students belonging to other vulnerable groups, such as students with disabilities, may also struggle to fit in within the academic setting (Fleming et al., 2017; Miller, 2015). Feelings of not belonging are exacerbated when students experience perceived microaggressive behavior from peers and faculty (Nadal et al., 2014). The notion of belonging in the academic setting relates to feeling relevant, respected, having a commonality with others in the classroom and college, feeling part of a community of faculty and students, being recognized as capable by faculty, and that one belongs in the learning environment (Tinto, 2017).

The literature supports that mindset/self-efficacy, intrinsic motivation, and belonging are important factors influencing student success (Augustyniak et al., 2016; Horton, 2015; Neto,

2015; Ng, 2018; Tinto, 2017). These characteristics form in the individual student prior to entering college but are malleable and can be influenced by adult experiences in the context of social, work, and academic interactions (Dweck & Yeager, 2019; Powers, 2015; Schmidt et al., 2017). The most critical interactions influencing these internal characteristics in college students are those with their faculty and peers, but most significant are those with their faculty (Tinto, 2017; Trolian et al., 2016).

Faculty–Student Interactions: Influence on Internal Student Characteristics

The position, power, and resulting influence faculty have on how students perceive themselves and feel motivated to learn can affect student motivation, engagement, and belonging (Chan et al., 2017; Seibel & Fehr, 2018; Tinto, 2017). A large body of research supports that positive faculty-student (F-S) interactions have positive influences on student motivation, engagement, and learning, and therefore, student success (Ingraham et al., 2018; Trolian et al., 2016). Conversely, negative behaviors and emotions (embedded in negative F-S interactions) are detrimental to student confidence, motivation, and social, professional, and mental health (Ingraham et al., 2018; Siebel & Fehr, 2018).

Interestingly, negative faculty behavior does not always hamper motivation. In a study conducted by Rowe and Fitness (2018) researchers found that, although most students find negative behaviors and emotions discouraging, some students find them motivating. Students discussed in this study mention that a desire to prove the faculty member wrong motivates them to try harder. Although exceptions like this exist, the type of motivation created is extrinsic (the reward is proving the instructor wrong) which is less effective in promoting sustained motivation than the intrinsic type born of student interest and desire to learn (Cook & Artino, Jr., 2016). Chan et al. (2017) found that differences exist in cultures as to how harsh behavior from faculty

is received by students. They found that nursing students who live in an Asian culture perceive their relationship with faculty as apprentice and master (Chan et al., 2017). Faculty power over the student is valued and seen as a means to ultimately protect patients from harm, and that even harsh criticism is seen as a caring act as part of the student's education (Chan et al., 2017). The authors are careful to note that criticism offered by the faculty is tempered by the caring attitude of the mentor who seeks to benefit the student, not degrade their self-efficacy and motivation to learn (Chan et al., 2017). The important influence that F-S interactions have on student mindset, motivation, belonging, and student success, warrants further exploration into these student characteristics (Booker & Campbell–Whatley, 2018; Glass et al., 2015; Tinto, 2017)

Faculty Influence on Student Mindset/Self-Efficacy

Strong, positive relations between faculty and students can support healthy self-beliefs and self-confidence in students (Glass et al., 2015). According to Horton (2015), a student's learning experience and success are strongly impacted when teaching practices focus on student psychological factors. Furthermore, the benefits of these practices are realized for months and years to come (Horton, 2015). Work by Dweck and Yeager (2019) also supports that when mindset interventions are administered it leads to a stronger growth mindset in adolescents and adults. Furthermore, Glass et al. (2015) noted that when students and faculty engaged in meaningful relationships, students gained confidence in their ability to learn. These studies support that faculty who challenge students while providing support, help students trust in themselves, take on a growth mindset, and learn that it is safe to take on new challenges.

Just as positive interactions can help the student gain self-efficacy, negative interactions can diminish self-efficacy and promote a mindset of failure (Seibel & Fehr, 2018). Students perceive their faculty as mentors and experts, and their faculty's belief in their ability to succeed

has a significant impact on their success (Canning et al., 2019; Friedrich et al., 2015; Good et al., 2018). When faculty disparage or otherwise attack students (i.e. verbally, psychologically, or emotionally), or behave in a demeaning manner, it can cause the student to feel discouraged, less capable and can diminish motivation and their growth mindset (Bodsteiner, 2017; Brewer-Smyth, 2017; Goodboy et al., 2015; Miller, 2015; Mott, 2013; Piotrowski & King, 2016). An example of this is provided by Seibel and Fehr (2019) in their exploration of nursing faculty roles during instances of student bullying. They determined that bullying often occurs in nursing education and that faculty are sometimes the perpetrators, or do not respond appropriately when they witness bullying acts. Students reported that faculty bullying left them feeling distrust towards faculty and disappointed (Seibel & Fehr, 2019). One student shared the personal impact of bullying acts committed by faculty towards students by stating, "they need to know that they can crush you" (Seibel & Fehr, 2019, p. 6). Other studies exist showing the impact that various forms of negative F-S interactions (humiliation, microaggression, disrespect) have on the student's self-beliefs and mindset (Brewer-Smyth, 2017; Goodboy et al., 2015; Miller, 2015; Mott, 2013; Piotrowski & King, 2016). Negative F-S interactions not only affect mindset and self-efficacy but can also further influence the student's intrinsic motivation.

Faculty Influence on Student Intrinsic Motivation

Faculty-student relations have the potential to ignite intrinsic motivation in the student or to snuff it out (Seibel & Fehr, 2018; Tinto, 2017). Maslow's work (1943) identifies the five levels of need that drive motivation: physiological need, safety need, love need, self-esteem, and self-actualization. Students entering college may be at various places within Maslow's hierarchy. According to Maslow's (1943) theory of motivation, students whose basic needs of food and shelter, safety, and love are unmet will find it challenging to give energy and attention to those

activities that build self-esteem and promote self-actualization (Maslow, 1943). The college and the college community can, to some degree, provide for food and shelter (room and board), safety (campus security, and connection to other human beings — a form of love). The learning environment can provide further safety and 'love' by being a safe place to be present, to share thoughts, inquire, and feel accepted by one's peers and faculty (Booker & Campbell-Whatley, 2018; Maslow, 1945; Westrick et al., 2015). Maslow (1945) points out that once these lower-level needs are met, the individual can focus on those activities that help meet their higher-level needs of self-esteem and self-actualization (Maslow, 1945). The learning environment created by the faculty can play an important role in helping students get these higher level needs met (Neto, 2015). It is important for faculty to understand this point. Self-esteem needs, such as those things that lead to self-worth, self-confidence, feeling capable, adequate, and of use in society (Maslow, 1943) are met through learning processes and academic interactions that support students in acting autonomously, in following their interests, and in empowering students to believe in their capabilities. The F-S interaction can provide opportunities for students to explore, to inquire, and build self-confidence which in turn sparks motivation to further engage in learning activities (Neto, 2015; Tinto 2017). Conversely, negative F-S interactions can chip away at a student's belief in themselves which douses their drive to achieve (Seibel & Fehr, 2018). This type of interaction can erase what progress a student has tentatively made in building self-esteem. Students who experience faculty behavior such as ignoring, uncaring behavior, negative expressions or comments, and bullying note that it makes them feel like they are failures, that they do not belong, and makes them question their choice to even be in college (Seibel & Fehr, 2018; Smith et al., 2016). These emotions caused by negative F-S interactions have a marked effect on student motivation and, as mentioned, even on their sense of belonging in college.

Faculty Influence on Student Sense of Belonging

The F-S relationship is a key contributor to a student's feeling of inclusion/belonging, to a student's self-confidence and empowerment, to their self-image and self-beliefs, and their level of motivation (Booker & Campbell–Whatley, 2018). Horton (2015) determined that 20 risk factors exist which negatively impact student success, and of these, belonging, self-efficacy, and motivation were noted as key factors. Tinto (2017) and Gore (2016) agree that a student's sense of belonging has a direct impact on their motivation to succeed, and in some cases, lack of belonging can cause greater fear of success.

Students from particular sectors of the population historically have struggled to feel included in their college community (Booker & Whatley, 2018; BrckaLorenz et al., 2017; Fleming et al., 2017; Wu et al., 2017). Studies report that the feeling of exclusion was related to being members of a certain socioeconomic status (SES), minority, or marginalized group (BrckaLorenz et al., 2017; Fleming et al., 2017; Wu et al., 2017). Consistently, studies examining these students' interactions with faculty, and their effect on students' sense of inclusion, find that those F-S relations that are positive and meaningful enhance students' feelings of belonging and relevance (Booker & Campbell-Whatley, 2018; Westrick et al., 2015). Furthermore, negative F-S interactions, involving discriminatory behavior from faculty, can add to a student's feeling of exclusion, furthering their struggle to succeed (Witkow et al., 2015).

There are specific practices faculty use that either reduce or enhance a student's sense of belonging and relevance in the classroom. Exclusive practices might entail a teacher only providing examples of high achieving white males when the student group is racially and gender-mixed or failing to acknowledge the challenges faced by individuals of different socioeconomic statuses when opportunities present themselves (Rios et al., 2010; Sekaquaptewa, 2014).

Inclusive practices might entail ensuring that instructional material includes information about, and is based upon, people of many cultural groups, minority groups, and different SES groups (Bigatti et al., 2012; Booker & Campbell-Whatley, 2018). Incorporating inclusive practices creates an environment where members of different groups feel recognized, respected, relevant, and are more at ease in the classroom (Bigatti et al., 2012; Booker & Campbell-Whatley, 2018). When students feel included and respected in the classroom they are more likely to ask questions and engage in discussion which promotes further inquisition and learning. These practices are part of the overall behavior of faculty that impacts student mindset, motivation, and belonging (Booker & Campbell-Whatley, 2018). This section has highlighted the need for faculty to be aware of, and utilize, appropriate and effective behaviors within F-S interactions to promote students' growth mindset, intrinsic motivation, and their sense of belonging. This requires that educators first understand their perceptions and expectations of students as these nourish and nurture their individualistic behaviors.

The Power of Faculty Perceptions, Expectations and Behaviors

Faculty behavior in F-S interactions is based upon the collection of experiences, perceptions, and expectations held by the educator. Furthermore, these experiences, expectations, perceptions, and behaviors are interrelated and interdependent, each having influence on the other (Jhangiani & Tarry, 2014). Because F-S interactions have such an impact on student internal characteristics and student success, it is prudent to discuss those perceptions, expectations, and behaviors at work within the F-S interaction.

Humans form identities based upon the social group within which they belong (CNX Psychology, 2014). Group norms, whether based in culture, community, or family, can pressure individuals to conform to those beliefs (CNX Psychology, 2014). When humans of one group are

confronted with individuals of another group, they can sometimes not understand the other individuals and their norms (CNX Psychology, 2014). This can lead to the formation of stereotypical beliefs about other individuals and their group (CNX Psychology, 2014). These stereotypes and prejudices can manifest in the workplace and cause negative interactions between those in the work community, specifically discriminatory behavior (Fiske & Lee, 2008).

Based on this human propensity to form stereotypical beliefs and prejudicial attitudes, it is not unreasonable to propose that faculty can be susceptible to carrying perceptions and prejudice into their teaching practice (Bryan, 2018; Moussaid et al., 2013; Olsen & Hora, 2014; Sedgwick et al., 2014; Zhang et al., 2010). Research shows that individuals who are of a higher class (more highly educated and higher economic status) tend to be more narcissistic, behave less ethically, and are more selfishly towards others than those of lower classes (Piff, 2014). Manstead (2018) adds that the social class in which one grows up can have a lasting effect on one's social attitudes and behaviors. Manstead (2018) and Piff's (2014) claims infer that faculty who grew up in an upper or middle class, who attended highly selective or elite colleges may have a prejudice against students of a lower class, lower intelligence, or who have a lower level of motivation. Furthermore, as Piff (2014) reports, this class difference could also promote unethical and selfish behavior towards those of lower classes, and inferentially students who are of a lower class.

Faculty Perceptions of Students

Human beings are adept at forming perceptions of other people. Jhangiani and Tarry (2014) refer to person perception as the way in which we learn about others, and these perceptions, in turn, create impressions of people (Jhangiani & Tarry, 2014). Faculty, therefore, are capable of forming impressions of their students based on their perceptions of them. Several

things can influence the forming of these perceptions, including prejudice, personal (non-professional) experiences, experiences as a faculty member, and professional culture (Bryan, 2018; Moussaid et al., 2013; Olsen & Hora, 2014; Sedgwick et al., 2014; Zhang et al., 2010)

Prejudice. Institutions of higher education are required to follow non-discriminatory practices and to have policies in place to ensure compliance and promote a discrimination-free campus culture (U.S. Department of Education, 2018). Although blatant discrimination is more apparent, microaggression is much more subtle and can easily go unaddressed (Bryan, 2018). Work by Sue et al. (2007) on the study of microaggression, defines microaggression as "brief, everyday exchanges that send denigrating messages to people of color because they belong to a racial minority group" (p. 273). Bryan, 2018 extends this definition by stating that microaggression includes "verbal, behavioral, or environmental indignities" (p. 119), that communicate antagonistic, intimidating, disparaging, or negative slurs or insults towards others, in particular those who are members of minorities and other marginalized or oppressed groups. Faculty who hold prejudicial views may not be identified as committing outright discrimination. However, instances of microaggression (conscious or unconscious, explicit or implicit) can occur regularly and cause significant distress and harm to students (Ackerman-Barger et al., 2020; Bryan, 2018). Several studies indicate that prejudicial behaviors and microaggressions are committed during F-S interactions against students of certain racial minorities, ethnicities, gender orientation, sexual orientation, SES levels, and those who are learning disabled (Bryan, 2018; Hong, 2015; Ingraham et al., 2018; Miller, 2015; Nadal et al., 2014; Witkow et al., 2015). Prejudice is specifically noted as occurring in medical and nursing schools (Akerman-Barger et al., 2020; Sedgwick et al., 2014).

Students who belong to any group perceived ‘as different from the majority’ can be subject to prejudicial or biased perceptions from faculty. Zerquera et al. (2018) report that some faculty hold perceptions of non-traditional students as being underprepared for college, and unable or unwilling to compartmentalize aspects of their life to support learning. Others hold beliefs about student-parents based upon whether or not they carve out adequate time during their week for study. For instance, faculty would speak highly of working student-parents who set aside time during their busy week for study but failed to understand that this was not an option for other working student-parents who may not have the support structures to allow for that (Zerquera et al., 2018). Further, in this same study, when asked their opinion of non-traditional students’ work ethic in attaining their degree, faculty were noted as speaking pejoratively about the students, implying they were lacking interest and were lazy (Zerquera et al., 2018).

It is important to remember that just as prejudice can promote negative behavior towards individuals, it can also promote preferential behavior towards those who are favored. Faculty who interact with students of a group that they perceive to be superior may believe they deserve more attention, or that they are naturally more intelligent and hardworking, and may grade their work more favorably (Malouff et al., 2014). Malouff et al. (2014) report that faculty are susceptible to the halo effect affecting their grading practices. Their study asked faculty and teaching assistants to observe and grade an excellent oral presentation or a poor oral presentation given by the same student, then to subsequently grade the student’s written work (Malouff et al., 2014). Unbeknownst to the graders, the written work given to them was identical and therefore should not have received significantly different grades. Findings showed that graders assessed the written work based on the quality of the oral presentation they graded previously, giving

higher scores if the grader observed the excellent oral presentation and lower scores if the grader observed the poorer oral presentation (Malouff et al., 2014). These authors support their findings by noting several studies conducted between the 1970s and 2000s that report grading bias based upon gender, color, popularity, attractiveness, name, and whether or not the student was described by someone else as being gifted (Malouff et al., 2014).

These studies show that faculty can possess biases that prejudice them for or against particular groups, and even certain characteristics of individual students. Biases against specific groups of people typically form from a stereotype that becomes over-generalized to a specific population of people (CNX Psychology, 2014). These biases can be formed at any time in one's life and can be affirmed by one's experiences in family, community, and social cultures. However, prejudice is not the only factor influencing faculty perceptions of students. One's socioeconomic status (SES), cultural background, academic background, and experiences within their professional field can also impact their perceptions of students and their professional practice (Kane et al., 2002; Olsen & Hora, 2014; Scott et al., 2015; Zhang et al., 2010).

Personal Experiences Influencing Perception and Practice. Faculty come from all SES levels and cultures and bring with them a host of personal experiences that inform their perceptions and beliefs about students (Olsen & Hora, 2014; Zhang et al., 2010). They may view a student more or less favorably, which in turn affects their expectations and behaviors in the F-S interaction. Sometimes it is a familiarity that can sway an instructor's opinions about their students. For example, Abu-Hamour (2013) and Zhang et al. (2010) found that faculty who had prior teaching experience with learning disabled (LD) students were more agreeable to providing accommodations to LD students than those who had no prior experience. Another finding of Zhang et al. is that a professor's academic ranking and age are related to their attitude towards

LD students. Zhang et al. (2010) found that full professors and older faculty had less accommodating attitudes towards LD students than professors of lesser ranks and those who were younger. This is corroborated by Abu-Hamour (2013) who found that full professors and those with greater years of teaching experience had more negative attitudes regarding the inclusion of LD students in academia.

Faculty may bring experiences with them from their post-secondary education that inform how they perceive students and their role as a faculty member (Kane et al., 2002, Vilppu et al., 2019). Olsen and Hora (2014) explored the notion that faculty tend to teach the way they were taught and found that faculty bring many different experiences into their teaching practice, including experiences as a student, as a researcher, and experiences from their personal lives. Following in prior professors' footsteps can include teaching in a similar manner as they did; replicating both positive and negative practices and attitudes (Lucas & Murry, 2011). This form of professorial mimicry is not foreign to human beings. Social learning (learning from others) including imitation, is an important method of learning for human beings (Rendell et al., 2011). Depending on who and what is imitated, the results can be positive or negative (Rendell et al., 2011). Imitating teaching practices and attitudes of one's former professor that are effective and support student academic and personal achievement is beneficial. However, adopting poor attitudes and teaching strategies can have negative effects on the student and propagate a cycle of unconstructive teaching. Scott et al. (2015) explored the persistence of humiliating teaching practices in medical school, noting that students in their study were frequently humiliated by instructors during pediatric rounds. This teaching style and cultural practice are perpetuated when medical students later become the teachers of the next generation of medical students (Scott et al., 2015).

Perceptions Influenced by Specific Experiences as a Faculty Member. Faculty perceptions of students and teaching practices may be influenced by colleagues within their college or department. When colleagues talk negatively of students, (they are lazy, try to cheat and do the least amount of work, they are disrespectful, trouble-makers), or positively (they are dedicated, smart, willing to work, responsible), these perceptions may be adopted by other faculty members. Studies show that in non-academic social contexts, the opinions of others can affect our own, especially if we are trying to fit into a group (Campbell-Meiklejohn et al., 2010; Moussaid et al., 2013). This is especially true when there is someone present who appears as an expert or when the majority of the group shares a certain opinion (Moussaid et al., 2013). Furthermore, Andrews et al. (2016) report that opinion leaders (colleagues who are considered an expert in their field) significantly impact the beliefs and practices of their colleagues.

Perceptions Influenced by Professional Culture. Certain professions are known for having unique dynamics. Medical residents report that they are often humiliated and embarrassed by their instructors' negative behaviors towards them when making hospital rounds (Scott et al., 2015). Likewise, although nursing is known as a caring profession, it is widely known that the nursing profession has an ongoing dynamic of horizontal violence and incivility between co-workers (Brewer-Smyth, 2017; Sanner-Stiehr & Ward-Smith, 2017). As nursing educators come from the ranks of nursing, and have experienced and, to some degree, assimilated into this environment of incivility, it is not surprising that perceptions that promote incivility may be carried over into their educational practice (Sanner-Stiehr & Ward-Smith, 2017). Proposals in nursing literature call for nursing curriculum to include material that focuses on civility and professionalism, and that educators model this in their interactions with students (Brewer-Smyth, 2017). However, the reality is that uncivil interactions frequently occur between faculty and

students (Mott, 2013; O'Mara et al., 2014; Sanner-Stiehr & Ward-Smith, 2017; Smith et al., 2016). Perhaps some of the behaviors of medical and nursing faculty are based on a perception that medical and nursing students must be prepared to deal with difficult interpersonal dynamics while under immense pressure to perform with excellence. As Thomas et al. (2012) propose, introducing students to difficult interactions may be seen as 'toughening them up' or de-sensitizing them to an uncivil and demanding environment.

Faculty Expectations of Students

Highfield et al. (2009) and Qin et al. (2016) show that when humans form perceptions of others, it affects their expectations. This affects their decisions, such as whether someone is hired, elected, or promoted. Likewise, perceptions faculty form about their students can cause them to have certain expectations of their students. These expectations can be positive or negative and have similarly positive and negative repercussions on the students' success (Rosenthal, 1994; Rubie-Davies, 2006; Tinto, 2012; Wigfield & Eccles, 2000).

Expectations Influenced by Prejudice. When perceptions of others are created, judgments form and based on these judgments, expectations are generated. Educators who have explicit or implicit prejudice towards their students can form expectations of these students based upon their negative or positive perceptions (Peterson et al., 2016; van den Bergh et al., 2010). Depending on the prejudice, expectations might be that students will be low achieving, unintelligent, lazy, trouble-makers, high achieving, motivated, intelligent, well behaved (Fiske & Lee, 2008).

Expectations Influenced by Personal Experiences. Albarracin and Wyer (2018) tell us that a person's past experiences often inform their future behaviors. Furthermore, they note that positive attitudes (or negative) towards something that occurred in the past will likely cause

future attitudes to be positive (or negative) should a similar future event occur. Based on these assumptions, it is not far-fetched to propose that prior experiences faculty had in their life could affect their attitudes and behaviors in the present. Faculty who had an educational past that was challenging on many levels may see this experience as what created their success or failure, and as a result, could affect how they interact with their students. Hustad (2017) reports that psychologists now acknowledge that the experience of struggling in childhood is beneficial for promoting success in adulthood. Persons who struggled in their youth identify certain attributes that they find beneficial (Hustad, 2017). Based on this it is possible that if faculty believe rigidity was necessary or useful for success, a student who cannot manage rigidity well could be seen as a failure or seen as someone needing faculty to be more strict. If on the other hand college was fairly easy for them due to multiple support systems, and an abundance of financial security, they may feel that college is inherently not that hard (Rothman, 2018; Willingham, 2012). This might cause the faculty member to not understand when a student who lacks support systems and economic security, fails from lack of course engagement, or who takes on additional work hours leaving less for study.

