


Winter 11-26-2018

Interprofessional Education: How Curriculum Influences and Develops Future Healthcare Professionals

Karen Keune

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Concordia University–Portland
College of Education
Doctorate of Education Program

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Interprofessional Education:

How Curriculum Influences and Develops Future Healthcare Professionals

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Concordia University–Portland

College of Education

Dissertation submitted to the Faculty of the College of Education

in partial fulfillment of the requirements for the degree of

Doctor of Education in

Transformational Leadership

Brianna Parsons, Ed.D., Faculty Chair Dissertation Committee

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Concordia University–Portland

2018

Abstract

The value of higher education is a topic of great consideration and discussion, not only for current and future students, but also for legislators, educators, and employers. A college degree is more than a pathway toward advanced knowledge in a given subject; it is a component of a larger outcome beyond a diploma, it's a job. While the scale of employment opportunities appears to rise for those with a college degree, it is not enough to guarantee security for new graduates, no matter their topic of study. More than a competency in the field of study is required to prove value as a potential employee for these new graduates. The healthcare industry, for example, requires skills beyond the concepts of care delivery. The industry looks for skills sets which may or may not be a part of a college curriculum; critical thinking, problem-solving, teamwork capacity, desire for ongoing learning, communication and leadership proficiency (North & Shriver, 2016). This qualitative case study utilized semi-structured interviews to investigate the perceived readiness of new graduates turned employees from health science professional programs of study at the undergraduate level with insight and perspectives of employers and educators. Curricular design and job expectation assessment was the foci of consideration with the survey analysis from individuals within the educator, graduate, and employer groups; creating a comparative look at preparedness in the areas of critical thinking, problem-solving, communication and leadership proficiency. The results of this study provide connectivity which reaches into the foundation of interprofessional education.

Keywords: concept-based curriculum, content-based curriculum, employability, healthcare, critical thinking, communication, leadership, flipped classroom, inter-professional learning, oral teach-back, allied health, nursing

Dedication

To my family, friends, colleagues, students, and faculty.

To George ~ thank you, for supporting all my dreams.

To Lucy, Grayling, and Henry ~ you are my inspiration. Dream big, love fiercely, laugh often.

To my Mother ~ thank you for being my angel on earth.

To my Father ~ thank you for being my angel in heaven.

To Dr. Brianna Parsons ~ thank you for your patience, guidance, wisdom, and wit. Most importantly, thank you for helping me realize my dream.

“And, when you want something, all the universe conspires in helping you to achieve it” (Coelho, 1988, p.22).

Acknowledgements

I would like to acknowledge all the individuals who have acted as a catalyst for my professional and personal growth over the years. Without your friendship, mentoring, guidance, and insight I would not have had the strength nor the courage to embark on such a journey. Your willingness to share your thoughts and experiences has provided me with the most unique and invaluable resources to shape my study. Thank you for your time and thoughtful consideration.

To my dissertation committee: Dr. Brianna Parsons, Dr. Patricia Talbert, and Dr. Bill Boozang. My sincerest thanks for pushing me to realize my best work. Your guidance brought me to this place and I am so grateful.

To my husband and children, you are the air I breathe. Thank you for all of your support. You often realize my ability far before I do and when I am ready to throw in the towel, you refuse to let me do it. I thank you for that.

To all the friends and family who have lived this journey with me (you know who you are). Thank you. You were my keepers and watch through the long nights of writing. I could hear your laughter and knew you respected my need for solitude. Thank you for your patience.

To my editor and friend. You are the peanut to my butter, the best to my friend, and the milk to my cookies. Thank you for everything.

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Chapter 1: Introduction

An organization is only as good as its employees is a commonly reflected sentiment. The basis for what defines a good organization within the healthcare field is often seen as a measure of quality outcomes (Institute of Medicine, 2003), regulatory guidelines, or accrediting standards. Quality outcomes, in turn, are driven by the knowledge, skills, collaboration, communication, leadership, and critical thought and decision-making of the employees within the healthcare organization. In the healthcare field, patient care outcomes are directly reliant on skilled and trained teams of providers to deliver quality services (Institute of Medicine [IOM], 2003).

What makes healthcare providers qualified and experienced, in part, is the exposure to strong educational foundations that create a database of knowledge that they draw from to perform their day-to-day roles. Educational preparation includes classroom and clinical experiences, exposure and interaction with interprofessional teams, and lifelong learning, all critical to creating the foundation of knowledge for soon-to-be healthcare professionals (North & Shiver, 2017). Independence and team-based collaboration are uniquely a synergistic activity that creates the platform for delivery of skilled and quality care, from the administrative level to the direct care employee, within the healthcare setting (World Health Association [WHO], 2010).