Expectations Influenced by Professional Experiences. Many experiences can contribute to an instructor's expectations of their students, including their own experiences as a faculty member. When faculty note specific types of behavior or know a student is gifted, of higher SES, belonging to certain ethnic groups, learning disabled, or from a lower SES, they may perceive the student to be more or less academically inclined (Malouff et al., 2014; Peterson et al., 2016). These perceptions can cause faculty to expect certain academic performance from the students.

Expectations can also be formed based upon pedagogical values or policies within the college, department, or program in which faculty teach (Academic Senate of California Community Colleges, 2008; Ebert-May, 2015; Vilppu et al., 2019). As is found in other areas where policy exists (Koessler & Engle, 2019), these pedagogical values and policies can be adopted by the faculty and become part of their set of beliefs and expectations. One example of such a policy/practice is in awarding grades. Achen and Courant (2009) report that it is common practice for some college departments to have higher grading standards than others. An example might be that a particular division or school within a college has a philosophy that rounding grades up is unacceptable (Becker College, 2019). As a faculty member within that division or college, the faculty member would be expected to follow suit in order to align themselves with that division's policy and practice. Where this policy or practice exists within a division, the faculty member would expect their students to reach the minimum grade point to pass, regardless of how close their raw score is to that grade point. In this case, there is no leeway; students must earn the minimum grade or they fail (Becker College, 2019). Conversely, if a division or college tends to be less strict regarding rounding, faculty would not have such rigid expectations of students reaching the minimum grade point to pass. Because policy can influence one's personal beliefs, the particular grading policy of a division or college within which faculty member teaches can change the faculty's basis for how they appoint grades from simply following policy to acting on their conviction (Koessler & Engel, 2019)

Dynamics in Professional Field. Certain professions have challenging working environments and require high levels of performance from workers. Radiologic technologists are required to perform with integrity and professionalism, put patient care first, and to perform at a high level of competency. Depending on their specific certifications, there may be increased

occupational stress, and additional areas of competency required. Some technologists utilize X-ray technology, whereas technologists using magnetic resonance imaging (MRI), computed tomography (CT), and sonography are required to have higher skill levels. Furthermore, radiologic technologists may also assist physicians in performing certain procedures, such as angioplasty, or administer radiation therapy to cancer patients (American Registry of Radiologic Technologists, n.d.). As such these professionals must perform with excellence, and at times in stressful environments. Of note, however, is the lack of reporting on workplace incivility within this profession (Reingold, 2015). This does not necessarily mean there is no incivility, simply that there is a paucity of literature reporting this. However, if workplace environment characteristics carry over to teaching practice and the workplace environment of radiologic technologists *is* generally civil, radiology instructors would feel no need to prepare their students for an uncivil work environment. As such, faculty expectations of students would not include becoming desensitized to experiencing uncivil behaviors.

Nursing is a profession that requires workers to perform with excellence often under conditions of extreme pressure, but in an environment that also has a culture of incivility to navigate (Ibrahim & Qalawa, 2015; Seibel & Fehr, 2018). Nurses are expected not to make mistakes, to act with integrity, to follow rules, and care for the patient's holistic needs. Often the environment is stressful and requires nurses to deny themselves care in order to care for their patients (Khamisa et al., 2015). Stress and the denial of self-care could be factors that contribute to the incivility seen in this profession. The historical hierarchical work environment between physicians and nurses has also contributed to feelings of low self-esteem in nurses (Roberts, 2019). This propagates insecurities and aggressive/passive-aggressive behavior when nurses feel their knowledge and skills are questioned or their self-esteem is further threatened (Roberts,

2019). To prepare students for their future profession and toughen them up for the job, nursing faculty may feel students should be exposed to rigidity and high expectations (Molesworth, 2017; Thomas et al., 2012).

These examples demonstrate that there are many contributing factors (personal experiences, prejudice, professional experiences) to faculty expectations of students. The level of workplace stress in a particular profession may be related to the expectations faculty have of students in these fields. Although faculty may be aware of their expectations, they may not be aware of the factors that help form them. Understanding faculty perceptions and expectations of students is vitally important as these have a significant influence on their behavior towards students (Canning et al., 2019; Peterson et al., 2016; Rosenthal, 1994; Rubie-Davies, 2015).

Faculty Behaviors with Students

Behaviors exhibited by faculty in the faculty-student (F-S) interaction can be overt or covert, conscious or unconscious and include such things as positive or negative comments, facial expressions, paying attention or ignoring, disrespecting or respecting, spending more or less time with a student, accepting or rejecting assignment submissions, and grading more or less harshly. Moreover, these behaviors can be even more subtle, such as sighing (as in exasperation), moving in a clipped manner (showing frustration), slight head movements indicating irritation, locking eyes longer (friendly), speaking in a slower calmer voice, and moving in a relaxed manner (Smith et al., 2016). Witnessing and experiencing these behaviors can have both positive and negative impacts on student motivation, self-efficacy, sense of belonging, professional behavior, and ultimately student success (Mikkonen et al., 2015; Seibel & Fehr, 2018; Shields, 2011).

Negative Behaviors. Studies focusing on negative behaviors within F-S interactions include such behaviors as microaggression, rudeness, preferential behavior, humiliation, and bullying (Bodsteiner, 2017; Brewer-Smyth, 2017; Goodboy et al., 2015; Miller, 2015; Mott, 2013; O'Mara et al., 2014; Piotrowski & King, 2016; Scott et al., 2015; Smith et al., 2016; Suarez-Orozco et al., 2015). The impact these behaviors have on the relationship between the faculty and student can be great, both in terms of academic success and on the psychological and emotional health of the student (Miller, 2015; Siebel & Fehr, 2018). Porath and Erez (2011) note that being the recipient of rude behavior, especially from an authority figure, can decrease motivation, work production, flexibility, and creativity. Furthermore, simply witnessing rude behavior towards someone else can produce these outcomes (Porath & Erez, 2011).

Bullying and Humiliation. Bad behavior by faculty in higher education is not a new phenomenon. Students from all academic levels have experienced faculty elitism, and even bullying – especially in graduate school (Bodsteiner, 2017; Goodboy et al., 2015; Piotrowski & King, 2016). Medical students historically have been the targets of humiliating behavior from medical professionals during their rotations (Scott et al., 2015). Bolding et al., (2020) also report incivility in level-two occupational therapy fieldwork. Various undergraduate programs also have sporadic instances of negative faculty behavior (Glass et al., 2015; Hoffman & Lee, 2015); however, the presence of bullying in health professions education (in particular nursing) is pervasive despite many studies on its existence and its effects (Ballard et al., 2018; Brewer-Smyth, 2017; Mott, 2013; Sanner-Stiehr & Ward-Smith, 2017; Seibel & Fehr, 2018; Smith et al., 2016; Son et al., 2016). Medical, nursing, and dental hygiene students state this type of behavior negatively impacts their learning (Ballard, et al., 2018; Mott, 2013; Scott et al., 2015; Smith et al., 2016). This is highlighted by Seibel and Fehr (2018) who state that bullying impacts the

psychological, physical, social, and professional well-being of those bullied and that, as a result, nursing students lose motivation and persistence, and drop out of college.

In many graduate programs, politics can have an impact on the success of the graduate student (Sumprer & Walfish, 2001). Some scholars recommend to graduate students that for the sake of their psychological and physical well-being, they should accept the fact that they have no power whatsoever in the graduate system and go about doing the work they must do to earn their degree (Sumprer & Walfish, 2001). Graduate students have been so vexed by the treatment received from their advisors that some have fallen into deep depressions, and even taken their own lives (Hall, 1998). A former Harvard graduate student was so distraught at the psychological abuse he endured, he committed suicide leaving a note that read, "This event could have been avoided … Professors here have too much power over the lives of their grad students" (Hall, 1998, p. 120). The student suggested that a committee be formed to oversee the progress of graduate students and to monitor the process to "provide protection for graduate students from abusive research advisers. If I had such a committee now I know things would be different" (Hall, 1998, p. 120).

Preferential and Rude Behavior. Preferential and rude behavior of faculty towards students has detrimental effects on the emotional, psychological, and sometimes physical well-being of students (Mohammadipour et al., 2018). These behaviors also negatively impact the student's ability to learn (O'Mara et al, 2014; Thomas, 2018). O'Mara et al. (2014) studied the effect that challenging clinical experiences have on nursing students. They found that when faculty exhibit preferential behavior, are overly critical, or when their responses to students are unpredictable, it negatively affects learning (O'Mara et al., 2014). Thomas (2018) notes that despite the increased attention given to incivility in nursing education it is still present.

Furthermore, Thomas (2018) proposes that uncivil behaviors towards students may perpetuate the incivility found in the nursing work environment. Although much focus is placed on incivility in health professions education, Miller (2015) adds that students in other groups (LGBT and learning disabled) experience this as well (Miller, 2015). Miller (2015) reports that these students are often ignored by faculty which creates in the students a sense of not belonging or feeling irrelevant. Regardless of the academic field, degree program level, or group in which a student belongs, research confirms that negative faculty behaviors contribute to detrimental outcomes for the student.

Positive Behaviors. Many F-S interactions embody supportive, caring, and empathetic faculty behavior (Chan et al., 2017; Mikkonen et al., 2015; Nasser-Abu Alhija, 2017). Supportive behaviors, such as mentoring, tutoring, listening to students, giving students opportunities to share their thoughts, and making them feel welcome and wanted in the classroom are known to help foster student success (Ingraham et al., 2018; Mikkonen et al., 2015; Nasser-Abu Alhija, 2017). Simply exhibiting enthusiasm and a positive attitude can have an effect on student motivation and student success (Alsharif & Yongyue, 2014). Findings from a study that examined the academic response of medical chemistry students to faculty attitude and enthusiasm showed that positive faculty attitude and heightened faculty enthusiasm for the subject being taught have a significantly positive effect on student learning (Alsharif & Yongyue, 2014).

Empathetic Behavior. The ability for faculty to empathize with students is a valued and needed experience of students (Mikkonen et al., 2015). Mikkonen et al.'s (2015) study exploring the impact of faculty empathy on nursing students found that empathy strongly and positively affected students. They note that students specifically mentioned that empathetic behavior by

faculty was significant in their academic success, quality of life, and professional development (Mikkonen et al., 2015). Furthermore, they note that students felt that the lack of empathetic behavior from faculty negatively impacted these same outcomes (Mikkonen et al., 2015). Lillis (2001-2002) conducted a study to determine the impact faculty emotional intelligence in the mentoring process had on student attrition intention. The focus was on the emotional and psychological support provided by faculty mentors including "empathetic listening and a genuine understanding and acceptance of the mentee's feelings" (Lillis, 2001-2002, p. 161). Lillis (2001-2002) found that greater faculty emotional intelligence (in particular empathy) had a significantly positive effect on decreasing student attrition risk.

Caring Behavior. Faculty empathy is not the only type of positive behavior in F-S interactions noted as being impactful to students. Labrague et al. (2015) found that faculty caring behaviors toward the student and also towards others was a significant factor influencing student self-perception and behavior. Labrague et al.'s (2015) study reports that when nursing students witnessed their faculty exhibiting caring behavior, it impacted their own self-confidence and caring behavior. Salehian et al. (2017) studied caring as a new educational approach in nursing and found that it leads to improved student self-esteem, self-awareness, peace, empowerment, and promotes caring behavior in students.

The student experience within the faculty-student interaction is complex as are the resulting responses within the student. Students bring their unique backgrounds and characteristics that are met by the faculty's background and unique characteristics. There are many foci of research on this topic, but one fact is apparent in the literature: the faculty-student interaction is one of the key influencers of student success. Understanding this relationship and

what can be done to improve the contribution of the faculty member to the interaction is a foundational step toward improving student satisfaction and success in higher education.

Conclusion

The need to comprehend how faculty and students understand the dynamics and fallout of faculty-student interactions is great. Understanding the perceptions from these groups can help explain the experiences of each individual in the F-S interaction, and perhaps enhance educators' ability to use these interactions to promote student success. This is important for the student as F-S interactions have a significant impact on (a) their ability to reach their academic goals, and (b) on their experiences as a learner (Barnett, 2011; Cardoso et al., 2011; Scarbrough, 2013). It is also essential to faculty as awareness about one's ability to impact student success is key in improving one's teaching practice and enhancing student achievement (Sukhera & Watling, 2018). Lastly, it is important to the college as F-S interactions ultimately have effects on student academic achievement, retention, and graduation rates; all of which impact accreditation and the reputation of the college (Higher Learning Commission, 2020; New England Commission of Higher Education, 2019; Northwest Commission on College and Universities, 2020; Trolian et al., 2016).

Scholars agree that student self-efficacy, motivation, and the sense of belonging are closely tied to academic success (Bandura, 1977a; Tinto, 2017; Trolian et al., 2016). Research shows that these internal characteristics of students are modified (enhanced or diminished) by faculty perceptions, expectations, and behaviors towards the student (Brewer-Smyth, 2017; Mott, 2013; Goodboy et al., 2015; Miller, 2015; O'Mara et al., 2014; Rosenthal, 1994; Rubie-Davies, 2006; Siebel & Fehr, 2018; Smith et al., 2016). Perceptions of others, and therefore of students, are formed by the culture one is raised in/lives in, by one's personal experiences, and

professional experiences (Moussaid et al., 2013; Olsen & Hora, 2014; Thomas et al., 2012; Zhang et al., 2010). These perceptions held by faculty create expectations of students (positive and negative) which may or may not accurately reflect the characteristics of the student and can spawn faculty behaviors towards students that impact their learning (Rosenthal, 1994). Rosenthal's (1994) four-factor theory proposes that teacher expectations of students (positive and negative) cause teachers to behave differently towards the students in a manner that either promotes or inhibits their learning (respectively). Rubie-Davies' (2006) work and Bandura's self-efficacy theory (1977a) demonstrate that these behaviors, and student perceptions of these behaviors, can modify student academic self-perception which, in turn, can modify student academic achievement.

The conceptual framework of this study includes a wealth of literature that helps to explain the elements involved in faculty expectations and leadership behaviors and their effect on student success. It also includes this researcher's interest in how faculty and students in different health professions perceive the influence of faculty behavior on student success. Lastly, it incorporates a theoretical framework comprised of Rosenthal's (1994) four-factory theory, Rubie-Davies' work (2006), and Bandura's (1977a) self-efficacy theory, which provides a foundation upon which to explore these understandings.

Nationally, health professions colleges have struggled to maintain high retention rates in nursing programs (Beauvais, 2014; Harris et al., 2014; Jeffreys, 2015). Although the college in this current study maintains high retention in its radiologic technology program, high retention rates in nursing, like other U.S. nursing programs, is a challenge (N. Smith, personal communication, January 16, 2019). Acknowledging (a) that faculty perceptions, expectations, and behaviors toward students have a significant impact on student success (and therefore

retention); (b) that retention is a problem in many nursing colleges and; (c) that perceived incivility is a common feature in the nursing faculty-student interaction, it is imperative to explore how faculty and students understand the role of faculty leadership in student success. Exploring whether different understandings exist between health profession divisions will provide information to support the future study of similarities and dissimilarities in levels of perceived incivility versus retention rates. Attaining a deeper comprehension of how faculty and students understand the role of faculty leadership behaviors on student success, can help colleges more adeptly address enhancing the F-S interaction to improve student learning outcomes.

CHAPTER 3: METHODOLOGY

Colleges and accreditation bodies across the United States and globally are increasingly focusing their attention on learning assessment, student success, and student satisfaction (DeAngelo, 2014; Northwest Commission on College and Universities, 2020; Ruffalo Noel Levitz, 2019). Several factors contribute to the success or failure of college students. Although some originate in the student (financial health, academic preparedness, family support, self-efficacy and motivation), one of the most influential factors is the quality of faculty-student (F-S) interactions (Seibel & Fehr, 2018; Trolian 2016).

Studies that examine the effect of teacher perceptions, expectations, and behaviors (PEBs) on the learning environment and the learner show that these significantly impact student self-efficacy, persistence, and success (Brewer-Smyth, 2017; Canning et al., 2019; Piotrowski & King, 2016; Rosenthal, 1994; Rubie-Davies, 2006). In nursing, dental hygiene, occupational therapy, and medical schools, faculty incivility and humiliation are commonly reported (Ballard, 2018; Bolding et al., 2020; Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015; Scott et al., 2015). Most of the literature centered on incivility in nursing education focuses on uncivil behaviors demonstrated by faculty and students (Authement, 2016; Rad & Moonaghi, 2016; Rawlins, 2017; Sprunk et al., 2014). Little is known about how health professions faculty understand the role played, and impact of, faculty behaviors on student success. Furthermore, although there is significant evidence of incivility in various health professions schools, little is known about the prevalence of incivility in radiologic technology programs.

This chapter describes the purpose of this study, the research questions guiding the study, and the study design chosen through which these questions were answered. Additionally,

information describing the study site, participants, the sampling method, the method of data collection, and a description of the data analysis are provided. Lastly, limitations and ethical considerations of these methodologies are offered.

Purpose of the Study

The purpose of this study was to explore how health professions faculty and students understand faculty leadership behaviors related to the quality of faculty-student interactions and their impact on student success. Specifically, this exploration sought to reveal how these individuals view the influence that faculty perceptions, expectations, and behaviors towards students have on student self-efficacy and academic success. Rosenthal (1994) identified that teacher behavior towards students is positively or negatively influenced based upon their favorable or unfavorable perceptions/expectations of students. Furthermore, this behavior similarly impacts the learning environment. Work by Rubie-Davies (2006) and Bandura (1977a) shows that teacher behaviors impact student self-efficacy and that this in turn impacts student learning. Information gathered from this study adds to our knowledge about similarities and differences that exist between the understandings of this phenomenon by health professions students and faculty. Moreover, this information may provide a deeper understanding as to what underlies faculty leadership behaviors, and how these impact students enrolled in healthcare professions education.

Research Questions & Design

To address the purpose of this study, the researcher sought to answer the following research questions:

- How do health professions faculty understand the role that faculty leadership (including perceptions, expectations, and behaviors towards students (PEBs)) plays in student success?
    - How do health professions faculty understand student self-efficacy?
- How do health professions students describe how faculty leadership impacts their self-efficacy and success?

Research Design

This dissertation employed a collective case study design. According to Yin (2018), a case study approach is best utilized when seeking to answer "how" or "why" questions about a phenomenon. A *collective* case study design is used to answer these types of questions when there are multiple cases within a single study (Yin, 2018) and allows for comparisons between cases to elucidate similarities and differences in experiences and perceptions (Merriam, 2009). The population of this study is bounded geographically (a single site), by the type of institution (private health professions college), and by participation in nursing and radiologic technology programs. Employing a collective case study design offered the opportunity to answer the research questions, by gathering rich, in-depth data about individual health professions faculty and student understandings of how faculty leadership behaviors influence student success.

Site Information and Population

This study took place at a small college in the United States that offers degrees in health professions. North College (pseudonym), known as the 'college' hereafter, offers associate

degrees in nursing, medical imaging, and in related health sciences (National Center for Education Statistics, n.d.). The college also offers a bachelor of science in nursing degree program, as well as various certificates in nursing and medical imaging (National Center for Education Statistics, n.d.). The annual enrollment is approximately 300 students, with the majority majoring in the associate degree of nursing program, and the associate degree in radiologic technology program (National Center for Education Statistics, n.d.). This site was specifically chosen based on the researcher's accessibility to the site and the researcher's knowledge of a misalignment of reported student perceptions and faculty perceptions regarding the quality of faculty-student interactions that occur at this college.

A primary goal of this college is to enrich the lives of its students, to provide a quality education that is characterized by rigor and compassion, and to nurture a love of life-long learning in its graduates. To fulfill this mission, students must learn compassion from their mentors and come away with a positive academic experience that motivates continual education throughout their lives. It was, therefore, prudent to explore the interactions of faculty and students and gain a deeper understanding of the impact faculty leadership behaviors have on student satisfaction and success.

Faculty and students from both the nursing and medical imaging divisions were asked to participate in this study. This population was chosen based on their unique experiences in the health professions environment, and because the small class sizes at this college allow for familiarity between the faculty and the student. This also provides an environment for more intimate interactions between each student and faculty member.

Out of approximately 20 faculty, approximately 10 were invited to participate in this study, with an expected enrollment of five to eight. The ten invitees were those faculty who

teach in the nursing and radiologic technology divisions. To be eligible to participate, faculty must have held a non-adjunct teaching role in either nursing or medical imaging divisions, and 75% of courses taught in the past two years must have utilize a face-to-face format. Faculty were divided into two groups; one comprised of approximately five nursing faculty, and the other comprised of approximately three medical imaging faculty. Because this study focused on faculty-student interactions in the nursing and radiologic technology programs, no general education faculty were included.

From the student population of approximately 300 students, it was expected that 10-20 who met specific criteria would enroll. Student eligibility criteria were that students are 18 years of age and were seniors in either the A.S in nursing or A.S. in radiologic technology programs. Students must have completed all biological sciences prior to participating (this is to ensure that students would not be a future student of the researcher).

Sampling Method

A non-random (purposive) sampling criterion was used to recruit participants in this study. Faculty from the nursing and radiologic technology divisions of the college were invited to participate with a goal of five to eight to be recruited for this study (two to three from the radiologic technology program and three to five from the nursing program). Additionally, senior students were invited to participate, and from this group, approximately 10 to 20 students were to be chosen for recruitment (five to 10 each from the A.S in nursing and A.S in radiologic technology programs). Recruited students were placed into two focus groups based upon the program in which they were enrolled in order to analyze similarities and dissimilarities between students of each program. The aim to enroll approximately eight faculty participants and 20 student participants (from their respective nursing and radiographic technology programs)

allowed for reasonable certainty that the data was credible, and reliable while keeping the numbers low enough to complete an in-depth exploration of participant understandings of the phenomenon.

Recruitment of faculty involved emailed invitations (see Appendix F) to the faculty population requesting their participation in semi-structured interviews and included a description of the study in which they were to engage. Eligibility criteria was also included (having a non-adjunct teaching role in the nursing or medical imaging division, and a minimum of 75% of courses taught in the past two years using a face-to-face format). Had more faculty agreed to enroll in this study than the planned limit of eight faculty, the selection of faculty participants would have been based on maintaining a ratio that would closely represent the faculty numbers in the nursing and medical imaging divisions. In preparation for a low response rate, a second email was prepared to remind faculty of the original invitation to the study, including a copy of the original emailed invitation attached (See Appendix L).

Senior nursing and radiologic technology students were sent two rounds of emailed invitations (see Appendices H & I) that included criteria that must be met to participate, such as a minimum age of 18 years, and completion of all general education sciences (this ensures that students are at similar points in their program). Students were also contacted via the college's learning management system directing them to check their college email accounts for a research invitation as many students were not actively using their college provided email accounts. A response period of 21 days was designated during which a second invitation was sent. It was important for student focus groups to be a representative sample of all nursing and radiologic technology seniors at this site. Students who have a strongly positive or negative perception of faculty interaction may be first to respond (Utts, 2014, Chapter 4), therefore, utilizing this time

frame and a follow up invitation allowed for both fast and slow responders to have an opportunity to participate. At the end of the response period, 5-10 respondents from each division were to be randomly chosen (from both early and late responders) for enrollment in the two focus groups. Due to a low response rate, fewer students than the target number enrolled in the study and random selection was abandoned as all respondents were needed for the study.

Instrumentation & Data Collection Procedures

Institutional Review Board

A research proposal comprised of the first three chapters of this dissertation was crafted by this researcher during the summer of 2020. During this time the researcher also completed required certification training through the Collaborative Institutional Training Initiative. Once the proposal was successfully presented and approved by the lead advisor of this study, an application for authorization to conduct the study was submitted to the Institutional Review Board (IRB) by the lead advisor on behalf of this researcher.

Pilot Tests

Before the initiation of this study, pilot interviews and a pilot focus group discussion were conducted. A health professions faculty member from another local college was asked to vet interview questions for clarity, openness, and to ensure questions were aimed at addressing the first research question and sub-question. A similar pilot was conducted with two recent graduates (one nursing and one medical imaging), who also did not participate in the study, to ensure questions were clear and promote discussion that reveals students' understanding surrounding faculty and their impact on student success. Students for this pilot were to be chosen from freshmen students who are at least 18 years of age and had fulfilled all general education courses that this researcher teaches to ensure they experienced no pressure to participate and to

minimize bias. However, no freshman students were identified who were also willing to participate, therefore, pilot student focus group questions were validated by recent graduates (within the past two years) of the nursing and radiologic technology programs.

Data Collection & Instruments

Interview questions were created using a semi-structured interview protocol (Appendices J & K). Question development was guided by (a) Rosenthal's four-factor theory (1994) which states that teacher expectations and beliefs of students impact the learning environment, (b) Rubie-Davies' (2006) proposal that faculty expectations influence student self-efficacy, and (c) Bandura's self-efficacy theory (1977a), which asserts that self-efficacy plays a significant role in how one approaches challenges and one's success with those challenges. These theories guided the crafting of questions aimed at getting to the specific understandings regarding the influence of faculty behaviors on the self-efficacy and success of students.

Before data collection began, informed consent was retrieved from both faculty and students (Appendices L & M). Demographic questionnaires were created using commonly available instruments as guides. The faculty demographic questionnaire (Appendix N) queried age, education level, years of post-secondary teaching, professional field, division in which they teach at the college, and whether they have formal post-secondary teaching education. The student demographic questionnaire (Appendix O) queried age, gender, race/ethnicity, country of origin, number of hours worked each week, education level, first-generation college status, and current program in which they are enrolled.

The faculty interview protocol consisted of eight open-ended questions and was conducted through an online meeting software such as Zoom or GoToMeeting. Online interviews were recorded using the software's built-in recording capability, and two additional

devices (cell-phone and electronic tablet). Interview recordings were to be transcribed manually or with the aid of a transcription service. Manual transcription was selected and copies of transcripts were distributed to interviewees for member checking. Student focus group interviews were conducted with each group (radiology and nursing) separately and were moderated using six identical open-ended questions as the primary discussion prompts. Sessions were conducted using online meeting software (as with faculty interviews). Online meetings were recorded using the software's built-in recording capability and two other devices (cell phone and electronic tablet). Recordings were to be transcribed manually or with the aid of a transcription service. Manual transcription was chosen and each focus group was provided an opportunity for member checking of the transcript to ensure credibility (Birt et al., 2016). Students were asked to note any corrections they felt needed to be made to their contribution to the discussion and to email corrections to the researcher within 72 hours. Personal identifiers were redacted and replaced with assigned pseudonyms.

Data were collected sequentially, first by asking each faculty participant to answer questions on a demographic questionnaire, followed by a semi-structured interview. The questionnaire was read to the faculty member and their answers were recorded. Student questionnaires were sent to students before the focus group meeting. Student participants were asked to complete the informed consent form and the questionnaire and to email both forms to the researcher prior to the start of the focus group interview. Focus groups were scheduled after faculty interviews to reduce interviewer bias (regarding negative F-S interactions) during faculty interviews. Additionally, gathering students for focus groups was easier when they had settled into the new academic year.

Data gathered from faculty and students were stored on an encrypted thumb drive or secured in a locked safe when not being used. All participants were assigned an alphanumeric pseudonym to protect confidentiality. The first identifier was based on their role, e.g. “F” for faculty, “S” for student. The second identifier was based on their division, e.g. “R” for radiology and “N” for nursing. The third identifier was based on receipt of their agreement to enroll (faculty) or order of selection (students), e.g. 01, 02, etc…. Two examples for a full identification pseudonym are SR01 (first student from radiology to enroll), and NF01 (first faculty from nursing to enroll). The key for pseudonyms was stored as a password-protected file saved on an encrypted thumb drive stored in a locked safe.

Data Analysis

Thematic and cross-case analytic approaches were applied to data from interviews and were used to determine the understanding of faculty concerning the impact faculty perceptions, expectations, and behaviors towards students have on student success. Variables from the demographic questionnaires were interwoven with the interview data to elucidate if participants with certain characteristics have similar or unique understandings of the faculty role. These approaches were also used to analyze data from student focus groups and questionnaires to determine the understandings of students concerning how faculty leadership impacts self-efficacy and student success. Thematic analysis involves coding transcripts and searching for categories and themes arising from the codes to reveal patterns and relationships to better understand the phenomenon (Nowell et al., 2017). A cross-case analysis involves an examination of the themes, similarities, and differences between the cases of this study, and provided a broader and more in-depth understanding of the phenomenon studied (Yin, 2018). Specifically, the cross-case analysis method determined if similarities and differences exist between and

among the understandings of faculty from different programs, between and among students of different programs, and between faculty and student groups. Deductive and inductive analysis techniques were employed to discover common themes from codes derived from the different faculty cases and student focus groups. This approach was used to develop theories and/or assertations surrounding the understandings of faculty leadership as it relates to student success.

Coding

Coding began with a first cycle consisting of two passes through the transcripts to identify similar words and phrases using initial coding methods (Saldana, 2016). Although preliminary considerations of initial coding methods were in vivo and versus coding, methods changed to in vivo and descriptive coding during this first cycle to produce the most substantive analysis (Saldana, 2016). First cycle coding was to be followed by a second coding cycle using *focused coding* and/or *pattern coding* (Saldana, 2016). Focused coding involves identifying the most frequent or dominant codes, then categorizing these according to conceptual similarity (Saldana, 2016). Ultimately pattern coding was used, which involves grouping codes from cycle one into patterns, themes, or constructs to "identify an emergent theme, configuration, or explanation" (p. 236). This method is particularly appropriate in this study as it is useful in "examining…patterns of human relationships" and "laying the groundwork for cross-case analysis" (p. 236). The resulting subthemes, themes, and patterns were organized, summarized, and checked against the data to ensure summaries appropriately described the data (code weaving) (Saldana, 2016). Finally, the resulting themes, subthemes, and patterns were interpreted to reveal the unique understandings of health professions faculty and students regarding the role of faculty in student success.

Limitations of the Research Design

This case study relied primarily on data from interviews and focus groups at a single site. A limitation inherent to this type of study is that the data are self-reported; as such respondent honesty, accuracy in recollecting events and articulating feelings, as well as reflexivity between the researcher and the respondent are potential issues that cannot be entirely excluded (Bloomberg & Volpe, 2016; Merriam, 2009). Participants may also have had difficulty expressing their feelings. Furthermore, participants may not have had the capability or the comfort level to adequately describe their views, and despite assurances of confidentiality, they may have felt nervous that their comments would negatively impact their standing at the college. Faculty participants may have felt uncomfortable in revealing their understanding of the influence faculty leadership has on student success as they are participants in this dynamic. Lastly, due to the nature of this study design, findings could only capture the understandings of health professions faculty and senior students at this one college, and although findings may apply to other similar health professions colleges, they may not apply to other institutions of higher education.

Credibility

Credibility and confirmability are essential in any research study as they establish that the results and conclusions of the study can be trusted (Patton, 1999). Potential threats to credibility and confirmability in a case study design are that participant and researcher bias can influence the interview process, and researcher bias can influence the interpretation of data, and the study findings (Bloomberg & Volpe, 2016; Creswell, 2015). Triangulation is a method by which "multiple… sources of data or data collection methods [are used] to confirm emerging findings" (Merriam, 2009, p. 229). In this study, triangulation was accomplished through the collection of

data from four sources: (a) faculty demographic questionnaire, (b) faculty interviews, (c) student demographic questionnaire, and (d) student focus groups. Together these allowed for an in-depth exploration of the experiences and perceptions of participants and provided demographic data that added to the overall understanding of the phenomenon. Reflexive journaling was also used to reflect on the researcher's preconceptions and biases and monitor the researcher's subjective perspectives throughout data collection and analysis (Bloomberg & Volpe, 2016; Ortlipp, 2008).

Member checking is another method that was used to enhance the credibility (and validity) of the data by ensuring accuracy is maintained. Member checking also provided a way to identify researcher biases and misunderstandings of the data (Merriam, 2009). All participants were emailed transcripts of their interview/focus group discussion with an invitation to respond with any corrections needed (Appendix L).

Dependability

Dependability of the study and reliability of instrumentation are also essential characteristics of the qualitative study. Dependability refers to results being "consistent with the data collected" (Merriam, 2009, p. 220), and the ability of outsiders to follow the process of data collection and analyses (Bloomberg & Volpe, 2016). Triangulation and careful articulation of the steps taken throughout the data collection and analysis processes provided details necessary to ensure transparency regarding the methods used in this study.

The reliability of the instruments used in this study was demonstrated through pilot tests of interview questions. A non-participating health professions faculty member vetted interview questions for clarity and openness, and that they promote responses that answer the first research question and sub-question. A similar pilot test was conducted with two non-participating

graduates (one nursing and one radiology) to ensure questions were clear and promoted discussion that would answer the second research question.

The goal of this study was to produce meaningful findings that relate to this particular study site and also to provide useful information that is transferable to other sites in similar situations. This study ensures transferability by providing descriptions of participants, and each faculty's and student's understandings of faculty influences on student success. Although the findings from this study speak to phenomena occurring at this single site, with sufficient detail and richness of data, findings may be transferable to other health professions colleges.

Participant Rights and Ethical Considerations

Studies that utilize interviews can place respondents in a vulnerable situation. During the interview process, respondents may reveal information that they did not intend (Creswell, 2015), or may discover feelings they have about their professional or academic circumstances that produce discomfort (Merriam, 2009). Further, respondents may recollect memories of events or interactions that are painful while exploring and sharing their thoughts (Creswell, 2015).

Limiting unintended adverse outcomes and protecting participant rights was a priority in this study. Permission to utilize respondent data was acquired from all participants in this study. This required participants to read and give signed informed consent. Documentation of the informed consent included the scope and purpose of the study, the rights of participants to leave the study at any time, redact statements given, and clarify or modify responses during the member checking process. In addition, the interview protocol included a statement that participants did not need to respond to any questions they were not comfortable answering. Focus groups were asked to maintain the confidentiality of anything shared during the focus

group interviews and were cautioned that although efforts were made to ensure this, it could not be guaranteed; this was also noted on the consent document.

This researcher works in higher education as a faculty member but had no authoritative connection/relationship in any capacity over the faculty participants or the students recruited to participate in this study. Written permission to conduct this study was submitted to the president of the college and was approved. This request included the scope and purpose of the study as well as details regarding how data would be collected from both faculty and students (see Appendix P).

Data was protected by securing transcripts, questionnaire data, and subsequent analysis on an encrypted external drive, and kept in locked storage when not being used. All recordings of interviews will be destroyed within three years after all analyses are completed. In addition, participants were assigned alphanumeric pseudonyms (as previously described) to protect their confidentiality. Any name of an administrator, staff member, non-participating faculty member, or non-participating student mentioned during interviews was redacted in the transcripts. Names were replaced by their role at the college, or by assignment of a pseudonym. Alphanumeric pseudonyms were created using lowercase letters (to signify a non-participant), and a number to signify when they were first mentioned in the discussion (e.g. “a02” administrator, “sf03” staff member, “rs01” radiology student 01, “nf05” nursing faculty 05), or generic terms were used (“an administrator”, “a classmate”). Securing and maintaining participant rights and confidentiality is a principal responsibility of all researchers, and should not be taken lightly (Roberts & Hyatt, 2019). The aforementioned measures ensure participant rights and confidentiality were protected.

Conclusion

Horton (2015) points out that there are several factors that impact student success, Barnett (2011), Scarbrough (2013) and Cardosa et al. (2011) note that one of the most influential factors on student success is the quality of the faculty-student interaction. Specifically, this interaction can affect student motivation and self-efficacy; two key factors in academic achievement (Bandura, 1977a, Bandura 1982; Bandura, 1993; Rosenthal, 1994; Rubie-Davies, 2006). In certain fields of health professions education, negative F-S interaction is reported (Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015; Scott et al., 2015), but little is known about the understandings of health professions faculty regarding how faculty leadership behaviors impact student success.

This chapter discussed how a collective case study methodology was utilized to reveal how this study is bounded by site and participants, how data was gathered utilizing questionnaires, open-ended interviews, and focus groups, and how these data were analyzed using thematic analysis. Chapters 4 and 5 discuss the findings of this case study, to help better comprehend how health professions faculty and students understand the impact that faculty behaviors have on student self-efficacy and success.

CHAPTER FOUR: RESULTS

This collective case study was conducted during the fall of 2020 at a small health professions college located in the United States. Study participants were nursing and radiologic technology faculty and students, the two main divisions of the college. The aim of this study was to explore the understandings of these two groups with respect to the role of faculty in student success.

Methodology and Research Questions

Data for this study were collected by interviewing six faculty members from the nursing and radiology divisions of the college and two senior student focus groups (one each from the nursing and radiology divisions). Research questions (RQ) this study attempted to answer are the following: RQ1: How do health professions faculty understand the role that faculty leadership plays in student success, RQ1a: How do health professions faculty understand student self-efficacy, and RQ2: How do health professions students describe how faculty leadership impacts their self-efficacy and success?

Interviews and focus group interviews were conducted during September, October, and November of 2020. Faculty and students represent the two program divisions at the college and are representative of the faculty and students in the college community in all aspects including ethnicity (see Table 1). The aim of the interview questions was to gain specific opinions of each participant regarding the role of faculty in student success. Interviews were recorded using Zoom or GoToMeeting and manually transcribed. Transcripts and emergent codes were sent to each participant for member checking to ensure the transcription and interpretation was accurate and reflected the thoughts and opinions of the participants.

Faculty transcripts were read individually to get an overall sense of the data for each participant, and then first-round coded. Nursing faculty transcripts were coded first followed by radiology faculty transcripts. This allowed for an understanding of the individual faculty member's thoughts but also gave a sense of similar understandings of faculty within each division. Initial coding of faculty and student focus group transcripts was completed using descriptive and in vivo coding methods. Once initial coding was completed for all participants, nursing and radiology faculty codes were organized into pattern codes and themes, then analyzed to determine themes for the faculty as a whole. Similarly, nursing and radiology student codes were pattern coded, organized into themes, then analyzed to determine themes for the students as a whole. Themes identified from these interviews were based on both implicit and explicit communications from faculty and students and provide a multi-dimensional understanding of faculty and student perspectives, as well as similarities and differences between the views of participants from the nursing and radiology divisions of the college.

Demographic Data

Table 1

Characteristics of Faculty and Student Participants

Category	Faculty Participants
Division	
Nursing	3
Radiology	3
Age	
33-43 years	1
44-54 years	2
55-65 years	3
Level of Education	
Graduate Degree or Higher	6
Profession Prior to Teaching	
Nurse	3
Radiologic Technologist	3
Years of Teaching	
0-8 years	2
9-14 years	2
15 or more years	2
Formal Education in Teaching	
Yes	2
No	4

Category	Student Participants
Division	
Nursing	5
Radiology	3
Age	
18-24	1
25-34	5
35-44	2
Gender	
Female	7
Male	1
Hours of Work per Week	
Not working	1
1-14 hours	2
15-30 hours	3
More than 30 hours	2
Education Level	
Some college	5
Associate's degree	1
Bachelor's degree	2
First Generation College Student	
Yes	4
No	4

Summary of Findings

Faculty Data

Faculty participants were administered a demographic questionnaire containing questions that pertained to their age, education and background in teaching. The interview was composed of eight questions relating to their views on factors impacting student success, the impact of

faculty perceptions, expectations and behaviors on student self-efficacy, and their opinion about how *students* view the role of faculty in student success.

Five Key themes emerged during analysis of the faculty data.

1. Student-Related and Faculty-Related Factors Influence Student Success
2. Self-Efficacy is Vital for Student Success
3. Drivers of Faculty Behavior are Multi-factored (perceptions & expectations of students, prior experiences as a student)
4. Faculty Behaviors Impact Student Self-Efficacy and Student Success
5. Faculty Believe Students View Faculty as a Strong Influence in Student Success

Theme 1: Student-Related and Faculty-Related Factors Influence Student Success

Overall, faculty from both divisions shared that student success is influenced by both student-related factors and college/faculty-related factors. Two key student related factors mentioned were a) understanding the requirements of the program/preparedness for college, and b) persistence/growth mindset/resilience/drive. Nursing faculty #1 (FN01) stated, "It's just who starts the program… making sure you have the right student in the program in the first place…they have to have the qualifications necessary to be successful", followed by nursing faculty #2's (FN02) comment that, "…on the student's part it would be overall preparedness and by that I mean intellectual ability...". Radiology faculty #3 (FR03) noted that, "… the student's ability to be resilient… especially in healthcare education… appears to be a big factor".

Several faculty/college-related factors were highlighted as influencers of student success. The factor that generated the most comments was positive faculty-student interactions and faculty support. As radiology faculty #1 (FR01) stated, "faculty interactions will be the most important thing that the college can do to support the student…" Interactions and types of

support discussed include being open to students, willingness to help students, utilizing effective teaching practices, being considerate of students and perspective-taking. FN03 offered that it is inherent on faculty "…to reach out to the students and encourage them to come…see us, being available for that student for… extra help, providing… different learning type opportunities…to grasp the concepts…" Another faculty-related factor deemed essential by faculty from both divisions is setting clear expectations for students. FR03 stated, "As long as [we set expectations clearly, and] …that communication and supportive environment is there. I think those are the three I would deem most valuable."FN01 agreed, stating, "It's really important for us, right from the beginning to set those expectations"

Theme 2: Vulnerability and Role of Self-Efficacy in Student Success

Faculty agreed that self-efficacy is essential for student success. Faculty shared their own experiences as undergraduates and noted how critical believing in their own ability to succeed was in meeting educational and inter-personal challenges while earning their degree. FR03 shared, "… it was my own self-efficacy… my determinants… I didn't want to fail." Although there are students who enter college with a high degree of self-efficacy, several faculty commented that students often do not have strong self-efficacy when they first enter college. FN03 summed up the feelings of all faculty participants by saying, "…if they can believe that they are going to succeed and they have the ability to…[succeed]… you know, positive thinking … [it] has a lot to do with their success." Faculty also agreed that self-efficacy can be built up over time and can be positively influenced by encouraging words from faculty.

Several faculty commented on the vulnerable nature of student self-efficacy, noting that incoming freshmen often start off with low or fragile self-efficacy and that faculty behaviors can either build-up or break down student self-confidence. FN01 shared, "…you can make a student

feel really stupid...the self-esteem bottoms out...it takes away from their self-confidence, so they're... going to start pulling back from you". In discussing the fragility of student self-efficacy FR01 noted that radiologic technologist instructors can significantly impact student self-confidence with just a comment, "they can crush your confidence with one word… just a blink of an eye and there goes your whole day…" Faculty also noted that positive behaviors such as encouragement, letting students know you believe in them, and taking time to mentor them can have the opposite effect by motivating students and increasing their self-confidence.

Theme 3: Drivers of Faculty Behavior are Multi-Factored

All faculty agreed that perceptions of students help to form their expectations of student performance and behavior. Faculty commented on a number of factors that influence their expectations of students and ultimately how faculty behave towards students. Some of the key factors mentioned are colleague perceptions of students, faculty's own biases, prior experiences with students who share similar characteristics as current students, and student behavior that is judged to be either that of a slacker, a low achiever, or a high achiever. Faculty FR03 confided, "…I have judged based on previous experiences of students in similar situations…" Speaking about a student who is perceived as a high-achiever, FR01 shared, "So sometimes if I'm …grading something where there's a little bit of leeway…. I might tend to give them a higher grade." Nursing and radiology faculty commented that information shared by colleagues about students can be helpful in knowing where their understanding of content is, and also can help faculty to have an increased understanding of the student's perspective and personal situation.

Student behavior can also influence faculty behavior. Nursing faculty FN01 relayed that some faculty disinvest in students who are deemed troublesome, "… anybody that is a squeaky wheel becomes someone that is almost less invested in…if you make waves you're perceived

as… that squeaky wheel… [faculty] don't like squeaky wheels. They don't want someone that complains about things…" FN01 continues, "… when the students hold someone to an expectation that they are… not meeting, as a faculty… [they are] put onto the radar [as] a trouble student…. There's not as much willingness…to work with them at that point."