Educational development begins the foundation for skills that qualify individuals to gain knowledge and competency in a specific field of study. Each field of study within the healthcare field, in turn, requires a professional credentialing process (Credentialing, 2010). The credentialing process is one of additional examination and assessment to further determine the breadth and capacity of knowledge gained from the academic perspective, which must be

satisfactorily passed in order to work within the field that one has completed educational training, thus paving the way to be a part of the healthcare team (Credentialing, 2010). These standards that apply to healthcare organizations originate by professional organizations, as well as state and federal agencies, specifically professional practice boards: Boards of Medicine, Nursing, and Pharmacology, to name a few.

This qualitative case study looked at the specific skillsets which are identified as being both critical to the field of practice and a key to their intended profession, as defined by educators, students, and employers. These skills, often referred to as soft skills, are crucial to success and sustainability in the modern workforce: critical thinking, decision-making, leadership and teamwork capability, professionalism, and desire for lifelong learning (Godin, 2017; North & Shiver, 2016; Wratcher, 2016). The focus of this qualitative case study was to identify a curricular method that best prepared a student with the tools and knowledge to enter the healthcare workforce. Through literature review, theoretical analysis, and semi-structured interviews with subsequent analysis of data, the evolution of this empirical study shed light on the importance of developing skills that enabled personal and professional success, specifically in the healthcare field (Academies, 2017).

Background, Context, History, and Theoretical Framework of the Problem

Programs of study within the healthcare field focus on competencies or measurable outcomes of skillsets—technical application of learned skills applied in the clinical setting (Gruppen et al., 2012). Developing a knowledge base beyond core skillsets is also critical, acting as an essential component to attaining and maintaining successful employment (Godin, 2017). Thus, the question becomes: how does a healthcare professional student gain knowledge and experience in areas beyond foundational content? Such skills as critical thinking, decision-

making, communication, teamwork capability, and lifelong learning capacity are all aspects of professionalism—skills needed in fully functioning interprofessional teams (Academies, 2017; Institute of Medicine, 2003; North & Shiver, 2016).

Robust training with rigorous curricular expectations is but one way that students in programs of study are prepared to move from student to professional (Lippincott Nursing Education, 2017). Determining the role curriculum plays in skill and knowledge development is the focus of assessment committees in higher education settings (Boud, 2010). Demand for relevance and accountability is of vital importance among higher education institutions where standards for student success are measured with the most considerable scrutiny (Kern et al., 2016). Creating a connection between curricular design and professional competency in the healthcare workforce was the foundation for this qualitative case study. Further, the study identified a pathway between academic preparation and professional readiness, building a framework for sustained success in the student's chosen field of study beyond the classroom.

This study examined how best to attain the skills of professionalism: decision-making, critical thought, teamwork capacity, communication, and lifelong learning (North & Shiver, 2016). The theoretical framework for this study was based on a concept-based curriculum as a model of teaching that promotes learning beyond content, focusing on big-picture thinking and engaging the learner in the process of mastery through engaged inquiry (Elliott, 2015; McCallum, 2009). Further, a concept-based curriculum creates a framework for learner-centered engagement (Elliott, 2015). A concept-based curricular model sets the stage for lifelong learning, a fundamental tenet of skills found to be most useful for successful and sustainable employment after graduation (Elliott, 2015; Godin, 2017; McCallum, 2009). Through an empirical case study, the research engaged educators, students, and employers who educate,

prepare, and employ allied health and nursing professionals to determine curricular effectiveness in developing students to gain conceptual competency in areas that are vital to not just employment readiness but also sustained employment success.

Theories that align and compliment this empirical case study are the conceptual change theory (Duit & Tregust, 2010) and the cognitive continuum of learning theory (Novak & Canas, 2008). Each of these studies looks at curriculum as a conduit to learning through independent self-discovery, increased student engagement, and creative and big-picture thinking practices. The focus of these theories is utilization of concept development in addition to competency versus skill competency alone, aligning with the foundation for this qualitative study. The intention is to identify a better understanding to frame the basis for outcomes that align closely with a concept-based curriculum. Further, they created a foundation for the concepts that promote development and refinement of the skills mentioned above, desired by new graduates in the healthcare profession. Variables to the learning and teaching methodology were also subject to investigation throughout the case study.

Statement of the Problem

Preparing students to enter the workforce is one of the many outcomes that institutions of higher education strive to achieve through curriculum and program design (Carlson, 2017). Connectedness between curriculum design and student outcomes, specifically in the areas of critical thought, problem-solving, decision-making, teamwork, communication, and leadership skills, is the emphasis and aim of this study. More specifically, this study examined how educators, students, and employers within health science professions benefit from a concept-based curriculum. Through engaged learning, both concept and content competency lead to job readiness and sustained employment success in the student's chosen field of study. This study

utilized the foundations of the conceptual change and continuum of learning theory (Duit & Tregust, 2010; Novak & Canas, 2008) to defend the concept-based learning model as a method of the curriculum that promotes the skills most sought after within the healthcare industry (North & Shriver, 2016).