Theme 4: Faculty Behaviors Impact Student Self-Efficacy and Student Success

One of the topics that received the most comments from faculty was the impact that faculty behaviors have on student self-efficacy and success. Comments focused on ensuring students are provided the necessary building blocks and learning opportunities for their success, the importance of setting clear expectations for students, faculty monitoring student progress, encouraging students, being available to students and offering extra time to those who need them. Faculty also shared the essentialness of creating a supportive environment through open, caring communication with students, ensuring students feel safe to approach faculty and inquire, the need for faculty to demonstrate perspective-taking and being self-reflective, and establishing meaningful connections with students so that students feel safe, supported, and comfortable reaching out to faculty. FR01 discussed the fragility of the student's self-efficacy and how negative communication can have a devastating effect on their self-confidence, "With just a word, with just a comment…that student who's climbed so high …it just takes a minute to knock them back down, and then it takes a lot of encouragement to get them secure again." FN01 relayed that she has witnessed negative interactions between faculty and students, and noted that these can have an emotional impact on students. "Some of the really negative interactions that I've seen [are] where a faculty member will say, 'I have the power to make your life miserable'. Nursing faculty FN01 summed up the views of the faculty by saying, "we have a *huge* impact on the students…as far as being open to their questions, not dismissing questions…. How we

respond to that will open up that classroom to more and more questions…it builds on their learning experience." FN01 went on to note that students pay attention to how faculty treat other students in the class, and if a faculty behaves in such a way as to shut down a student, other students can be similarly silenced simply by observing that interaction.

Theme 5: Faculty Believe Students View Faculty as a Strong Influence in Student Success

The last key theme that emerged from the faculty data was the belief that students see faculty as a major influence in student success. Faculty felt students would say that when faculty are inconsistent, do not give effective feedback, do not teach in an engaging manner, do not communicate effectively and in a positive manner it has a significantly negative effect on their success. Speaking as she feels a student would, radiology faculty FR03 stated "… if I feel a faculty doesn't believe I'm capable or doesn't give me the feedback that shows that I'm capable, I may myself determine that I'm not capable of it… 'I'm a failure'."

FN01 felt a typical student would say, "Those faculty who are open to me, that I feel comfortable...asking questions of, that respond …promptly, that provide me with additional [information]... that's going to make me be more successful if I feel I can do that."

Research questions (RQ) answered through faculty interviews are RQ1 and RQ1a. The table located in Appendix A maps the interview questions that produced the data from which thematic findings emerged. This table also provides mapping of key themes to the research questions.

Student Data

Student participants were asked to complete a demographic questionnaire which included questions pertaining to general demographical information (age, gender etc…) as well as their degree program, the number of hours worked per week, education, and first generation college

student status. Focus group interviews were based on six questions concerning the influence of the learning environment on student success, the role of self-efficacy in student success, factors that affect their self-efficacy, and their opinion about how *faculty* view the role of faculty in student success. Four key themes emerged during the analysis of student data.

1. Educator Behaviors in the Learning Environment the Key Influence of Student Success
2. Self-Efficacy is Critical for Student Success
3. Multiple Factors Influence Self-Efficacy
4. Students Believe Faculty View Themselves as Strongly Influencing Student Success

All interview questions provided data that helped to answer research question 2, and all contributed to the five key thematic findings (see the table located in Appendix B to view key thematic findings mapped to interview questions).

Theme 1: Educator Behaviors are the Key Influence of Student Success

Student participants noted that faculty, instructor, and administrator behaviors were the key factor influencing student self-efficacy and success. In this study, the role of instructor signifies a nursing clinical instructor or a radiologic technologist who is precepting radiologic technology students in the clinical setting. The term educator refers collectively to faculty, instructors, and administrators. Students commented that faculty engagement with students, educator consideration of students, and the nature and quality of educator communications with students all played principal roles in their self-confidence, motivation, and success. Comments about communication emphasized how disrespectful, demeaning, and rude communication from educators has a detrimental effect on student motivation, self-confidence, and their perceived value in the eyes of educators. SR02 shared that, “in clinical sometimes a tech…will make

snarky comments… that degrades my confidence." SR01 added, "even like the little things are kind of like a big dig… it hurts more than it, it probably should." Students also noted that positive communications have a motivating effect on students, make students feel valued, and increased their belief in themselves to be successful.

Students stated that the openness and willingness of faculty to help students facilitated students feeling valued and positively impacts their success. In describing his first semester experience and how a professor's willingness to help encouraged him, SR01 shared that "[The professor was] very accepting with not just me, but any students that were in [the] class coming to [her] at any time of the day." In comparison, as noted by SN04, unwillingness to help students has an isolating effect on students, "[the faculty] not [being] willing to offer that support or additional information…to understand felt very isolating, and made it feel like, 'Well, it's on me 'cause I'm not getting anything from you." Referring to faculty who are considered pedagogically skilled, SN02 stated, "…the teachers who are fit for teaching understand that every single thing that they do impacts the student."

Theme 2: Vulnerability of Self-Efficacy and its Role Student Success

Students were asked how important self-efficacy was to their success, and if and how their self-efficacy changed from when they started college to where they are currently in their senior year. Students agreed that self-efficacy was a critical component of their ability to succeed. Levels of self -efficacy varied among students, with some stating they have always had a strong sense of self-efficacy and others noting that they tend to have a weaker sense of self-efficacy. Students who confessed to having a weaker sense of self-efficacy, also noted that their self-confidence was much more vulnerable to fluctuations as a result of facing new challenges,

experiencing positive and negative faculty behaviors, whether or not they have experienced a recent success or failure, and whether or not they received encouragement from peers and family.

Theme 3: Multiple Factors Influence Self-Efficacy

The factors most discussed that influence student self-efficacy were confronting new challenges and the quality of faculty/instructor/advisor communication. Nursing students commented that their self-efficacy is often low at the start of the semester but improves as the semester progresses, especially if they have been successful on exams and in clinical experiences. Some students noted that their self-efficacy gained some strength while taking general education courses prior to entering their program. Radiology student SR03 shared, "…before I was in the radiology program… I took Anatomy & Physiology…that's where I gained my confidence… then I was accepted into the program and… it was low again." Starting either a new semester or a program seemed to cause student self-confidence to waiver but with time and successes self-efficacy recovered.

Students from both divisions also discussed the impact that educator communication/feedback has on their self-confidence. Students commented how when feeling insecure and doubting themselves, faculty and advisors who offer encouragement and show students that they believe in their ability to succeed had a significant influence in raising their self-confidence. Nursing student SN03 shared that during her first semester she struggled to believe in herself and would turn to her advisor for encouragement. SN03 stated, "[my advisor would say] '…you are smart… you know this, you can do it' [and] I realized I *can* actually do this. I'm *not* a complete idiot". SN05 countered that negative communication or lack of response from faculty can, in a sense, bolster self-efficacy. SN05 explained that this happens when one comes to the conclusion that you can only rely on oneself to succeed, stating, "you're not getting

…answers…you're getting very passive aggressive emails back… you feel like you can't depend on someone, you have to depend on yourself…" SN05 also stated that although this may have taught her to depend on herself, this is not how she wants to learn. Students also noted that faculty and instructors who communicate negatively with students, using demeaning and disrespectful language, can cause their self-efficacy and motivation to decline. Lastly, students mentioned that their own determination and motivation to earn their degree, and peer support also influenced their ability to be successful.

Theme 4: Students Believe Faculty View Themselves as Strongly Influencing Student Success

Students were asked how they thought faculty/instructors would answer the following question: How does faculty behavior impact student self-efficacy and success? Student responses varied from faculty understand precisely how their behavior affects student success and they care about that, to faculty understand how their behavior impacts student success but they do not care about that, to faculty/instructors simply do not understand that their behaviors impact student success. SR02 stated, "Our [faculty]… are really awesome… it's a moral thing… they know that it would have an effect on us, so they aren't negative towards us." She goes on to say, "… the technologists…don't really know that it would have an effect on us or, if they do know, they don't really care…" Nursing student SN01 shared, "… I think that they feel their behavior makes no difference. They're very closed minded with the exception of a select few." SN02 noted, "…the teachers who are fit for teaching understand that every single thing that they do impacts the student. I think that they 100% get it…" Student opinions between the nursing and radiologic technology groups showed a difference in views between how they viewed faculty versus clinical instructors. This difference is highlighted in the section reporting data between nursing and radiologic technology students.

Comparison of Faculty and Student Data

Faculty data and student data were analyzed using cross-case analysis to determine if similarities and differences exist between how faculty and students understand the role of faculty in student success, and the importance of self-efficacy in student success. Four key themes emerged from the entirety of the data:

1. Key Influencers of Student Success
2. Role of Self-Efficacy in Student Success
3. Influence of Faculty Behaviors on Student Success
4. Views About the Impact of Faculty on Student Success

Overall, faculty and students agreed on most of the key influencers of student success and the role self-efficacy plays in student success. Similarly, faculty and students both agreed that faculty behaviors have a significant impact on student self-efficacy. However, faculty and students differed in their responses about faculty behaviors impacting student success, in that faculty comments tended to focus on positive faculty/instructor behaviors, and students tended to center slightly more on negative faculty/instructor behaviors. Furthermore, faculty felt that students would say that faculty/instructors play a significant role in student success, but students gave mixed opinions as to whether or not faculty/instructors were aware of their impact on student success. Table 2 shows the views of faculty and students according the thematic findings. See Appendix C to view a mapping of key thematic findings to interview questions.

Theme 1: Key Influencers of Student Success

Faculty and students noted that student-related and faculty/college related influences impact student success. Both participant groups discussed the importance of students having determination or drive. Faculty also noted the importance of having a growth mindset and

perseverance in order to be successful. Another characteristic mentioned by both groups was preparedness. Faculty focused on academic preparedness, understanding the program requirements, and students being the right 'fit' (general readiness, aptitude, professionalism), for the program. Students focused on readiness as it related to past college experience or no college experience. As one radiology student (SR01) shared about his experience during his first semester at college, "It was a shock, kind of in a sense that I didn't know what to expect and when it hit me it was kind of almost unbearable." According to other student participants, having prior college experience allows students to be better prepared for the challenges of college, which increases their ability to be successful.

Although student characteristics were noted by both groups as important most comments centered on influences related to faculty and the college that have an impact on student success. The most commonly discussed factors in this category were the quality and quantity of faculty support, and the quality and quantity of communication. Each group stated that abundant, regular, and caring support by faculty is one of the key determinants of student success. Specific elements of faculty support included perspective-taking, providing student learning opportunities and rich instructional content, monitoring student performance, and being available and responsive to student needs. Each participant group also stated that clear, consistent, respectful, and reliable communication was critical for student success. Radiology student SR01 shared the student's perspective by stating, "If the teacher's giving a negative response or being passive aggressive, the student isn't going to respond well to it… whether or not they want to learn it or not…. It's … kind of a respect thing as well." Radiology faculty FR03 summed up the opinions of the faculty by stating, "As long as [we set expectations clearly, and] …that communication and supportive environment is there, I think those are the three I would deem most valuable."

Lastly, students mentioned that peers played a significant role in their academic success. Most comments came from the nursing students and focused on moral support and encouragement. Comments made by radiology students focused primarily on the benefit of student study groups.

Theme 2: Role of Self-Efficacy in Student Success

Faculty and students were asked their opinion about the importance of self-efficacy in student success. Both groups agreed that having strong self-efficacy was a key factor in a student's ability to be successful in college. Additionally, faculty and students mentioned the variable and fragile nature of some students' self-efficacy and that multiple faculty/instructor-related behaviors and actions by peers or family can cause self-efficacy to strengthen or decline.

Theme 3: Influence of Faculty Behaviors on Student Success

Much discussion occurred surrounding the topic of faculty behavior and its impact on student success. Faculty participants more frequently mentioned positive faculty behaviors and their impact on students, whereas students more frequently mentioned negative faculty/instructor behaviors and their impact on students. In general, faculty noted that positive faculty behaviors such as encouraging students, being available to students, mentoring students, creating a safe environment within which students feel comfortable asking questions of faculty/answering questions, responding promptly to students, communicating respect, consideration, caring, and belief in students' ability to succeed, all positively impact student success. Some faculty mentioned negative faculty behaviors they have witnessed which led to students feeling disrespected, belittled, frustrated, and angry. As FN01 shared, "I've actually seen that [where a faculty says] 'Don't mess with me'. [That] makes the students angry."

Although students did mention positive faculty behaviors and how these were invaluable in boosting their self-confidence, a considerable amount of their discussion centered on negative faculty/instructor behaviors. Students stated that negative faculty/instructor behaviors impact their sense of value, their self-confidence, motivation, and ultimately their success. Specifically, students noted how disrespectful, demeaning, and belittling comments and gestures made them feel devalued, frustrated, and not possessing the abilities needed to succeed in their chosen profession. When stating how demeaning comments make her feel, SR02 confessed "…it gives you this …pit feeling in your stomach" "… you're trying your best but you're not being acknowledged for that…" "[You feel] inadequate and disrespected." Students also mentioned the importance of faculty/instructors showing care and consideration for students in word and deed.

Theme 4: Views about the Impact of Faculty on Student Success

Faculty and students were asked how they thought *each other* would answer the following question: How does faculty behavior impact student success? Faculty responded by saying students would think faculty behavior has a significant impact on their success, whereas students had a mixed response. Student responses varied from, faculty are aware and they care that their behavior impacts student success, to faculty are aware but do not care how their behavior impacts student success, to faculty/instructors are not aware how their behavior impacts student success. Faculty who are aware and who care were attributed with positive behaviors, faculty who were aware but did not care were attributed with negative/harmful behaviors, and faculty/instructors who are not aware were described primarily as those who were not experienced in teaching or who did not hold a teaching position as their primary means of employment. Generally, these faculty/instructors were also characterized as demonstrating negative behaviors.

Table 2

Views of Faculty vs. Students According to Thematic Findings

Themes	Faculty	Students
1. Key Influencers of Student Success	Student characteristics Faculty/Instructor behaviors with students	Student Characteristics Faculty/Admin/Instructor behaviors with students Peer support
2. Role of Self-Efficacy in Student Success	Very important	Very important
3. Influence of Faculty Behaviors on Self-Efficacy	Significant positive experiences dominated	Significant negative experiences dominated
4. Views about the Impact of Faculty on Student Success	Faculty play a significant role in student success	Most faculty are aware of their impact on student success, but some are not.

Comparison of Nursing Faculty and Radiologic Technology Faculty Data

Nursing faculty and radiologic technology faculty initial codes and pattern codes were analyzed using crossed case analysis to determine if similarities and differences exist in how faculty from different divisions understand the role of faculty in student success, and how faculty understand the role of self-efficacy in student success. Four key themes emerged.

1. Impact of Student Characteristics on Student Success
2. Impact of Faculty Behaviors on Student Success
    a. Faculty Perceptions and Expectations on Faculty Behavior
    b. Faculty-Student Interactions on Student Self-Efficacy
3. Impact of Self-Efficacy on Student Success
4. Faculty Believe Students View Faculty as Strong Influencers of Student Success

Faculty shared strikingly similar views related to these themes. Both groups commented on the importance of certain student-related and faculty-related factors that impact student success. Faculty also shared similar views regarding the essentialness of students having strong self-efficacy but noted that students new to college often had fragile and lower levels of self-confidence. All faculty agreed that students feel faculty hold a position of power related to their success. To view a comparison of faculty subthemes aligned with thematic findings see Table 3 on page 89. To view how faculty interview questions mapped to key thematic findings see the table in Appendix D.

Theme 1: Impact of Student Characteristics on Student Success

Faculty from both divisions agreed that there are certain student characteristics that play a significant role in student success. Characteristics discussed by both groups include being generally prepared for college, students being the right 'fit' for the program, understanding the program requirements having drive/determination, having resilience/perseverance, and having a growth mindset. Having strong support from home was also mentioned.

Theme 2: Impact of Faculty Behaviors on Student Success

Faculty from both divisions agreed that faculty behaviors are key influencers of student success. Most faculty discussed positive behaviors that faculty should engage in order to positively influence student success, such as being considerate, trying to see things from the student's perspective, being clear about expectations, offering challenging and appropriate learning opportunities, being available to students, being open to questions from students and providing answers for those questions. One topic discussed at length was the quality of faculty communication. Nursing and radiology faculty agree that communication with students must not only be timely, but must be respectful, encouraging, and of a quality that creates a safe and

comfortable learning environment. Examples of faculty communication were shared by nursing and radiology faculty participants. FN03 describes an example of positive faculty communication when she was in nursing school, "… she didn't come across as aggressive and … confrontational and just beat me up… she was truly a caring professor…" FR01 also shared how important it is "…for someone to get behind [students] and say…you're doing exactly what you need to be doing… I'm here for you, I'm going to help you but you can do this…you absolutely can do this." Still, other faculty noted that some of the negative communication stems from insecurity on the part of faculty. FR03 shared, "If a student… appears to be asking questions… some faculty … create a defense… and almost… belittle the student or … put them in their place… I think that threatens some faculty."

Two subthemes emerged which centered on the origins/influencers of faculty behavior and its effect on self-efficacy: the influence of perceptions and expectations on faculty behavior, and the influence of faculty behavior on student self-efficacy. Faculty from nursing and radiologic technology shared that experiences with past students, colleague opinions of students, and student behavior all played a role in how they perceived students as well as how they behaved with students. Student performance influenced nursing and radiologic technology faculty behavior in both inhibiting willingness to offer additional support and in giving leniency when grading. Family values and the faculty's own experiences as a student were also influences implicitly expressed during faculty interviews. Faculty from both divisions noted several times that the resulting faculty behaviors towards students have a significant impact on a student's self-efficacy.

Theme 3: Impact of Self-Efficacy on Student Success

Faculty were asked to discuss the impact of self-efficacy on student success. The consensus was that self-efficacy is vital for a student to reach their academic goals. Additional discussion highlighted that the self-efficacy of most students new to college is vulnerable to various positive and negative influences, but with consistent encouragement and support can improve and strengthen over time.

Theme 4: Faculty Believe Students View Faculty as Strong Influencers of Student Success

Faculty were asked to consider how a student would answer the question, how does faculty behavior impact student self-efficacy and student success? Once again faculty shared similar views. Both nursing and radiologic faculty agreed that students would say that faculty responsiveness and openness to students were behaviors that impacted student self-confidence and success. Furthermore, faculty agreed that students would say that the faculty–student relationship and the quality of faculty-student interactions were central to their success and satisfaction. Nursing faculty, FN02, stated, “I do think students would say that their interactions with a faculty member… makes a difference on their success or lack of success.”

Minor differences emerged between the two groups. Nursing faculty commented that students would say consistency in communication and information was important to their success, whereas radiology faculty felt students would feel setting clear expectations was an important element of their success. Faculty from both divisions agreed that students view faculty as having a significant amount of power in whether they are successful or not. As radiology faculty, FR02, shared, “I think there are students who think that [faculty are] the ones that make or break them.”

Table 3

Themes & Subthemes of Nursing Faculty vs. Radiologic Technology Faculty Data

Themes	Nursing Faculty	Rad. Technology Faculty
1. Impact of Student Characteristics on Student Success	Perseverance, resilience, drive, growth mindset, preparedness, right fit	Perseverance, resilience, drive, growth mindset, preparedness, right fit
2. Impact of Faculty Behaviors on Student Success	Quality of faculty-student communication & interactions, Perspective-taking Setting clear expectations	Quality of faculty-student communication & interactions, perspective-taking, Setting clear expectations
3. Impact of Self-Efficacy on Student Success	Key factor, amount when students enter college, vulnerable to fluctuations	Key factor, amount when students enter college vulnerable to fluctuations
4. Faculty Believe Students View faculty as Strong Influencers of Student Success	Responsiveness, openness faculty-student relationship faculty-student interaction consistency power of the faculty	Responsiveness, openness faculty-student relationship faculty-student interaction clarity of expectations power of the faculty

Comparison of Nursing Student and Radiologic Technology Student Data

Nursing student and radiologic technology student initial codes were pattern coded and analyzed using cross case analysis to determine if similarities and differences exist in how students from different divisions understand the role of faculty in student success. Views concerning the importance of self-efficacy in student success were also analyzed. Four key themes and several subthemes emerged from these data.

1. Faculty Behaviors in the Learning Environment Impact Student Success
    a. Quality of Instruction
    b. Faculty Consideration, Approachability, Openness, Willingness

    c. Quality of Faculty Communication/Availability Offered
        i. Communication
        ii. Availability
2. Program Culture Impacts Student Success
    a. Hostility and Fear
    b. Rite of Passage
    c. Punitive Culture
    d. Focus on Program Outcomes
    e. Administrative Detachment
    f. Peer Support
    g. Positivity and support
3. Student Understanding of Self-Efficacy
    a. New Challenges
    b. Prior Success
    c. Academic vs. Applied Orientation
    d. Quality of Advisor/Faculty/Instructor Feedback
    e. Faculty/Advisor/Instructor/Peers
4. Faculty awareness of their Role in Student Success
    a. Effective and Pedagogically Skilled Educator Understand Their Role
    b. Faculty/Instructor Behaviors are Chosen Based on Faculty's Desire to see Student Succeed

Although students agreed generally that faculty behaviors impact student success, that self-efficacy is fluid and influenced by multiple factors, and that most faculty/instructors are

aware of their impact on student success, only nursing students explicitly commented on the influence the culture of their program has on their success. Radiology student comments about faculty were consistently positive, whereas comments about clinical preceptors were mostly negative. The interview revealed that, overall, radiology students felt self-confident, had a respectful and trusting relationship with their faculty, and although experiences with clinical preceptors were often unsatisfactory, students seemed generally upbeat and satisfied with their program.

Conversely, although nursing students had positive things to say about certain faculty/instructors, most of their comments were predominantly negative. As a whole, the interview with nursing students revealed students felt generally dissatisfied, frustrated, and resigned to just getting through the program. Nursing students did emphasize their deep admiration, affection, and gratitude for a small set of faculty but also underscored the lack of positive and respectful relationships with other nursing faculty and administrators.

Theme 1: Faculty Behaviors in the Learning Environment Impact Student Success

Several subthemes emerged regarding the impact of faculty behaviors on student success: quality of instruction, consideration/approachability/willingness, quality of communication/availability, and peer support. Nursing and radiology students both agreed that faculty engagement and their ability to engage students in learning were essential behaviors for promoting student success. Both student groups shared examples of experiences when (on-campus) faculty exhibited these behaviors. Only the nursing group discussed situations when these faculty behaviors were lacking. SN03 shared, “then you have those teachers who just take a back seat… like they’re there for a paycheck… they just want to sit behind a desk and they want to collect that money …it’s very disheartening…” Although radiology students had no negative

comments about faculty they did note that clinical instructors exhibit negative commentary and, at times, an unwillingness to aid student learning which impacted their self-efficacy.

Students from both groups also noted that when faculty demonstrate that they care, are considerate, are willing to listen to questions and respond in a supportive and helpful manner it promotes student learning and self-efficacy. Nursing and radiology students stressed that when faculty exhibit these behaviors it makes them feel valued, believed in, and their self-confidence is bolstered. Both groups relayed experiences when faculty engaged in these behaviors, but only nursing students shared experiences when these faculty behaviors were absent. SN01 shared an experience when there was a disagreement between a faculty and the students in the class and stated, "the [nursing professor] was snarky and kind of passive aggressive." SN03 stated that "When we go for help to be unwilling to provide that for us…it's not OK for the faculty to sit there and treat us like that." SN03 continued, "it's like they forget that they are teachers." Radiology students shared that clinical instructors can also exhibit behaviors that negatively affect their self-confidence. Describing an interaction with an instructor, SR02 shared, "I found [her comments] very…offensive and something they should not be telling students that are just learning…. That…degraded my confidence."

Quality of communication was another theme that both student groups agreed impacted their self-esteem, self-confidence, and success. Comments related to this subtheme from both nursing and radiology students included examples of positive and negative experiences with faculty, instructors, and administrators. Nursing student SN05 recalls a faculty who always communicates positively and is always willing to offer assistance, "… that is what makes her the best…she gives me that peace when I am just freaking out or when I am desperate for an answer. I know that I can go [to her for answers]." Conversely, SN03 remembered a negative experience

with a faculty member and stated, “She literally called us idiots and said that we were stupid… it’s verbal abuse.” SN05 was in a similar situation and when she asked to talk to her advisor about it, she was told there was not time to see her. SN05 asked, “Why was I treated like that? Why did nobody want to talk to me? Why am I here?... I asked politely and I was rejected.” She continued, “…everything started to go downhill from there and I lost a lot of respect for the school …and for that teacher…needless to say I never went back [to that class].”

Lastly, peer support was noted by both groups as being a factor in their self-efficacy and success, but differences between the reliance/need for peer support exist between nursing and radiology students. Nursing students noted that they relied on their peers more than they relied on their faculty to support them. According to students, this reliance grew out of a continued experience of feeling unsupported and ignored by faculty and other program educators. SN04 stated, “Oh my gosh. I mean I don't even know what I would do without them. I lean on them more than I do the professor.” SN03 agreed, “…if it wasn't for them specifically I don't know if emotionally, mentally, I would be able to really get through it.” Radiology students on the other hand expressed that although peers are a factor in their success, the implication was that they were not as critical to their success. SR02 shared, “…it helps being, like, close with a few people in my class because we can do study groups…”

Theme 2: Fluctuating Nature and Importance of Self-Efficacy

Students from both groups agreed that self-efficacy is important for success, and that several factors can influence this. Students from both groups agreed that facing new challenges (the start of a new semester, beginning their program) tended to cause dips in their self-confidence. Student groups also agreed that prior successes (previous college, passing an exam, success during clinical) bolstered their self-efficacy. Although both groups mentioned that

faculty/instructor interactions influence their self efficacy, nursing students specifically mentioned that their freshman advisors and peers were invaluable in helping improve their self-confidence and motivation. Radiology students alone mentioned that one's natural orientation to learning (academic vs. applied) also influenced self-confidence if they found themselves in a learning environment where the learning mode was not aligned with their personal orientation.

Theme 3: Program Culture

One theme emerged that showed a stark difference between the two student groups. Nursing students discussed at length certain negative characteristics about the nursing program culture that they felt significantly impacted their self-efficacy and success. In contrast, despite radiology students making negative comments about certain clinical instructors (who are not employees of the college), comments about their faculty and other program educators implied an enriching and supportive program culture. Subthemes of program culture that surfaced from the nursing student interview were hostility and fear, rite of passage, a dominant focus on program outcomes, and administrative detachment. Nursing students shared that since the start of their program, an atmosphere of fear and hostility has dominated their experiences. SN05 recalls her first experience in the freshmen's introductory course,

> We're sitting [in our first day of the course]… first thing I heard… was pretty much scaring us…. 'If you don't do this, you're gonna fail, if you don't do this, we're gonna kick you out'… Everything was, 'We're gonna kick you out of school and you're going to fail'. I felt like…I'm just gonna fail… it was very discouraging."

SN03 confided that as a result of relentless and mounting fear of failure, she experienced an emotional breakdown in front of several classmates. "I had a complete mental breakdown … in front of a whole bunch of people, just *terrified* that … I was going to fail over just this ridiculous

… test". In discussing the culture of the program, she shared, "…you're gonna lead us with this fear of failure, and expect that … we're just gonna… go right along with it and just deal with it... that whole culture is wrong", adding, "it's a toxic learning environment."

Students discussed how the importance of creating safe environments is frequently promoted in the nursing program, yet they feel the educational environment is strikingly opposite of that. SN05 expressed, "I don't know if the hostility of people comes with the program or they're [just] made that way." She continues, "…in school, a place that is supposed to be safe, [where] we promote so much safety…I don't feel safe in there. I feel like I'm the most attacked in school."

Students noted that this environment of fear and hostility is perpetuated from something akin to a rite of passage for nursing students. Remembering a time when a program educator came to talk with freshmen who were having a review session, SN03 stated, "we had one [educator] actually say to a group of us in our…review that she cried every day in nursing school, so we basically need to get over it… that's the culture." She concluded, "… it's almost like it's a rite of passage where 'I suffered so now you have to suffer'."

Nursing students also noted that the program seems to prioritize meeting program outcomes (attaining high ranking for first time licensing exam pass rates) over ensuring students receive the robust support needed to successfully complete their program. Students noted that they understand that they have a responsibility for their learning but feel they are often left with little support from faculty and administration. In addition to this, students felt administrators are detached from the reality of what is happening in the nursing program. As SN05 states, "Nobody cares [at the administrative level]… Whoever is taking care of what's going on with the school has no clue of … what's going on. Not whatsoever, completely disconnected from it."

Theme 4: Faculty awareness of their Role in Student Success

Students were asked to consider how faculty would answer the question, how does faculty behavior impact student self-efficacy and student success? Student groups were somewhat split as to whether faculty/instructors were aware that they impact student success. Radiology students stated that teachers who are pedagogically skilled understand that they impact their students' success. SR03 commented, "the professors or teachers… that are at the college do think their positiveness is going to affect our outcome in a more positive way than if they were negative." However, students felt that because clinical instructors are not teachers by profession they likely do not understand this. Radiology student SR03 also wondered if clinical instructors might purposefully behave negatively because they are threatened by new radiologists coming into the field. Perhaps they want students to fail out of the program so their jobs are protected. She offers, "… The teachers, they want us to be… as best as we can be…whereas the technologists… maybe see us as a threat."

Nursing students' opinions about whether faculty understand the impact they have on student success were split between faculty fully understand this and faculty do not at all understand this. Students discussed that there are some faculty who want to teach, who have the appropriate knowledge and understanding required to be an effective teacher, and who choose to engage in positive behaviors. SN02 expressed, "teachers who are fit for teaching understand that every single thing that they do impacts the student. I think that they 100% get it." Students also pointed out that some faculty know full well that they have a significant impact on student success, but simply do not care whether students succeed or fail and therefore feel free to engage in negative behavior. Students stated that behavior is a choice, and that faculty choose to engage either positively or negatively with students. SN03 added to this conversation by stating that

faculty choose the quality of their behavior based on whether they like a student and want that student to succeed. She declared, "the faculty member *chooses* their behavior [based] on what they hope will be the outcome of the student." Nursing student SN01 suggested that faculty who behave negatively towards students, might feel it makes no difference to the student's success because faculty own none of the responsibility for the student's success to begin with. She stated that perhaps, "…they feel that their behavior makes no difference … [because they place] the whole responsibility [for success] on the student." Despite the varied reasonings about faculty behaviors, one student (SN05) stated what most nursing students implied in this interview, "…a faculty member can make or break someone."

In summary, the overall views reported by these nursing students were that they generally feel unsupported and at times disrespected or undervalued by faculty/nurse educators except for a select few. Students noted that those select few faculty truly stand out due to their positive interactions and care demonstrated for their students. Student comments also relayed their understanding of the difficult and serious work required to earn a nursing degree, acknowledgement that students own a large share of the responsibility for their learning, but that faculty have a significant responsibility in their success as well. Radiology students felt strongly that faculty/instructors play a key role in their success, they commented positively about faculty and administrators regarding their efforts to positively impact student success but acknowledged that clinical instructors were often disrespectful and rude which negatively impacted their self-efficacy. To view a comparison of nursing and radiologic technology student codes, and the related themes and subthemes see the table in Appendix E.

Summary

Faculty Views Compared to Student Views

Faculty and students' perspectives on the role of faculty in student success and the importance of self-efficacy on student success were generally similar. Both groups believe that student-related and faculty-related factors influence student success. Key student-related factors were, being academically and attitudinally prepared, and being the right 'fit' for the program. However, both groups focused primarily on the influence of faculty-related factors on student success, stating that faculty behaviors are the key influencers in student success. Both groups also agreed that self-efficacy is essential for student success but that student self-efficacy is vulnerable to fluctuations. According to participants, the frequency and degree of fluctuations is due to the strength of the students' self-efficacy coming into the program, past successes/losses, and the quality and tenor of faculty/instructor behaviors towards students; this latter factor being the greatest influencer. Faculty and students (generally) both felt that faculty understand the power they have in influencing student success. Participants noted that positive behaviors promote student success, and negative faculty behaviors impede student success. Both groups also felt that there are situations when faculty base the quality of their behavior towards certain students on whether they want them to succeed or not.

Nursing Faculty Views Compared to Radiology Faculty Views

Nursing and radiology faculty groups had very similar views about the role of faculty in student success and the importance of self-efficacy in student success. Both groups agreed that numerous student-related factors play a role in student success (perseverance, growth mindset, being prepared for college/program) but that faculty behavior was the greatest influence. The behaviors most mentioned that have an impact on students' success were the quality and tenor of

faculty communication and interactions with students, the importance of being able to see things from the student's perspective and setting and communicating clear expectations for students. Both groups also agreed that self-efficacy is vital for student success, that the level of self-efficacy at entry to college matters, and that self-efficacy is vulnerable to fluctuations. Lastly, both groups felt that students believe faculty understand their power in promoting or inhibiting student success. Faculty groups agreed that students would say that the quality of faculty-student interactions, the quality of faculty-student relationships, and the level of faculty responsiveness and delivery of consistent information are the behaviors that most impact student success.

Nursing Student Views Compared to Radiology Student Views

Students from nursing and radiology programs shared many common opinions regarding the role that faculty play in student success. However there were some marked differences that emerged centering on behaviors of faculty versus clinical instructors. Other differences emerged that highlighted the influence of program culture on the student experience, the critical role of peers, and the beliefs surrounding the intent of faculty in manipulating student success.

Where Students Agreed

Student groups agreed that faculty-related factors strongly impact student success. Factors specifically mentioned by both groups were, the quality of instruction, the level of faculty consideration of students, their willingness to help, approachability, openness to students, quality of communication, and how available they make themselves to students. Students also agreed that peer support influenced student success. Students also agreed that self-efficacy is a key influencer of student success and that it is susceptible to vacillation. According to students this fluctuation is due to the student's level of self-efficacy entering the program, the quality of advising, the quality of faculty/instructor-student interactions, facing new academic challenges,

and experiencing prior successes. Students from both groups also generally agreed that faculty are cognizant of the influence their attitudes and behavior have on student self-efficacy and success.

Where Students Differed

Throughout the interview, radiology students had consistently positive things to say about their faculty/administrators; when negative opinions and experiences were shared, they centered only on their clinical instructors. Conversely, nursing student comments were mixed. Students made positive statements about a select few nursing and non-nursing faculty (who taught in the classroom and clinical environments), but most comments were negative and reflected experiences with nursing faculty and with other nursing educators.

Another difference that surfaced was the opinion of students about the quality of their program's culture. Radiology students never explicitly mentioned the culture of their program, but their comments implied that the radiology program embodies a culture of positivity, support, and is strongly student-centered. In contrast, nursing students explicitly described a program culture experienced as unsupportive, and in opposition to a healthy learning environment. Nursing students also stated that the program culture embraces a rite of passage mentality, where nursing students must be able to survive an antagonistic academic environment if they are to be successful.

Nursing students also differed from radiology students in the degree in which they rely on peer support. Nursing students stressed the critical need for peer support in getting through their program; some stating that they would not have made it without that support. Although radiology students agreed that peer support was important their level of need for this was significantly less.

Lastly, although students all agreed that faculty are aware that their actions can positively or negatively impact student success, radiology students stated that it is because of this, that their faculty make sure their actions only promote student success. Conversely, radiology students commented that their clinical instructors likely do not fully understand their influence on student success. In contrast to radiology students, nursing students generally agreed that faculty are aware of their power to influence student success, however, they believe that faculty will purposefully tailor their behavior towards students based on whether they want a student to succeed or fail.

CHAPTER FIVE: DISCUSSION

The purpose of this study was to explore how health professions faculty and students understand faculty leadership behaviors related to the quality of faculty-student interactions and its impact on student success. Specifically, this study aimed to determine if faculty and students from these different divisions had similar or different views regarding the role of faculty in student success. This chapter reviews the findings and themes derived from interviews with faculty and students that helped to answer the research questions guiding this study.

Review of Research Questions and Summary of Responses

This study employed cross case analysis to determine similarities and differences between the views of faculty and students, nursing faculty and radiology faculty, and nursing students and radiology students regarding the role of faculty in student success. The research questions (RQ) that directed this study are:

- RQ1. How do health professions faculty understand the role that faculty leadership (including perceptions, expectations, and behaviors towards students (PEBs)) plays in student success?
    - RQ1a. How do health professions faculty understand student self-efficacy?
- RQ2. How do health professions students describe how faculty leadership impacts their self-efficacy and success?

Comparison of Faculty Views with Student Views

To begin answering the research questions of this study, faculty views as a whole were compared to student views as a whole. Five themes relating to RQ1 and RQ1a emerged from analysis of faculty interviews:

1. Student-Related and Faculty-Related Factors Influence Student Success
2. Self-Efficacy is Critical for Student Success
3. Drivers of Faculty Behavior are Multi-factored (perceptions & expectations of students, prior experiences as a student)
4. Faculty Behaviors Impact Student Self-Efficacy and Student Success
5. Faculty Believe Students View Faculty as a Strong Influence in Student Success

Four themes relating to RQ2 emerged from analysis of student interviews:

1. Faculty Behaviors Impact Student Self Efficacy and Student Success
2. Self-Efficacy is Critical for Student Success
3. Multiple Factors Influence Self-Efficacy
4. Students Believe Faculty View Themselves as Strongly Influencing Student Success

From these two sets of themes, four common themes emerged:

1. Key Influencers of Student Success
2. Vulnerability of Self-Efficacy and its Role in Student Success
3. Influence of Faculty Behaviors on Student Success
4. Views About the Impact of Faculty on Student Success

Faculty and students agreed that there are multiple factors influencing student success, and that these factors are a mixture of student-related and faculty-related influences. Both groups felt that faculty and the faculty-student interaction are the most important factors in student success. Faculty noted that their perceptions and expectations, and prior experiences with students were strong influencers of how they behave towards students. Both faculty and students agreed that student self-efficacy is essential for student success and that it is vulnerable to fluctuations. Lastly faculty and students had similar views as to how each other sees the role of

faculty in student success. Faculty believe that students think faculty have a lot of power in determining student success, and students believe that most faculty are aware of their power but some instructors may not be aware of this.

Comparison of Nursing and Radiologic Technology Faculty Views (RQ1 and RQ1a)

This study also compared the views of nursing faculty to the views of radiologic technology faculty to discern if similarities and difference exist with respect to the role of faculty (RQ1) and self-efficacy (RQ1a) in student success. This comparison involved a more detailed exploration between the two faculty groups. Analysis of the interviews of each of these faculty groups together produced four themes and two subthemes:

1. Impact of Student Characteristics on Student Success
2. Impact of Faculty Behaviors on Student Success
    a. Faculty Perceptions and Expectations on Faculty Behavior
    b. Faculty-Student Interactions on Student Self-Efficacy
3. Impact of Self-Efficacy on Student Success
4. Faculty Believe Students View Faculty as Strong Influencers of Student Success

Theme 1. Impact of Student Characteristics on Student Success

Faculty from each group agreed that student-related factors played an important role in student success. The student-related factors mentioned most often were student academic preparedness (academic scores, ability to prioritize and manage time, emotional maturity etc…), attitudinal preparedness (understanding the program requirements, positive attitude, growth mindset), and overall being the right fit for the program. Another factor mentioned is the degree to which a student receives support from home.

Theme 2. Impact of Faculty Behavior on Student Success

Faculty from each group discussed at length faculty-related factors and agreed that the most important overall faculty-related factor of student self-efficacy and success is the quality and tenor of faculty-student interactions. Nursing and radiologic technology faculty also agreed that multiple factors (colleague opinions of students, student behaviors, past experiences with students, their own experiences when they were in college, and their own value systems) influence their perceptions and expectations of students, and that these strongly influence their behaviors towards students.

Theme 3. Impact of Self-Efficacy on Success

Faculty were asked to describe how self-efficacy relates to student success. Faculty from both divisions agreed that self-efficacy is an essential trait needed for students to be successful, noting that students must have the confidence and motivation to push through the challenges of their programs. Faculty also stated that students new to college often enter with low or fragile self-efficacy and that it is vulnerable to fluctuation due to the words and actions of faculty and clinical instructors towards students. Both faculty groups expressed that student self-efficacy can improve with achievement experiences and by engaging in positive experiences with faculty. However, even with increases in self-efficacy realized, it can plummet due to a single negative faculty-student interaction.

Theme 4. Faculty Believe Students View Faculty as Strong Influencers of Student Success

Faculty were asked their opinion as to how students view faculty a influencers of student success. Nursing and radiology faculty agree that students view faculty as having substantial power to determine student success. Faculty from both divisions noted that students would say that faculty responsiveness, openness, and the quality of faculty-student interactions were central

to their success and satisfaction with their academic experience. Nursing faculty also commented that students would say consistency in faculty/program communication is important to their success, whereas radiology faculty thought students would say faculty setting clear expectations is key to their ability to be successful

Comparison of Nursing Student and Radiologic Technology Student Views (RQ2)

The final component of the cross case analysis involved the comparison of nursing student views with radiologic technology student views with respect to the role that faculty play in their sense of self-efficacy and student success. Interviews with these two student focus groups produced four themes:

1. Faculty Behaviors in the Learning Environment Impact Student Success
2. Fluctuating Nature and Importance of Self-Efficacy
3. Program Culture
4. Faculty Awareness of their Role in Student Success

Theme 1. Faculty Behaviors in the Learning Environment Impact Student Success

Students from both divisions had very similar views regarding the major impact that faculty behavior in the learning environment has on student success. Nursing student comments predominantly focused on how faculty behavior negatively impacts students whereas the radiologic technology students' discussion predominantly focused on how faculty positively impact student success. However, radiologic technology students differentiated between faculty at the college and clinical instructors (preceptors) at off campus clinical sites, stating faculty positively impact their success but clinical instructors tend to have a negative impact on student success.

Theme 2. Fluctuating Nature and Importance of Self-Efficacy

Both student groups felt that self-efficacy is important for student success and that many factors (faculty, peers, challenges, successes, failures) impact self-efficacy. Students from both groups noted that self-efficacy wavers more when facing certain challenges throughout the academic year, like at the start of a new semester, starting clinical experiences, and as they are preparing for exams. Nursing students generally spoke more negatively about experiences with their faculty, advisors and administrators and their impact on self-efficacy, whereas radiology students spoke positively about faculty but mostly negatively about clinical instructors.

Theme 3. Program Culture

Radiology students implied that their program culture was positive and student-centered. Culture was not explicitly mentioned, however, students expressed a consistency in feeling challenged, supported, nurtured, and considered in their academic experience at the college. Words frequently used to describe interactions with faculty were “positive”, “care”, “listen” “accepting”, “awesome”, and “willing”. The one area they did not always feel this was with their clinical instructors but this seemed to have no impact on their overall view of the program culture. Although certain faculty were highlighted as being exceptional, nursing students reported negatively about the culture of their program. Nursing students described the culture of their degree program using terms like, ‘toxic’ ‘hostile’, ‘fear’, ‘they don’t care’, and ‘disconnected’. One student reported that “it is just not a conducive learning environment. Nursing students expressed a need for transformational change to the nursing program culture into one that is more caring, positive, and student-supportive.

Theme 4. Faculty Awareness of Their Role in Student Success

Nursing and radiologic technology students felt that faculty have considerable power in determining whether a student succeeds and that most faculty who are career educators are aware of this. Radiology students felt that clinical instructors may not understand their role/power because they are not professional educators. Nursing students added that faculty use their power to promote success for students they want to succeed and impede success for students they do not want to succeed.

Interpretation and Alignment of Findings with Literature

The overall goal of this study was to determine how health professions faculty and students understand the role that faculty play in student success. As part of this exploration, this study also aimed to determine if there were similarities and differences between how faculty and students view the role of faculty, whether or not similarities or differences exist in how faculty from nursing and radiologic technology view the role of faculty, and whether similarities and differences exist between how students from these divisions view the faculty role.

Limitations

During the period of time in which this study was conducted, the world experienced a global Covid-19 pandemic. It is reasonable to assume that the stress of the pandemic on participants influenced their stress levels and in turn the overall emotional tone of responses may have been impacted. This is especially true of the nursing and radiologic technology students. Students in these rigorous health professions programs must cope with the normal stresses that all nursing and radiologic technology students must face. Because all courses were moved online, many students struggled with the transition and with their ability to learn content delivered via the internet as opposed to face-to-face delivery. In addition, several of these

students work in some capacity within the healthcare field. Student participants had to manage the stress of college, of becoming infected at their jobs as they cared for patients, and in some cases caring for patients who did not survive Covid-19 infections. This additional stress may have flavored their overall attitudes and this may have in turn skewed the student data.

Another limitation related to the pandemic was the small number of student participants. With the additional stresses students carried, only a few from each program were willing to volunteer for the focus group interviews and in member checking. Faculty numbers were low but expected because the study site is a very small college with limited faculty who met the criteria for this study.

Finally, the faculty who participated in this study were faculty who are experienced in teaching and have a general understanding of how faculty and the learning environment impact students. Faculty who met the criteria of the study but who did not participate were fairly new to academia and therefore may not have the experience in teaching that participants have. Had these other faculty participated, the data from them may have been significantly different than what was gathered due to having less experience in teaching.