Purpose of the Study

The purpose of this study went beyond research and analysis of a specific topic. This study aimed to create a bridge between educator and employer in the preparation of students for the workforce. Through a specific curriculum model, the opportunity for success and sustained growth in the student's field of study is optimal. Academic preparedness geared toward job readiness to enter the workforce requires extensive knowledge in multiple skillsets. The foundational skills necessary to maintain successful, long-term employability within the industry, which this study outlines, are found to be lacking (Elliott, 2015; Godin, 2017; North & Shiver, 2016). Through the examination of literature research, theoretical frameworks for curriculum design and educational models, and interviews with research participants, this study provided a foundation of knowledge to conclude that curriculum style and methodology does impact the preparedness of students who enter the workforce. This empirical case study uncovered the value of utilizing a concept-based curriculum in the development of student competencies beyond core skills, looking at decision-making, critical thinking, communication, teamwork, and lifelong learning.

Research Questions

Through semi-structured interviews with educators, students, and employers, the researcher gained knowledge to answer the overarching research questions of this study:

RQ₁: How does curriculum design within a health science professional program of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy, and continuous learning?

RQ₂: How can a specific curricular design best align with and reinforce characteristics most sought within the workforce by both the employer and the interprofessional team members that a new graduate will be joining?

Rationale, Relevance, and Significance of the Study

The rationale for conducting this empirical case study has to do with my desire to understand better how to prepare students who enter the healthcare workforce for professional success. My experience in both healthcare administration and higher education has provided me with an opportunity to observe gaps in workforce readiness, from the educator and the employer perspective. Through personal observation and professional research, it has become apparent that students are prepared more at a competency level than a concept-level. However, a concept-based curricular model, particularly in preparing healthcare professionals, is evidenced to sustain success within an interprofessional team in the healthcare setting. As a healthcare professional and educator, I am cognizant of the importance of creating a curriculum that is strong in core knowledge and skillsets to work within one's profession. As licensing boards set the expectations and requirements for skills within nursing and allied health programs of study, this study attempts to create an understanding of whether a specific curriculum model can infuse other defined skills needed to be successful in these fields in addition to the core skill development.

This study engaged educators, students, and employers of nursing and allied health professions to gain multiple perspectives on workforce readiness. Through one-on-one

interviews, this empirical case study aided the research in connecting curriculum design and academic preparedness with employment readiness relative to skills outside of core competency. Semi-structured interview questions provided each participant with an opportunity to give perspective on the value of preparedness when entering the workforce, define what that means, and how one achieves this.

Definition of Terms

To follow are terms utilized that support the ideas and concepts of the study.

Advocacy. The protection and promotion of health, prevention of illness and injury, and alleviation of suffering in the care of individuals and families, groups and populations (ANA, 2017).

Concept-based learning. Utilizing universal themes to create active knowledge in a variety of circumstances and settings (Elliott, 2015).

Communication. The ability to have an exchange in a verbal or nonverbal manner among professional disciplines within the work environment (Godin, 2017; North & Shiver, 2016).

Competency-based learning. System of learning based on demonstration of specific skills and knowledge through assessment and presentation (Competency, 2014).

Critical thinking. “Forms of learning, thought, and analysis that go beyond memorization” (Competency, 2013, para 1).

Curriculum. Formula by which students are guided throughout a topic of study, to gain knowledge and proficiency (Education Reform, 2015).

Decision-making. The act of making a decision related to circumstances within the workplace—specifically important ones (North & Shiver, 2016; Wratcher, 2016).

Interprofessional education. An approach to preparing health students to work in a collaborative team environment (Buring et al., 2009).

Problem-solving. The process of finding solutions to problems (Problem-solving, 2017).

Semi-structured interview. A qualitative method of inquiry that utilizes pre-determined open questions to prompt discussion and allows the interviewer to explore themes or responses further (Creswell, 2015).

Workforce readiness. A term referencing the preparation to enter the workforce prepared to work as part of a team, with skills needed to enhance the quality of the team (North & Shiver, 2016).

Assumptions, Delimitations, and Limitations

Assumptions. There are many assumptions native to qualitative studies. It is the assumption that the individuals interviewed within this study are aware of the impact that educational preparation has on the outcomes of students in nursing and allied health programs of study. Knowing this also lends to the assumption that research participants understand the ever-changing and demanding role that healthcare employees have when entering the workforce. An additional assumption is that the individuals who participate in the interview process of this study will be honest in their answers to questions asked.