Faculty Views and Student Views

The first comparison revealed that, regarding the general role of faculty in student success, faculty and students feel that although there are several student-related factors that impact student success, faculty have the greatest influence. These findings align well with Horton (2015) and Trolian et al. (2016) whose work demonstrates that multiple student and college/faculty influences affect student success, but the interactions between faculty and students are the most impactful. The similarity of views between the faculty and students may be a reflection of the small number of faculty and student participants, and that they work at and

attend a very small college. A campus of this size with little academic and socioeconomic diversity, and frequent interactions between faculty and students, may inadvertently create some homogeneity in general understandings of things related to the role of faculty in student success. Also, this study only enrolled faculty who were full-time and who had taught 75% of their courses during the past two years in a face-to-face format. Because four out of the six faculty have taught nine years or more, and the two remaining have taught for at least two years, it is possible that these more experienced faculty might have a similar and more informed perspective about student learning than would new faculty with less experience (Kini & Podolsky, 2016).

Nursing Faculty Views and Radiologic Technology Faculty Views

The second comparison illustrated that faculty of the nursing and radiologic technology divisions have very similar understandings regarding the influences that impact student self-efficacy and success. Faculty from both divisions noted that student self-efficacy is often fragile and vulnerable to multiple factors that can cause it to increase or decrease, and that faculty-related factors play the most critical role in facilitating or impeding student success. Both faculty groups noted that faculty behaviors can make a significant difference in the student feeling safe and comfortable to inquire, to make mistakes, to seek help when needed; in their motivation and confidence; and ultimately in their ability to succeed. The importance of students feeling safe to inquire and seek help cannot be understated. Several scholars have shown that without the sense of safety and belonging, students are less likely to succeed (Everett, 2020; Edgar et al., 2019; Tinto, 2017; Trolian et al., 2016).

Faculty from both divisions also confided that faculty behaviors are subject to their perceptions and expectations of students, and that many factors influence these; namely student behaviors, past experiences with students, colleague opinions of students, their own experiences

as a student, and their own value systems. This concept is supported by Rosenthal (1994) whose study emphasizes that teacher perceptions and expectations are driving factors of behaviors with students. These behaviors have significant bearing on student self-efficacy and their ability to succeed (Bandura, 1977; Rubie-Davies, 2006)**.**

Nursing Student Views and Radiologic Technology Student Views

The third comparison revealed the most discordance of all the groups analyzed. This comparison revealed many areas in which the student views were in agreement, but there were obvious and important differences that came to light. Students of both divisions felt strongly that faculty are major influencers in student self-efficacy and success. Students also agreed that self-efficacy was often fragile and vulnerable to fluctuations due to multiple factors. Both groups also felt that faculty/instructors have significant power in whether students succeed or fail, that experienced/pedagogically skilled faculty are aware of their power, and use this power based on their desire for students to succeed or fail. The agreement between nursing and radiology students on these topics is not surprising. The faculty-student relationship is inherently characterized by a power imbalance which can create the assumption that faculty have and use that power at will (Clark, 2008). Health professions programs such as nursing and radiologic technology, have rigorous education standards. Health professions students realize that there is a high bar they must reach in order to succeed in their programs. The combination of shared perceptions of faculty power, and the collective experience of pressure to succeed, might cultivate mutual views regarding the role and power of faculty in influencing their self-efficacy and success.

Where student views differed markedly was in their general attitude about their faculty and programs, and in their explicit and implicit views expressed about the culture of their

programs. The overwhelming negative emotions and frustrations expressed by nursing students were noticeably different from that of radiology students. Although some comments were positive, negative experiences shared by nursing students dominated their responses. Radiology students commented negatively about their off-campus clinical instructors, however, their comments about their campus-based faculty were unanimously positive, and their overall expressions were void of the level of frustration and anger noted in the nursing student responses.

This difference with respect to the student experience raises several questions. One question is whether or not there is a difference in how faculty interact with students in these different healthcare divisions, and if so, why does this occur? According to nursing student responses, there were only a few key faculty/advisors who treated them with consideration, respect, and who cared enough about their success to work with them and provide quality instruction. Comments about these educators were expressed with great admiration and gratitude. However, in general, nursing faculty and certain other nurse educators were noted as being disengaged, disrespectful, disingenuous, unskilled in teaching, unwilling to help students and answer questions, and were not responsive to students. In contrast, radiology student experiences with faculty and advisors were positive; noting caring, respectful, and supportive interactions.

Another key difference between these two student groups was in how they experience the culture of their programs. Radiologic technology students implicitly expressed that their program culture was one that is positive, student-supportive, one that fostered open, considerate, and respectful communication between faculty and students. Despite their negative experiences in the clinical setting the overall feelings about their program were optimistic and one that nurtured

connection and support. Nursing students explicitly stated that their program had a culture of fear and hostility, that it promotes a rite of passage-mentality such that students must go through difficult educational experiences in order to make it through the program. Nursing students also felt that administrators either ignore what goes on in the nursing program or they are detached and completely unaware of it happening. Whether such variation in culture exists between these two programs or not, the student experience is real. One element that may have flavored the responses of nursing students is that these students had recently had a negative exam experience. This single experience likely would not have influenced their responses to a great extent but it is possible that the stress of an exam and an outcome that was not as positive as hoped for could have had some impact.

The difference in opinion over program cultures also highlights another key finding. Both groups of students experienced positive and negative interactions with faculty and clinical instructors and spoke of each as being impactful. Radiology students discussed at length that their on-site faculty and administrators were supportive, talented instructors, always there for students and shared positive experiences which resulted in students believing in themselves and being successful. They also shared negative experiences had with their off-site clinical instructors that had a significantly negative effect on their self-efficacy and motivation. Yet, the radiology students remained resolutely positive in their views about their program and maintained an upbeat and confident attitude throughout the interview. Nursing students had extremely positive experiences with on-site faculty and spoke of them superfluously, stating that they really knew how to teach and that they were the pinnacle of instructors. Despite this, their negative experiences with on-site faculty seemed to flavor their entire experience in their program. Nursing students were overall negative and somewhat cynical in their attitudes and

although light moments arose, they remained this way for most of the interview. Based on the responses from the radiology students, it seems that interactions with on-site faculty have a much greater impact on students than those with off-site faculty. According to the nursing students' responses, it also seems that when students have positive and negative experiences with on-site faculty, the negative experiences have far greater and lasting impact on students.

The last difference that relates to the overall experiences and feelings shared by nursing and radiology students is the degree of reliance on peer support. According to Horton (2015) peer support contributes significantly to student success. It seems that although peers are helpful to radiology students as a way to enhance studying, the nursing students expressed an absolute need for peers in order to 'survive' their program. Nursing students noted that they rely heavily on one another for emotional support, for encouragement, and for help in learning course content. In fact, they stated that they rely more on peers than they do on faculty. This dissimilarity between nursing and radiology students highlights the distinction between their emotional states, their needs, and how they attempt to meet these needs, and the overall differences in their academic experiences.

Summary

The faculty at this college and the students (in general) agree that faculty play a critical role in student success. There was no glaring discrepancy between the views of faculty in the different health professions divisions pertaining to elements related to faculty's role in student success. Nursing faculty and radiology faculty acknowledge that faculty hold power with respect to student self-efficacy, motivation, and ability to succeed, and they feel that students view faculty in a similar manner. Students from these two divisions agreed on a number of things such as the power faculty have to facilitate or impede student success, on the importance of self-

efficacy in their ability to succeed, that multiple factors impact their self-efficacy, and that faculty are aware of their power to facilitate student success. Despite this there were marked differences in the views of nursing and radiologic technology students on key issues related to student success and in their overall emotions and attitudes. Radiologic technology students seemed relatively pleased overall with their learning experience and faculty except for certain clinical experiences with preceptors, however nursing student comments were dominated with negative faculty-student experiences and reserved positive comments for a very small subset of faculty. Nursing students strongly emphasized a negative program culture and a critical reliance on peer support.

Sense-Making

The similarity of views about the general role of faculty between the faculty and students may be a reflection of the small number of faculty and student participants, and that they work and attend a very small college. A campus of this size, having little academic and socioeconomic diversity may inadvertently create some homogeneity in general understandings of things related to the role of faculty in student success. Also, this study only enrolled six faculty who were full-time and who had taught 75% of their courses during the past two years in a face-to-face format. Because four out of the six faculty have taught nine years or more, and the two remaining have taught for at least 2 years, it is possible that these more experienced faculty might have a similar and more informed perspective about student learning than would new faculty with less experience (Kini & Podolsky, 2016). This could also explain some of the alignment of views between faculty and students as faculty with experiential insight may have a deeper understanding of what students need to be successful.

The congruency that exists between views of nursing faculty and radiologic technology faculty compared to the important incongruencies between views of students from these divisions is somewhat surprising. Faculty from both divisions report an understanding of their ability to impact student-self-efficacy and their responsibilities in facilitating student success; namely to provide quality instruction, provide meaningful and effective support, be available to students, communicate respectfully and adequately with students, demonstrate care and consideration to students, and promote student engagement. Based on this similarity in views of faculty, it might be expected that students from these two health professions divisions would share similar learning experiences and share similar views regarding the role of faculty in student success. Although there is agreement between students and faculty about the general notion that faculty play an important role in student success, the experiences of nursing students and radiologic technology students are at odds with the similarities of faculty views. In other words, if faculty from both divisions equally understand the importance of their behaviors in the teaching role, why is the student experience in these two divisions so different? One has to ask whether or not there is a difference in these programs based on the requirements of the professions. Do the nursing and radiologic technology professions require such different learning environments that would lead to the disparity in student experience revealed in this study?

That nursing students feel angry and frustrated is not a new phenomenon. The literature is full of works that address the perceived negative faculty-student interaction in nursing programs and the emotional impact it has on students. Certain suppositions as to the cause of these interactions are reported in the literature such as incivility of faculty towards students and incivility of students towards faculty (Authement, 2016; Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015). The nursing profession has a long history of incivility between nurses and

therefore, if we are drawing nursing faculty from this work environment, are they bringing that culture with them to academia? If so, is this something that professional development for new nursing faculty could ameliorate?

The nursing and radiologic technology programs consistently produce graduates who are highly skilled, safe, and effective healthcare professionals. Since 2015, nursing graduates of this college have had an average of 100% job placement within six months of graduation (personal communication, January 24, 2021). For radiology graduates this number is slightly lower (90%) (personal communication, January 24, 2021) but still robust. Graduates have remarked over many years how competent they feel when starting their first position compared to what they hear graduates from other colleges say (personal communication, February 13, 2021). Furthermore, employer surveys consistently show a high level of satisfaction with graduates from this college (personal communication, January 24, 2021). Based on these data, it is clear that the instruction provided by the faculty at this college, as well as the clinical instructors, is high quality and thoroughly prepares graduates for their careers in nursing and radiologic technology. Radiologic technology retention rates are higher than the nursing program (2015-2019: 84.4% vs. 2015-2019: 75% respectively), but the licensure pass rates for students of both programs are equally impressive (personal communication, January 24, 2021). The five year (2015-2019) average licensure pass rate for radiologic technology is 85% and for nursing it is 84.5% (personal communication, January 24, 2021).

Why then is there such a difference between the experiences of nursing and radiologic technology students? Both groups see the role of faculty similarly but experience their education quite differently. One possibility is that the nursing program utilizes high-stakes testing whereas radiologic technology does not. This method of testing requires students to meet a minimum

benchmark of 74 on every exam in order to pass a didactic course (clinicals are pass or fail). Also, the question types often used on nursing exams (which mirror the licensing exam question formats) provide students with multiple correct answers, but they must choose the 'most' correct answer. Other questions are the type where students must choose all that are correct, and if students do not choose all of the correct answers the entire question is wrong. Radiologic technology mid-term and final exam questions are more like a traditional multiple choice question where there is only one question correct out of the possible answers. The use of high stakes testing and the types of exam questions used may place additional stressors on nursing students causing more negative emotions when they fail to pass an exam (Jones et al., 2013).

Is there a difference between the professions that would require a different academic culture in order to prepare students for their professional roles? Do nursing students need to learn resiliency during their academic experience that will give them the ability to withstand the daily pressures experienced as a nurse? Is this the most effective way to teach resiliency to students? Nursing student comments that were positive about certain faculty centered around the fact that these faculty demonstrated that they sincerely cared about them, both in their communication and in their willingness and availability to offer help. This seemed to be the major difference between whether these students came away with a positive or negative experience. Because the students all tended to express a negative experience in the nursing program despite stating some faculty were outstanding, suggests that what they did not get from the other faculty was a critical need of the students; namely care, consideration, respect, and a demonstration in word and deed that the faculty care deeply about their success. It is important to point out that this is a small college and as such, there are not many faculty and administrators. Although positive and negative comments were divided fairly evenly between six nursing educators (three were described as wonderful and

three were described negatively) the students' overall experience was described very negatively. This highlights the fact that the negative experiences had a much more profound effect on these students than the positive experiences.

Rubie-Davies (2006) work shows that faculty expectations and behaviors can have a substantial impact on a student's self-efficacy. Bandura's work (1977) tells us that in order to be successful, one must have the self-confidence to support facing and overcoming challenges. The negative bias that Baumeister et al., (2001) write about may be a key factor in why these negative experiences seem to dominate the nursing student psyche more than their positive experience. Baumeister et al. (2001) state that humans are prone to forming negative impressions more quickly than positive ones, and these negative impressions are much harder to disconfirm. Because negative experiences have a greater and lasting impact on humans than do positive experiences (Baumeister et al., 2001), negative experiences with faculty will be experienced as more profound than the positive ones. These experiences can impact how students perceive their faculty, program, and their college.

Implications and Recommendations for Practice

Student Success/Retention

Retention and completion rates in higher education continue to be problematic (U.S. Department of Education, National Center for Education Statistics, 2018). Although the completion rate of radiologic technology students at this college is fairly high (average rate for 2014-2018 is 88%) (personal communication, January 24, 2021), the associates degree in nursing program has struggled to maintain robust completion rates (average rate for 2015-2019 is 71.6%) (personal communication, January 24, 2021). Based on licensure pass rates, graduate surveys and employer surveys (personal communication, January 24, 2021) it is evident that this college

provides students an excellent education. However, there is a significant percentage of nursing students who never graduate. The reason for the low retention in this nursing program (and many nursing colleges across the United States) is likely multi-factored. Admissions standards and student-related factors contribute to this (Horton, 2015). However, the literature has demonstrated that faculty have the most significant influence on student success (Trolian et al., 2016). These findings provide nursing colleges, and other health professions colleges, a meaningful place to begin the work of combating attrition. This study has shown that it is possible for nursing and radiologic technology faculty of a small health professions college to have similar understandings as to the role faculty play in student success, and yet have students of these programs experience their education quite differently. Given these findings it is prudent to look more deeply at where the negative student experiences are occurring, what factors are contributing to this, and determine what should be done to reduce these experiences where possible. One recommended area of focus is the student-faculty connection.

Student-Faculty Connection

Throughout the student focus group interviews the difference in attitude between the nursing and radiologic technology students was evident. Radiology students discussed positive experiences with faculty and negative experiences with clinical instructors but remained extremely positive in attitude overall. Nursing students discussed positive and negative experiences with faculty but remained negative in attitude overall. Factors mentioned that created a positive experience for nursing and radiology students alike were that faculty were engaged in their teaching, they were kind/respectful, they took the time to give answers and explain content, they challenged students but supported them through the challenge, they were available and responsive, and above all they genuinely cared about the student and their success.

The factors that stood out when radiology students discussed negative experiences with clinical instructors were that they were rude, they humiliated students, and that they told students to do things in a manner that was in conflict with what their faculty were teaching them. Factors that contributed to nursing students' negative experiences with faculty were that faculty did not demonstrate that they cared if students succeeded, faculty ignored students when they reached out for answers or help, faculty/administrators not responding to emails, faculty not being engaged in their teaching, and the perception that the faculty/program used fear as a method to motivate students. It seems that when students have negative educational experiences the reasons revolve around faculty attitude/approach, and the amount of care, consideration, and engagement demonstrated by faculty. Students have a need for their faculty to believe in them, to care about their success, and to be engaged and motivated in their teaching. Based on these findings it would be important for administrators to consider ways to enhance faculty perspective-taking skills, caring behaviors and connections with students, faculty engagement in their teaching practice, and to determine where to focus these efforts in their program.

Key Events that Trigger Declines in Self-Efficacy

Self-efficacy is essential for student success (Bandura, 1977). Interviews with students revealed that faculty behaviors have a marked impact on their self-efficacy, but that other factors also had an effect. Students noted that there are specific events during their academic journey that foster self-doubt and create vulnerability in their self-efficacy. These events tend to occur when entering college, at the start of each semester, when students begin their clinical education, and several days prior to the administration of exams. With this knowledge it might be possible to develop supports for students aimed at building their self-efficacy prior to and during these triggering events. Additionally, incorporating no-stakes or low-stakes assessments aimed at

building student self-efficacy throughout the semester might provide boosters to student self-efficacy levels. Such strategies could help students improve their academic success.

Healthcare Education and Workplace Culture

Ensuring that faculty understand their impact on students is critical for creating and maintaining a positive academic culture and improving students' experience and success. These student experiences can also have an impact on the student long after graduating. Kawamoto (2016) notes that even small daily experiences and environmental influences can influence personality changes in college students. It is not unreasonable to assume that continued positive or negative student experiences could mediate personality changes which could potentially influence their professional identity and future workplace culture. When negative faculty/instructor behavior continues in a program, the negative behavior students experience becomes somewhat normalized and can influence their personality, their professional identity, and behaviors (Bandura, 1977b; Kawamoto, 2016). Bandura's (1977) social learning theory states that most human behavior is learned through observing others who are modeling certain behaviors (Bandura, 1977). Based on Bandura's theory it is possible that some students learn how faculty should behave from observing how faculty/instructors behave towards them. If a student is the recipient of continued perceived negative behaviors, and if their personality and professional behavior are influenced by this, it is possible that they bring this experience with them into the work environment. This is especially significant for nursing education as this helps to perpetuate a continued and prevalent uncivil nursing culture (Brewer-Smyth, 2017; Sanner-Stiehr & Ward-Smith, 2017). Furthermore, when nursing and radiologic technology colleges recruit instructors, they often pull individuals straight from the professional workforce. Nurses who work in a culture where hostility is frequent, or even the norm, might bring this type of

behavior into their academic practice, thus also perpetuating the educator-student-nurse-educator behavior cycle. Making sure faculty understand their role and their impact on students is important for improving the student experience and success, but also might help inject new healthcare professionals into the workplace who model positive behaviors and see positive behaviors as the expected norm.

Recommendations for Practice

Establish a Culture of Collaboration and Learning

Health professions colleges should establish a college-wide culture of collaboration and learning with a strong professional development program at its core. Administrators, faculty, and professional staff should be required (and incentivized) to engage in professional development focused on best practices in teaching and learning, emotional intelligence, self-reflection, and practicing perspective-taking. In addition, instituting a mentorship program for all newly hired faculty would benefit inexperienced faculty by having someone available to provide guidance and advice in best teaching practices. Through early and ongoing education centered on teaching, faculty can better comprehend their influence on student success which can facilitate a more positive learning experience, and better support student success (Schussler et al., 2016; The Aspen Institute, 2014). Developing a college-wide peer support system to foster emotional, social, and academic support to students could also help students meet the various challenges of college. Crisp et al. (2020) suggest that integrating a robust peer support system can help students manage the stressors of college and increase their chances of reaching academic goals.

Evaluate and Establish a Positive Program Culture

Health professions colleges would benefit by examining their program culture from the perspective of the student and determine actions and policies that cultivate a respectful, caring,

student-centered culture. Administrators are key individuals who can create the vision, lead this change effort, and model positive professional behaviors. Ensuring faculty work in a positive, respectful, and supportive work environment can enhance the overall attitude of faculty. Furthermore, providing faculty development in teaching and emotional intelligence can give them the tools to improve their teaching practice. These actions can contribute to creating a healthy learning environment for students and provide positive faculty role models for students.

Partner with Hospitals in Educational Initiatives

Partnerships between hospitals and health professions colleges for the purpose of providing professional development for nurses and radiologic technologists who are interested in becoming educators or preceptors could better prepare these professionals for teaching positions. Hospitals would benefit from this as their employees would have the opportunity to further their education, and this would increase the chances that students educated by these healthcare professionals will receive positive learning experiences which will facilitate positive professional behaviors once they enter the workforce. This provides a pipeline for ensuring the quality of new hires. Health professions colleges benefit by having future instructors/preceptors educated about best practices in teaching and emotional intelligence which creates a more positive clinical learning culture.

Recommendations for Further Study

This study provided a small but significant set of data that begins to explore the similarities and differences between the views of nursing and radiology faculty and students about the role of faculty in student success. Expanding on this study by enrolling a larger number of participants and colleges would provide a more robust data set and perhaps offer additional insight into this phenomenon. In addition, including faculty who are part-time, adjunct, and

recently hired would allow for a fuller picture of the understanding of faculty regarding their role in student success, as faculty in these roles may see their responsibilities quite different than those of full-time faculty.

Given the data that emerged from the student interviews in this study, further research is also needed exploring the relationship between the health professions workplace culture and health professions college culture. There are copious studies on incivility in nursing and nursing education (Brewer-Smyth, 2017; Ibrahim & Qalawa, 2015; Sanner-Stiehr & Ward-Smith, 2017), and, although few, there are studies that show incivility occurs in radiology education (Clark 2017; Clark & Wagner, 2019) and in the radiologic workplace (Patton, 2020; Willis et al., 2018). There is also evidence that incivility occurs in dental hygiene education (Ballard, 2018), and in healthcare environments where occupational therapy students conduct level-two fieldwork (Bolding et al., 2020). Studies examining the potential relationship between workplace incivility and incivility in the academic setting of students of these professions may reveal opportunities for applying interventions that would improve student experiences and success.

The commonness of perceived disruptive behavior/incivility in the nursing profession compared to that of other health professions is a curious phenomenon. Further study as to why this is so prevalent is warranted. Studies exploring whether this is due to the nature of work done as a nurse, behaviors passed down from educator to student, behaviors learned from colleagues, or some other factors would provide potential areas on which to focus improving this workplace issue.

Another area needing future research is to examine the individual characteristics and past experiences of health professions educators to determine if and how these impact faculty expectations and behaviors. Despite the common adage, ‘teachers teach the way they were

taught', there is little in the literature focused specifically on the prevalence of this in higher education. Furthermore, examining health professions faculty personality type, cultural background, and life experiences, and how these relate to teaching practice could offer insight for determining individualized professional development.

Conclusion

Health professions colleges in the United States, especially nursing colleges, continue to struggle to improve retention (Beauvais, 2014; Harris et al., 2014; Jeffreys, 2015). The faculty-student interaction is the key factor identified in effecting student success. Although health professions faculty may cognitively understand the role they play in student success it is possible that that does not translate to the educational environment. It is also possible that essential skills specific to the profession require unique teaching methods and environments for learning. Nursing students and radiology students at the college in this study expressed a clear difference in their program cultures, and educational experiences with faculty. The literature supports that the most effective learning environment is one where students feel supported, believed in, are challenged, and one in which they perceive they belong and connect to their faculty and peers (Everett, 2020; Edgar et al., 2019; Tinto, 2017; Trolian et al., 2016). Given the discrepancy between the experiences of the nursing students in this study and what the literature promotes as the most effective learning environment, and also noting the common retention problem in nursing colleges nation-wide, further research is needed to address these issues.

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Appendix A

Faculty Research Questions Mapped to Interview Questions and Key Thematic Findings

Research Questions	Interview questions	Key thematic findings
Research Question 1	1,2,3,4, 8	1,3,5
Research Question 1a	5, 6, 7	2,4

Appendix B

Student Research Questions Mapped to Interview Questions and Key Thematic Findings

Research questions	Interview questions	Key thematic findings
Research Question 2	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5

Appendix C

Faculty and Student Interview Questions Mapped to Key Thematic Findings

Participant Group	Interview questions	Key thematic findings
Faculty	1, 2	1
Faculty	4	2
Faculty	6, 7	3
Faculty	8	4
Students	1	1
Students	2, 3, 4	2
Students	5	3
Students	6	4

Appendix D

Nursing and Radiology Faculty Interview Questions Mapped to Key Thematic Findings

Participant Group	Interview questions	Key thematic findings
Nursing Faculty	1, 2	1
Nursing Faculty	1, 2, 3, 4, 7	2
Nursing Faculty	5, 6	3
Nursing Faculty	8	4
Radiology Faculty	1, 2	1
Radiology Faculty	1, 2,3, 4, 7	2
Radiology Faculty	5, 6	3
Radiology Faculty	8	4

Appendix E

Themes, Subthemes, Descriptive and In Vivo Codes of Student Experiences

Theme	Subtheme	Nursing Students	Radiology Students
1. Influence of the Learning Environment on Student Self-Efficacy and Student Success			
	Quality of instruction	**Positive**: eye contact, engaging, passionate, experienced, relevant **Negative**: Not even looking at us, wouldn't have answers, there for the paycheck	**Positive**: Force us to participate, makes us get involved, our teachers really know what they are doing
	Consideration/ Approachability/Openness, Willingness of Faculty	*Consideration:* **Positive**: care, concern, you guys are doing awesome, she'll talk to you, answer questions, nice, give[s] real life… examples, you can relate it to the example which is like just crucial **Negative**: negative attitude, passive aggressive, snarky, couldn't give examples, not willing to offer that support, or additional information or material, [nursing is] trying to run a business, it's not a business to us, they would simply …let us fail, no help, consider our side, [if they could] not think of it as [a] transaction *Approachability*: **Positive**: I'm not afraid **Negative**: I don't feel comfortable approaching her, [an administrator] was very intimidating and I felt like I couldn't approach her *Willingness:* **Positive**: we're going to find out together, I mattered, built me up, someone believes in me **Negative**: unwilling to provide help, unsupported, isolating, they forget that they are teachers, *Openness:* **Negative***:* wasn't going to accept [that she was wrong]it got pretty heated, wasn't nice, she took offense to people questioning the exam, don't question exams it's unprofessional	*Consideration:* **Positive**: everyone at [the college] is very responsive to your questions, the support that [my faculty advisors] offered was helpful *Approachability:* **Positive**: you're comfortable, can say anything, not afraid to ask, I don't have to be quiet, *Willingness*: **Positive**: teachers are more than willing to assist, nursing teachers [during IPE] have actually offered to help even though they might not …know… the answer, go out of their way, more than willing to answer questions *Openness*: **Positive**: out teachers ask our opinions, anytime of the day, [a Gen Ed instructor] was very accepting with not just me but students, help with anything, boosted my confidence, she really appreciates that I was trying to help, build confidence, respectful

Theme	Subtheme	Nursing Students	Radiology Students
	Quality of communication, Faculty availability	*Communication*: **Positive**: advisor would say… you are smart, you can do it, I'm not a complete idiot, fantastic clinical instructor… would ask me real world questions, [faculty] would send out announcements: you guys are doing awesome, **Negative**: passive aggressive, I've never found someone so disrespectful, we were called idiots, yelled at me, raised her voice, she literally called us idiots and said that we were stupid, disrespect, it's verbal abuse, lost all respect for the school, never went back, a bitter start, here we are again, [a nursing faculty] said she cried every day in nursing school so we basically need to get over it, it's not tough love, it's disrespect *Availability*: **Positive**: available after class, she said yes [I'm available], as always **Negative**: rejected me, does not have time for me	*Communication:* **Positive**: [Faculty] easy to talk to faculty, responsive to your questions, email back quickly **Negative**: [Technologists] very offensive, I was trying to do the right thing, degraded my confidence, "don't argue with me", flustered, nervous, I do worse, I don't want to be in this situation, snarky, not feeling acknowledged, feel inadequate, disrespected, it hurts more than it should, it still hurts
	Peer Support	*Critical:* in it together, don't know what I'd do without them, lean on them more than professors, lean on each other, my peers have really made the difference, if it wasn't for them …I don't know if…I would be able to really get through it	*Helpful*: **Positive**: It helps being close with a few because we can do study groups
2. Culture of Program/School	Hostility & Fear: Rite of Passage: Focused on Program Outcomes: Administrative detachment:	**Negative:** I don't know if the hostility of people comes with the program or they're made like that, it's a kind of kill or be killed kind of mentality, fear, you're gonna fail, we're gonna kick you out, discouraging, supposed to be safe, promote so much safety, I don't feel safe, based on fear, instill fear, threaten with failure, only choice we have, terrified, breakdown, whole culture is wrong, toxic, **Negative**. that's the culture, rite of passage, 'I suffered so now you have to suffer' *Punitive*: not allowed to, they've taken that away from us, not allowing, taken away resources, the very few things we had, now no one can they don't care about us, more concerned with the [NCLEX] pass rate, it's their numbers, it changes the whole culture… of the school nobody [in administration] cares, [negative faculty behaviors] are being allowed, has no clue, completely disconnected	**Positive** culture implied

Theme	Subtheme	Nursing Students	Radiology Students
3. Student Under-standing of Self-Efficacy			
	Fluctuations Based on New Challenges	Shit got real when we got to clinical, it changes at the beginning of the semester, as I get into the semester I start to get more confident, pretty poor in the beginning	Fluctuated, before the radiology program…I gained confidence [in Gen Ed courses], I can do this…then I was accepted into the program… low again, confidence has risen, it builds over time
	Prior Successes	Every test that I pass boots my confidence, made it through first and second semester, ebbs and flows, kind of with … wins and losses	On a steady incline… the further we get into our courses and our clinicals, we never thought we would be as good at it.. as we are now, [small successes over time have increased self-efficacy], yeah, yeah.
	Academic vs. Applied Orientation	No comments	Some people are more… book smart… as opposed to something that's more hands-on, in class I feel way more confident… than in actual clinical
	Faculty/ Advisor /Instructor / Peers	*Faculty* **Negative/Positive**: she gave me absolutely zero to work with… [which].. taught me to be self-reliant more than anything *Advisor* **Positive**: [my advisor] would sit me down and be like, 'You are smart, you are good enough, you know this, you can do it'. And I was like, I'll figure it out, I can actually do this *Peers* **Positive**: my peers have really made the difference… belief in myself, constantly building me up	*Faculty/Instructors* **Positive**: our teachers are always super, super positive, some [clinical sites] they boost you up… give you a lot of confidence, make you feel like you're doing great *Instructors* **Negative**: someone at clinical says something, lowers your confidence, it felt very offensive, degrading my confidence, not feeling good enough,
4. Faculty Awareness of their Role in Student Success			
	Effective faculty understand their role, ineffective faculty or non-professional educators do not	*Faculty do not think their behavior matters* **Negative**. [they would say] their behavior makes no difference [to them], close minded, whole responsibility is on the student, [faculty would say] their behavior was not an influence, *Faculty are aware that their behavior matters* Neutral comment but the emotion was **negative**. teachers who are fit for teaching understand that every single thing they do impacts the student	*Clinical instructors do not think their behavior matters or they don't care* **Neutral/Negative**. I don't think people in clinical think that way, they are not professional teachers, technologists don't really know that, if they do know they don't really care, *Faculty are aware that their behavior matters* **Positive**. I would think that they would see it, [faculty] think that they could make a difference on our confidence, [faculty believe their] positiveness is going to

	Faculty/instruct-ors behaviors are based on if they want a student to succeed or not	*Faculty choose their behavior with particular students based on whether they want particular students to succeed* **Negative**: key word is behavior, everyone has an option, choose to be…supportive or… intimidating, prevent success through intimidation or barriers, they actively choose a behavior to have a very specific outcome, …" "I think their behavior is based on their intention."	affect our outcome, yes, you don't have to be a part of the faculty …to know that… it's more like a moral thing, a respect thing. Obviously you would want to be treated the same way if you are in a learning situation, our teachers are awesome, it's a moral thing, they know it would have an effect on us so they arent' negative towards us, they want to see us succeed, *Technologists choose negative behavior because they are threatened* **Negative**: The techs are afraid that we're going to take their jobs…, technologists… maybe see us as a threat

Appendix F

Faculty Invitation to Participate Recruitment Email

Subject: Research Study Participant Search

Dear [Faculty],

My name is Kim Emery and I am a Doctor of Education candidate at the University of New England. I am completing a dissertation on the topic, "*Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views*." I seek to recruit five to eight faculty and *teaching* administrators to interview. The criteria to participate in this study are the following:

- [redacted]The faculty member must be contracted and at least ¾ time employed with the [redacted]
- The faculty member must teach in either the Nursing division or the Medical Imaging division at the [redacted], and at least 75% of courses taught during the past two years must have been delivered in a face-to-face format.
- If you are an administrator, to be eligible, you must currently teach, or have taught, face-to-face courses within the last three years in the Medical Imaging division at the [redacted] The purpose in recruiting teaching administrators solely from medical imaging is to balance the number of participants from each division of the college. As there is only one radiologic technology faculty member, recruiting one or two additional interviewees from this division will also help to protect the faculty member's confidentiality.

To complement information gathered from faculty, student volunteers from the radiologic technology and nursing programs will also be recruited to participate in focus group interviews.

The purpose of this study is to explore how health professions faculty and students understand how faculty impact student success. This study will explore generally whether faculty and students have similar or different perceptions about this, and will seek to determine if faculty and students of different health professions divisions have similar or different views.

Individual interviews will be conducted virtually through an online platform (i.e. Zoom, GoTo Meeting) and are expected to last 30-60 minutes. Consent forms will be sent to all participants to be read, signed, and returned electronically to the researcher. The researcher will also review the consent form at the beginning of the interview. Participants may skip any question they do not want to answer, and will have the opportunity to review the transcript of their interview as well as the initial data from the interview transcript to ensure information is accurately captured. The identity and privacy of all participants will be protected.

Your contribution to this study could help to improve the educational experience of faculty and students in higher education, and will be greatly appreciated. If you would like more information about this study or would like to schedule an interview, please contact me at Kemery5@une.edu.

Thank you very much,

Kim Emery, M. S.

Appendix G

Faculty Second Invitation to Participate Recruitment Email

Subject: Research Study Participant Search

Study Title: *Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views*.

Dear [Faculty Name]

Two weeks ago you received an email invitation to participate in a study I am conducting that explores how faculty and students understand the role that faculty play in student success. If you have responded please disregard this email, and thank you for participating! If you have not yet decided if you would like to participate, I encourage you to please consider that this is a great opportunity for you to share with the education community your opinions about how faculty impact student success, and for you to contribute to improving student success. It is critically important that we understand this from the viewpoint of both the faculty and the student in order to fully understand the dynamic involved in faculty-student interactions, and the similar and dissimilar perceptions of faculty's influence on student success.

If you agree to participate, you will engage in a 30-60 minute interview. A number of measures are in place to ensure your confidentiality, and this will be given the highest priority.

Your input is very important, and this will not require more than an hour of your time. Your consideration is greatly appreciated. For your convenience, a copy of the original email invitation is attached to this email which includes participation eligibility requirements.

Sincerely,

Kim Emery, M.S.

Appendix H

Student Invitation to Participate Recruitment Email

Subject: Research Study Participant Search

Dear Student,

My name is Kim Emery. I am a Doctor of Education candidate at the University of New England. I am completing a dissertation on the topic, "*Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views*." I seek to recruit five to ten volunteer students from the radiologic technology program, and five to ten volunteer students from the nursing program to participate in two separate, private, focus group interviews. The criteria to participate in this study are the following:

- Student participants must be enrolled in either the Associate of Science degree in nursing program or the Associate of Science degree in radiologic technology
- Student participants must be seniors in their respective program of study, and must have completed all required general education science courses (Anatomy & Physiology I, Anatomy & Physiology II, and Microbiology with Lab)
- Student participants must be 18 years of age or older

To complement information gathered from students, faculty volunteers from the radiologic technology and nursing programs will also be recruited to participate in individual interviews. Information from student participants will not be identifiable and names of student participants will remain confidential.

The purpose of this study is to explore how health professions faculty and students understand how faculty impact student self-beliefs, and students success. This study will explore what these understandings are, whether faculty and students have similar or different perceptions about this, and if faculty and students of different health professions divisions have similar or different views.

Focus group interviews will be conducted virtually through an online platform (i.e. Zoom, GoTo Meeting) and are expected to last 30-60 minutes. Consent forms will be sent to all participants to be read, signed, and returned electronically to me prior to the date of the focus group interview. Participants will be asked to complete a short demographic questionnaire and email this back with their signed consent form. I will also review the consent form at the beginning of the interview. Participants may skip any question they do not wish to answer, and will have the opportunity to review the transcript of the focus group interview as well as the initial data from the interview transcript to ensure information is accurately captured. The identity and privacy of all participants will be protected, and all focus group participants will be required to keep participant identities and shared information confidential.

Your contribution to this study could help to improve the educational experience of students in nursing and radiologic technology programs both at your college and at other health professions colleges. Your participation will be greatly appreciated.

If you would like more information about this study or would like to schedule an interview, please contact me at Kemery5@une.edu.

Thank you very much,

Kim Emery M.S.

Appendix I

Student Second Invitation to Participate Recruitment Email

Subject: Research Study Participant Search

Study Title: *Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views*.

Dear Student,

Two weeks ago you received an email invitation to participate in a study I am conducting that explores how faculty and students understand the role that faculty play in student success. If you have responded please disregard this email, and thank you for participating! If you have not yet decided if you would like to participate, I encourage you to please consider that this is a great opportunity for you to share with the education community your opinions about how faculty impact student success, and for you to contribute to improving both faculty-student interactions and student success. It is critically important that we understand this from the viewpoint of both the faculty and the student in order to fully understand the dynamic involved in faculty-student interactions, and the similar and dissimilar perceptions of faculty's influence on student success.

If you agree to participate, you will be part of a group of 5-10 students from your degree program and will engage in a private group interview/discussion. A number of measures are in place to ensure your confidentiality, and this will be given the highest priority.

Your input is very important, and this will not require more than an hour of your time. Your consideration is greatly appreciated. For your convenience, a copy of the original email invitation is attached to this email which includes participation eligibility requirements.

Sincerely,

Kim Emery, M.S.

Appendix J

Semi-Structured Interview Protocol – Faculty/Teaching Administrator

Study Title: Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views

Theoretical Framework Key
(R) Rosenthal (1994) - Faculty beliefs > behaviors > influence learning environment
(RD) Rubie-Davies (2006)– Faculty expectations & behaviors > student academic self-beliefs (self-efficacy)
(B) Bandura (1977) – Self-efficacy influences student success

Date of Interview: [TBD]

Interviewee: [pseudonym]

Thank you for taking the time to participate in this research. Today is _____. I am here with _____ who is a live participant of my study. Do I have your permission to record this interview? The purpose of this interview is to explore how health professions faculty and students understand how faculty impact student success. This study will explore generally whether faculty and students have similar or different perceptions about this, and will seek to determine if faculty and students of different health professions divisions have similar or different views.

I would like to take a moment to review the consent form with you to ensure you understand its contents and to answer any questions you might have. Do you have any questions?
You should have a copy of the signed consent form, but if you need a copy one will be emailed to you before we begin this interview. Do you need a copy sent to you?

This interview will take 30-60 minutes. The recording will be transcribed either manually or by using an online transcribing service. If an online transcribing service is used, the online company will delete the audio file once transcription is completed. If manually transcribed, the audio file will be deleted within three years after the conclusion of this study. Please refrain from using proper names for people or places. If you do mention names or places, these words will be redacted from the written transcript.

If you would like to receive a copy of the transcript of this interview as well as initial data from the interview to review for accuracy, these will be provided.

If at any time, and for any reason, you would like to skip a question please let me know and we will immediately move on to the next question. If at any time during this interview you would like to stop, please inform me and we will cease immediately.

Do you have any questions?

I would like to share a few terms that may be used during this interview so you understand how they are used in context.

Faculty leadership includes faculty perceptions and expectations of students, as well as their behavior with/toward students, during faculty –student interactions in a learning environment.
Self-efficacy is the belief a person has in their ability to succeed at something. Here it is primarily centered on academics.
Student success in this situation includes being successful in any task associated with academic work (projects, assessments, etc.. in a course), success in passing a course, success in caring for patients, success in earning an associate's degree, success in passing their licensing exam, and the student's ability to be a capable nurse or radiologic technologist once hired.

Do you have any questions before we start the interview?

There are no right or wrong answers to these questions. Please be as candid as your comfort level allows.

RQ 1. How do health professions faculty understand the role that faculty leadership (including perceptions, expectations, and behaviors towards students (PEBs)) plays in student success?

RQ1a. How do health professions faculty understand student self-efficacy?

1. When you think about student success, what are your fundamental/general beliefs about this? (R, RD, B)

2. Has your opinion changed about this from the time that you were an undergraduate to now?

3. Once a student has entered college we know that there are a number of factors that play a role in student success. When you think about variables associated with student success, which are the greatest influencers? (R, RD, B)

All people, consciously or unconsciously, make judgments of others based on many things (their looks, the way they present themselves, the way they interact with others, the way they carry themselves, what they have heard about the person). These perceptions can heavily influence expectations, and we know this can occur in the academic setting between faculty and students.

4. In what ways do you feel faculty perceptions (of students) influence their expectations of students? (R)

5. In what ways do you feel those expectations (of students) influence faculty behaviors towards students? (R, RD)

   Without using names, are there any examples of this that you can share with me?

6. How much of a role do you feel self-efficacy (self-belief to succeed) influences a student's ability to succeed? (B)

7. What is your opinion about whether or not faculty interactions with students have any real effect on a student's self-efficacy as far as their ability to succeed in college? (is self-efficacy fixed or changeable?) (RD, B)

   - *[prompt*: *If not affirmative] Do faculty have any effect at all on students?*
   - *[prompt: If affirmative] In what way?*
   - *[prompt: What about faculty behaviors that provide a challenge, or demand accountability from students? Are these behaviors that also affect self efficacy]*

   Can you share why you feel this way, or give examples that help to explain this?

8. How do you think students will answer the following question: When faculty and students interact in a learning environment, how does faculty behavior impact the student's sense of being a capable person and able to succeed? (R, RD, B)

   Is there anything else you would like to add?

   Thank you for taking the time to participate in this interview

Appendix K

Semi-Structured Interview Protocol – Student Focus Groups

Title of Study: Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views

Theoretical Framework Key
(R) Rosenthal (1994) - Faculty beliefs > behaviors > influence learning environment
(RD) Rubie-Davies (2006) – Faculty expectations & behaviors > student academic self-beliefs (self-efficacy)
(B) Bandura (1977) – Self-efficacy influences student success

Date of Interview: [TBD]

Interviewees: [pseudonyms]

Thank you everyone for participating in this focus group. Today is _____ and I am here with [____students_____] who are live participants of my study. [each student], do I have your permission to record this interview? I hope the information gathered today will add a lot of meaning to my study and help to answer an important research question:

> How do health professions students describe how faculty leadership impacts their self-efficacy and success***?***

I would like to take a moment to review the consent form with you to ensure you understand its contents and to answer any questions you might have. Do you have any questions?

You should have a copy of the signed consent form, but if you need a copy one will be emailed to you before we begin this interview. Do you need a copy sent to you?

This interview will take 30-60 minutes. The recording will be transcribed either manually or by using an online transcribing service. If an online transcribing service is used, the online company will delete the audio file once transcription is completed. If manually transcribed, the audio file will be deleted within three years after the conclusion of this study. Please refrain from using proper names for people or places. If you do mention names or places, these words will be redacted from the written transcript.

If you would like to review a copy of the transcript of this interview as well as initial data from the interview to review for accuracy, an opportunity to do so will be provided.

If at any time, and for any reason, you would like to skip a question please let me know. You will not be asked to answer that question. If at any time during this interview you would like to stop, please inform me and your participation in the interview will cease immediately.

Before we start there are a couple of things I need to go over. First is **confidentiality**. Since we are all meeting together, you all know who is here and you will know what is said in this group. Everyone's identity and anything shared must be kept absolutely confidential. This is important for not only privacy, but to provide a safe and trusting environment within which everyone feels comfortable sharing their thoughts, feelings, and opinions. Please answer as honestly and as openly as you can. Also, please do your best to not use anyone's name when you speak; If you forget, don't worry... I will be sure to redact any names from the transcript.
Do you have any questions about this?

I also want to make sure everyone understands some terms that I will use in the questions: **Faculty Leadership** includes faculty perceptions and expectations of students, as well as their behavior towards students. **Self-efficacy** is the belief a person has in their ability to succeed at something. Here it is primarily centered on academics. **Student success** in this situation includes being successful in any task associated with your academic work (projects, assessments, etc.. in a course), success in passing a course, success in caring for patients, success in earning your associates degree, success in passing your profession's licensing exam, success in your ability to be a capable nurse or radiologic technologist once hired.

Does anyone have any questions about these terms?

There are no right or wrong answers. Please answer as candidly as your comfort level allows.

RQ2. How do health professions students describe how faculty leadership impacts their self-efficacy and success?

1. How do you feel the learning environment influences your ability to ***succeed*** (this refers to student success) in college?
   Can you give examples of this?

2. How do you feel your level of self-efficacy influences your ability to ***succeed?***

3. Think about when you first enrolled at this college to where you are now. How would you rate your degree of ***self-efficacy*** when you began versus your degree of ***self-efficacy*** now?

4. If you have experienced a change, what factors played a role in this change in self-efficacy?

    - Prompt: If **faculty leadership** played a role, how significant was their influence in changing your level of self efficacy?

5. Can you give specific examples of faculty-student interactions that impacted the learning environment and your belief in yourself to succeed academically (positively and/or negatively)

6. During these interactions how did you feel?

7. How do you think faculty will answer the following question: When faculty and students interact in a learning environment, how does faculty behavior impact the student's sense of being a capable person and able to succeed?

   Is there anything else you would like to add?

   Thank you for taking the time to participate in this interview

Appendix L

Faculty/Teaching Administrator Consent Form

APPROVED FOR USE BETWEEN

UNIVERSITY OF NEW ENGLAND
INSTITUTIONAL REVIEW BOARD

Version 8.22.18

UNIVERSITY OF NEW ENGLAND
CONSENT FOR PARTICIPATION IN RESEARCH
-- FACULTY/TEACHING ADMINISTRATOR--

Project Title: Role of Health Professions Faculty on Student Success: Exploring Student and Faculty Views

Principal Investigator(s): Kim Emery M.S., Doctor of Education candidate.
Kemery5@une.edu (207) 331-4439

Introduction:

- Please read this form. You may also request that the form is read to you. The purpose of this form is to give you information about this research study, and if you choose to participate, document that choice.
- You are encouraged to ask any questions that you may have about this study, now, during or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

Why is this research study being done?

The purpose of this study is to explore how health professions faculty and students understand how faculty impact student success, and the role of civility and incivility in this process. This study will explore generally whether faculty and students have similar or different perceptions about this, and will seek to determine if faculty and students of different health professions divisions have similar or different views.

Who will be in this study?

There are three groups of individuals who will be asked to participate in this study: nursing and radiologic technology faculty; radiologic technology teaching administrators; and nursing and radiologic technology students.

Faculty: Faculty must be contracted (not adjunct), and be a member of the nursing division or the medical imaging division at the [redacted] and must have utilized a face-to-face format in at least 75% of their courses during the past two years.

Teaching Administrators: Only those administrators who are part of the medical imaging division, and who have had a face-to-face *teaching* role within the past two years may participate. Due to the small faculty size in this division, it is necessary to include administrators to balance, as much as possible, the sample groups from nursing and medical imaging. Teaching administrators will be considered "faculty" in this study.

The expectation is to enroll three radiologic technology faculty/teaching administrators and five nursing faculty for one-to-one interviews.

Prior to the start of this study, a single faculty member who will not participate in this study will be asked to validate the interview protocol for the faculty/teaching administrator interviews.

What will I be asked to do?

Consent Form

Prior to the date of the interview, the principal investigator will review the consent form with you, and discuss any points for which you want further clarification. After reviewing the form, you will be asked to sign the consent form and email a copy to the principal investigator. Please keep a signed copy for your records.

Demographic Questionnaire

Prior to the start of the interview, you will asked to answer a small number of demographic questions; this will take approximately 5 minutes. Examples of the types of questions asked include: What is your age (only age ranges will be offered)? If there is no way to share this information without risking identification, this question may be omitted. In what division of the college do you teach? What are your credentials? How long have you taught in higher education?

Interview

You will be interviewed for 30-60 minutes using an online meeting tool (Zoom, GoTo Meeting, etc…). Due to the use of online meeting software all interviews will be electronically recorded unless you have objections. If so, the interview will not proceed.

- Examples of the *types* of questions asked are: How would you define student success? In your opinion, what contributes to student success?

Review of Transcript

You will also be offered an opportunity to review the transcript from your interview and the initial data derived from the transcript to make sure it is accurate and that the interpretations of transcript data are correct. You will be asked to forward any corrections to the principal investigator using email within 72 hours.

What are the possible risks of taking part in this study?

The nature of this research project imposes little to no risk to the participant. The only risk possible is a breach of confidentiality. To protect you from this risk please see "How will my Privacy be Protected?" and "How will my data be Kept Confidential?" sections below.

What are the possible benefits of taking part in this study?

There are no direct benefits of your participation, however, indirectly you will have an opportunity to reflect and learn about your perceptions regarding the role of faculty play in student success. As a faculty member you can use this information to inform your practice. You

will also know that you have participated in a study that could benefit andimprove the educational experience of faculty and students in higher education.

What will it cost me?
There is no cost to you for participating in this study. Online interviews will be conducted using free digital software (Zoom, GoTo Meeting, etc…).

How will my privacy be protected?
All participants and individuals mentioned by name during interviews will be assigned a pseudonym. The key for pseudonyms linking them to identifiers will be stored on an encrypted thumb drive and stored in a locked safe accessible to only the principal investigator. To further protect your identity, the college will also be assigned a pseudonym along with other measures to protect identification of its location. Your participation in this study will be kept confidential.

How will my data be kept confidential?
The following measures will be taken to ensure that no breach of confidentiality will occur related to names and information shared.

- Questionnaires will use an alpha numeric pseudonym (i.e.FR01, for radiology faculty/teaching administrator number one, FN02 for nursing faculty number two, etc…) to identify participants instead of their name.
- Interview transcripts will use only alphanumeric pseudonyms for participants. Any names mentioned by interviewees during the interviews will either be replaced with an alphanumeric pseudonym or a generic term (i.e. "a faculty member in the radiologic technology program" or "an administrator in the nursing program", or "a member of the college administration") will be used.
    - These protective measures will also be utilized when writing the dissertation of this study.
- The key for pseudonyms will be kept on an encrypted thumb drive and stored in a locked safe accessible to only the principal investigator. This information will be erased within three years after the conclusion of the study.
- The name of the college and anyone employed at the college who provided information about the college will been given pseudonyms. Also, the location of the college is protected by identifying it as a college in the United States, and by referencing multiple accrediting bodies across the U.S. so as to not identify the region in which it exists.
- You do not have to answer any questions on the questionnaire or any questions asked during interviews that you do not want to answer.
- Any paper documents (consent forms, questionnaires, hard copies of transcript and data reviews) will be stored in a locked safe accessible to only the principal investigator. Documents will be held securely by the principal investigator for three years after the study is completed; at which time they will be destroyed.
- Electronic documents and audio recordings will be stored on an encrypted thumb drive and locked in a safe accessible to only the principal investigator. This information will be held up to three years after the conclusion of the study, at which time it will be destroyed.
- De-identified transcripts and initial data from the transcripts will be sent to participants for review. This information may also be shared with the faculty advisor, and or the

Institutional Review Board (IRB) to ensure the study is done in an appropriate and confidential manner.

What are my rights as a research participant?

- Your participation is voluntary. Your decision to participate or not participate will have no impact on your current or future relations with the University of New England.
- [redacted].
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate there is no penalty to you.
- You are free to withdraw from this research study at any time, for any reason, up until the initiation of data analysis. Once data analysis has begun, your participation will remain active until the end of the study. If you choose to withdraw from the research there will be no penalty to you.
- The principal investigator may terminate your participation in the study at any time for any reason, with or without notice to you.

What other options do I have?

You may choose not to participate.

Whom may I contact with questions?

You may contact the researcher conducting this study, Kim E. Emery, with any questions about this study at (207) 331-4439, or at Kemery5@une.edu

You may also contact the faculty advisor of this study, Dr. Ella Benson at 757-450-3628 or ebenson2@une.edu.

If you have any questions or concerns about your rights as a research subject, you may call Mary Bachman DeSilva, Sc.D., Chair of the UNE Institutional Review Board at (207) 221-4567 or irb@une.edu.

Will I receive a copy of this consent form?

Yes, you will be given a copy of this consent form.

Participant's Statement

I understand the above description of this research and the risks and benefits associated with my participation as a research subject. I agree to take part in the research and do so voluntarily.

_____ _____

Participant's signature or Legally authorized representative — Date

_____

Printed name

Researcher's Statement

The participant named above had sufficient time to consider the information, had an opportunity to ask questions, and voluntarily agreed to be in this study.

Researcher's signature	Date
Printed name	

APPENDIX M

Student Consent Form

APPROVED FOR USE BETWEEN

UNIVERSITY OF NEW ENGLAND
INSTITUTIONAL REVIEW BOARD

Version 8.22.18

UNIVERSITY OF NEW ENGLAND
CONSENT FOR PARTICIPATION IN RESEARCH
--STUDENTS--

Project Title: Role of Health Professions Faculty on Student Success: Exploring Student and Faculty Views

Principal Investigator(s): Kim Emery M.S., Doctor of Education candidate.
Kemery5@une.edu (207) 331-4439

Introduction:

- Please read this form. You may also request that the form is read to you. The purpose of this form is to give you information about this research study, and if you choose to participate, document that choice.
- You are encouraged to ask any questions that you may have about this study, now, during or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

Why is this research study being done?
The purpose of this study is to explore how health professions faculty and students understand how faculty impact student success, and the role of civility and incivility in this process. This study will explore generally whether faculty and students have similar or different perceptions about this, and will seek to determine if faculty and students of different health professions divisions have similar or different views.

Who will be in this study?
There are three groups of individuals who will be asked to participate in this study: nursing and radiologic technology faculty; radiologic technology teaching administrators; and nursing and radiologic technology students.

Eligible Students: Students must be seniors enrolled in either the Associate of Science in Nursing or Associate of Science in Medical Imaging programs at [redacted], and must be 18 years

of age or older. If for any reason a senior student has not completed Anatomy & Physiology I & II, and/or Microbiology, they will be not be eligible to participate. [redacted]

The expectation is to enroll five to ten senior nursing students to participate in a nursing student focus group interview, and five to ten senior radiologic technology students to participate in a radiologic technology student focus group interview.

Prior to the start of this study, one student from the nursing program and one student from the radiologic technology program will be asked to validate the interview protocol for the student focus groups.

What will I be asked to do?

Consent Form

Prior to the date of the interview, the principal investigator will review the consent form with you, and discuss any points for which you want further clarification. After reviewing the form, you will be asked to sign the consent form and email a copy to the principal investigator. Please keep a signed copy for your records.

Short Demographic Questionnaire

You will be asked to complete a short demographic questionnaire prior to the day of the interview; this will take approximately 5 minutes. This should be returned to the principal investigator by email. Examples of the types of questions on this questionnaire include: What is your age (only age ranges will be offered)? What is your gender (you may opt to not answer)? In what program are you enrolled? When you complete this program, will this be your first degree? If not, what other degrees do you hold?

Group Interview

Student focus groups will be interviewed as a group, for 30-60 minutes, online. Focus group interviews will be held at a time that is agreeable to all participants.

Focus group interviews will be electronically recorded unless participants object to this. Those who object will not be eligible to continue as participants of the study.

- Examples of the *types* of questions asked are: When considering student success, what role do you believe faculty play and in what way do they contribute? Can you give specific examples of faculty-student interactions that impacted the learning environment?

Review of Transcript

Once the interview is completed and a transcript is made, you will be offered an opportunity to review the transcript portions that pertain to information that you shared, and the initial data derived from the transcript (a) to make sure it is accurate and (b) to ensure the interpretations of transcript data are correct. Anyone wishing to complete the review will be asked email corrections to the researcher within 72 hours.

What are the possible risks of taking part in this study?
The nature of this research project imposes little to no risk to the participant. The only risk possible is a breach of confidentiality. To protect you from this risk please see "How will my Privacy be Protected?" and "How will my data be Kept Confidential?" sections below.

What are the possible benefits of taking part in this study?
There are no direct benefits of your participation, however, indirectly you will have an opportunity to reflect and learn about your perceptions regarding the role of faculty play in student success. You may gain a deeper understanding and appreciation for those things that play a role in your academic success. You will also know that you have participated in a study that could benefit andimprove the educational experience of health professions students, and other students in higher education.

What will it cost me?
There is no cost to you for participating in this study. Online interviews will be conducted using free digital software (Zoom, GoTo Meeting, etc…).

How will my privacy be protected?
All participants and individuals mentioned by name during interviews will be assigned a pseudonym. The key for pseudonyms linking them to identifiers will be stored on an encrypted thumb drive and stored in a locked safe accessible to only the principal investigator. The college will also be assigned a pseudonym along with other measures to protect identification of its location. Your participation will not be made known to anyone other than to your focus group members, and all student participants will be asked to keep the identity of fellow participants confidential as well.

How will my data be kept confidential?
The following measures will be taken to ensure that no breach of confidentiality will occur related to names and information shared.

- Questionnaires will use an alphanumeric pseudonym (i.e.SN01, for nursing student number one, SR01 for radiology student number one, etc…) instead of participant names.
- Interview transcripts will use only alphanumeric pseudonyms for participants. Any names mentioned by interviewees during the interviews will either be replaced with an alphanumeric pseudonym or a generic term (i.e. "a faculty member in the nursing program" or "an administrator in the radiology program", or "a member of the college administration") will be used.
    - These protective measures will also be utilized when writing the dissertation of this study.
- The key for pseudonyms will be kept on an encrypted thumb drive and stored in a locked safe accessible to only the principal investigator. This information will be erased within three years after the conclusion of the study.
- The name of the college and anyone employed at the college who provided information about the college will been given pseudonyms. Also, the location of the college is protected by identifying it as a college in the United States, and by referencing multiple accrediting bodies across the U.S. so as to not identify the region in which it exists. In this way the student identification is further protected.

- This document serves to notify you that a requirement of participation is that participant identities and information shared during the group interview be kept confidential. Student participants will also be reminded at the start of the group interview that they are expected to keep all information shared confidential.
- You do not have to answer any questions on the questionnaire or any questions asked during interviews that you do not want to answer.
- Any paper documents (consent forms, questionnaires, hard copies of transcript and data reviews) will be stored in a locked safe accessible to only the principal investigator. Documents will be held securely by the principal investigator for three years after the study is completed; at which time they will be destroyed.
- Electronic documents and audio recordings will be stored on an encrypted thumb drive and locked in a safe accessible to only the principal investigator. This information will be held up to three years after the conclusion of the study, at which time it will be destroyed.
- De-identified transcripts and initial data from the transcripts will be offered to participants for review. This information may also be shared with the faculty advisor, and/or the Institutional Review Board (IRB) to ensure the study is done in an appropriate and confidential manner.

What are my rights as a research participant?

- Your participation is voluntary. Your decision to participate or not participate will have no impact on your current or future relations with the University of New England.
- Your decision to participate or not participate will not affect your relationship with the [redacted].
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate there is no penalty to you.
- You are free to withdraw from this research study at any time, for any reason, up until the time that data analysis has begun. After data analysis begins, your participation will remain active until the end of the study. If you choose to withdraw from the research there will be no penalty to you.
- The principal investigator may terminate your participation in the study at any time for any reason, with or without notice to you.

What other options do I have?

You may choose not to participate.

Whom may I contact with questions?

You may contact the researcher conducting this study, Kim E. Emery, with any questions about this study at (207) 331-4439, or at Kemery5@une.edu

You may also contact the faculty advisor of this study, Dr. Ella Benson at 757-450-3628 or ebenson2@une.edu.

If you have any questions or concerns about your rights as a research subject, you may call Mary Bachman DeSilva, Sc.D., Chair of the UNE Institutional Review Board at (207) 221-4567 or irb@une.edu.

Will I receive a copy of this consent form?
Yes, you will be given a copy of this signed consent form.

Participant's Statement

I understand the above description of this research and the risks and benefits associated with my participation as a research subject. I agree to take part in the research and do so voluntarily.

_____ _____
Participant's signature or Legally authorized representative Date

_____
Printed name

Researcher's Statement

The participant named above had sufficient time to consider the information, had an opportunity to ask questions, and voluntarily agreed to be in this study.

_____ _____
Researcher's signature Date

_____
Printed name

Appendix N

Faculty Demographic Questionnaire

Title of Study: Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views

Pseudonym ___[TBD]_____.

I will share my screen with you so you can see the questions on this form. As I read these questions to you, please provide the answer that best answers the question.

1. **Age**

   What is your age?
   - 22 to 32 years
   - 33 to 43 years
   - 44 to 54 years
   - 55 to 65 years
   - Older than 65 years

2. **Education Level**

   What is your highest education level?
   - High school graduate (including equivalency)
   - Completed some college
   - Associate degree
   - Bachelor's degree
   - Master's degree
   - Doctorate, Ph.D., law or medical degree

3. **Professional Field**
   Prior to when you began teaching as a college faculty member, what was your professional field?
   - Nursing
   - Medical Imaging
   - Other (please specify) _____

4. **Years of Post-Secondary Teaching**
   How many years have you taught (two courses per year or more) at the college level?
   - 0-3 years
   - 4-8 years
   - 9-14 years
   - 15-20 years
   - Greater than 20 years

5. **College Division**
   In which division at [redacted] do you currently teach?

   - Nursing
   - Medical Imaging

6. **Teaching Education**
   Have you had any formal post-secondary education in teaching?

   - Yes, (specify degree or certificate program: _____)
   - No

Appendix O

Student Demographic Questionnaire

Title of Study: Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views

Pseudonym ___[TBD]_____.

Please read the question and circle the answer that best answers the question.

1. **Age**

   What is your age?
   - 18 to 24 years
   - 25 to 34 years
   - 35 to 44 years
   - 45 to 54 years
   - 55 to 64 years
   - Age 65 or older

2. **Gender**

   What is your gender?
   - Female
   - Male
   - Other (if you are comfortable sharing, please specify) _____

3. **Race/Ethnicity**

   Which race/ethnicity best describes you?
   - White/Caucasian
   - Black or African-American
   - American Indian or Alaskan Native
   - Hispanic
   - Asian
   - Native Hawaiian or other Pacific islander
   - From multiple races
   - Some other race (please specify) _____

4. **Country of Origin**

   Where were you born?
   - United States
   - Canada
   - Other (please specify) _____

5. **Employment**

   How many hours per week do you usually work at your job?
   - More than 30 hours a week
   - 15- 30 hours a week
   - 1-14 hours a week
   - I am not currently employed

6. **Education Level**

   What is the highest level of education you have completed?
   - High school graduate (including equivalency)
   - Completed some college
   - Associate degree
   - Bachelor's degree
   - Master's degree
   - Doctorate, Ph.D., law or medical degree
   - Other advanced degree beyond a Master's degree

7. **Degree Program**
   In which degree program are you currently enrolled?
   - Associate of Science in Nursing
   - Associate of Science in Radiologic Technology

8. **First Generation College Status**
   Did any of your adopted or biological parents complete a 4-year degree?
   - Yes
   - No

Appendix P

Study Site Authorization- Email Request to Conduct the Study

Date: July 1, 2020

[redacted]

RE: Proposal to Conduct Research

Dear President [redacted]

My name is Kim Emery and I am a Doctor of Education candidate at the University of New England in Portland, ME. I am writing to request authorization to conduct a research study [redacted]. The study topic is the *Role of Health Professions Faculty in Student Success: Exploring Student and Faculty Views.* The purpose of this study is to explore how health professions faculty and students understand faculty leadership behaviors related to civility and its impact on student success

The proposed research period is from August 1, 2020 through May 1, 2021. This study involves recruitment of 5-8 faculty and *teaching* administrators to participate in individual interviews, as well as two senior student cohorts (5-10 from the A.S. in Radiologic Technology program and 5-10 from the A.S. in Nursing program) to participate in focus group interviews. Participants will also be asked to complete a short demographic questionnaire. Only teaching administrators from medical imaging will be invited to participate as this is necessary to balance the number of participants from medical imaging with those from the nursing program as much as is possible. [redacted] *Teaching administrators* are those administrators who have a teaching role, or who have had a teaching role, in the last three years.

There is little to no risk to participants other than a breach of confidentiality. This will be mitigated using a number of protective measures such as de-identification of all audio, digital, and paper files through assignment of pseudonyms, storage of the pseudonym key and all digital and paper files on an encrypted thumb drive, and storing the thumb drive in a locked safe. Any names or other identifiers that are mentioned during interviews will be redacted or changed so that confidentiality of all employees and students at [redacted] is protected. Students participating in focus groups will be strongly advised that the identity of participants and information shared during focus group interviews are to be kept confidential. Students will be reminded of this prior to the start of the interviews. All faculty, teaching administrators, and students who choose to participate will be given a consent form which will be reviewed with each participant prior to its

signing. Each participant will keep a copy of the signed consent form and return a copy to the researcher prior to data collection.

The identity of the college will also be protected by using a pseudonym, by concealing the physical location of the college, ensuring any language specific to the college is not identifiable (i.e. mission statement), and also by referencing accreditation bodies that exist throughout the United States rather than just the regional accreditation body of the college.

If authorization is granted, faculty and student participants will be interviewed via an online platform such as Zoom or GoTo Meeting. All participants will answer general demographic questions after informed consent forms have been signed, and before the interviews commence. Questionnaires should take no more than 5 minutes to complete. Interviews will require 30-60 minutes. Interview transcripts and initial data from the interviews will be offered to each participant to review for accuracy. All identifiable information, manual and audio recordings, and transcripts will be held in locked safe until three years after the conclusion of the study, at which time they will be destroyed.

There are no direct benefits to participants or [redacted] for participating, however, participants will have an opportunity to reflect and learn about their perceptions regarding the role of faculty play in student success. Faculty members can use this information to inform their practice. Students may gain a deeper understanding and appreciation for those things that play a role in their academic success. Participants will also know that they have participated in a study that can benefit and improve the educational experience of faculty and students in higher education. Findings from this study may also contribute to establishing an ongoing professional development program or center for teaching at [redacted]. There are no costs incurred by either [redacted] or the individual participants for engaging in this study.

Your approval to conduct this study would be greatly appreciated. I will follow up with an email or telephone call next week and am happy to answer any questions or concerns that you may have at that time. You may contact me at my email address: Kemery5@une.edu.

If you agree, kindly sign below and return the signed form to me via email. Alternatively, you may submit a signed letter of authorization on your institution's letterhead acknowledging your consent and permission for me to conduct this study at [redacted].

Sincerely,

Kim Emery, M.S., Doctor of Education Candidate
University of New England

cc: Dr. Ella Benson, Research Advisor, UNE

By signing below, the principal investigator, Kim Emery, is authorized to conduct this study at the [redacted] during the period August 1, 2020 through May 1, 2021. The [redacted] will defer to the University of New England's Institutional Review Board (IRB) to determine appropriateness of the study for the human subject population at this institution and grant IRB authorization.

Authorized by:

_____	_____	_____
Print your name and title here	Signature	Date