Delimitations and Limitations. Delimitations and limitations were present within this study. Delimitations of this study were specific to the study method and style (qualitative case study) that focused on individual interviews for the primary source of research specific data. Additional delimitations were the geographic setting (academic and hospital system affiliate), academic content (curriculum style and methodology), and impact on student readiness (to enter the healthcare setting as well-rounded professionals).

Limitations and boundaries associated with this study relate primarily to the size of the audience that utilized for data collection (interview). As a qualitative case study which uses one-on-one interviews to gather research, the number of participants likely will be less than it would be had the research been conducted via survey or polling questionnaire. The sample of research participants came from a controlled group within a mid-sized private health science college with an affiliated hospital and healthcare system in the Midwest, thus placing limitations on sample size and capacity. Additionally, the choice to not seek artifacts for use within the study also could be considered a limitation. Lastly, another possible limitation in this study is researcher bias. Due to personal and professional experience in both healthcare and higher education, it is impossible to remove personal thoughts and opinions that relate to past and present experiences. Having an awareness of this, as the principal researcher of this study, I committed to being open-minded and recognizing personal bias to avoid any influence in this study.

Summary

Advanced education to prepare individuals to enter the workforce is often a requirement to attain employment in a variety of industries. Healthcare is one such segment of the workforce population that is primarily made up of employees who are formally educated to acquire advanced skills and knowledge in a specialty: nursing, medicine, and allied health. A curriculum is a formula that guides students throughout a topic of study, to gain knowledge and proficiency (Education Reform, 2015).

This study aimed to connect curricular design and preparation for workforce readiness specific to nursing and allied healthcare professions. Throughout this study, the perspectives of educators, students, and employers were gathered to create an understanding of how the curriculum was currently utilized to prepare individuals to enter the workforce. Further, this

study examined curriculum models to determine if a methodology was best suited to prepare students in higher education programs of study (nursing and allied health) to enter an ever-changing, demanding, and integrated industry that aims to produce highly efficient and quality-driven interprofessional teams of healthcare providers and administrators. The next chapters will traverse areas that impacted this study and its outcomes, focusing on literature review, methodology, results and analysis, and ultimately conclusion.

Chapter 2: Literature Review

Knowledge (in-depth understanding and competency of a subject), development (growth and maturity), and readiness (prepared) are all expected outcomes of students who exit higher education or vocational training programs. Students, educators, and employers have a vested interest in one, if not all, of these realized outcomes with the completion of an educational program of study, despite the focus or specialty. Creating models of education that promote the skills students and employers need for future success is essential for the employability of new graduates, particularly in the healthcare industry.

The value of promoting educational models that create deep thinking, problem-solving, broad scope critical analysis, communication, and leadership capability is immeasurable and requires a deep understanding of where knowledge leads us. An educator who engages synergistic thinking, between higher and lower skill levels, prepares all students for the full range of situations beyond the classroom (Erickson et al., 2017). When used as a launch pad for discovery, analysis, and inquiry, the higher education classroom has the opportunity to send students into the world with competency in a specific skillset; however, it often lacks the conveyance of skills necessary to thrive in the workforce (Godin, 2017). The skills of leadership, diligence, contribution, communication, and accuracy are but a few skillsets missing from the curriculum meant to prepare the future workforce. “Real skills can't replace vocational skills . . . what they can do is amplify the things you've already measured,” (Godin, 2017, p.4).

Expectations of healthcare professionals defined and driven by industry standards (Emanuel, 1997), regulatory guidelines (U.S. Department of Health and Human Services, 2017), and/or licensure requirements (Licensure standards, 2000), both contribute to and impact how the healthcare industry recruits, develops, and manages the professionals they employ. The

standards that must be met and maintained within the healthcare industry, therefore, impact the expectations of all staff, including new graduates. Healthcare employers expect providers of all disciplines within the interprofessional team to be able to think critically, use sound clinical judgment, provide advocacy for patients, be lifelong learners, collaborate, work well with coworkers, be open-minded and consider other points of view (North & Shriver, 2016).

Engaging vocational, clinical, and subject matter mastery, along with active learning strategies to employ quick adaptation in real-world practice, requires a shift from content-based curriculum to a model that engages students to think like the professionals they will become.

This shift in curriculum is meant to help students learn the art of filtering information in an ever-changing landscape, allowing them to think beyond black and white and look at the big picture (McCallum, 2009). Content is still a part of the curriculum; however, part of the shift to a concept-based curriculum is to engage the student in the mastery of asking questions versus the mastery of answering, as this skill sets the tone for lifelong learning (McCallum, 2009). The development of a concept-based curriculum is a shift from instruction-centered focus to learner-centered focus where the student engages in the act of navigation through cognitive subcategories of knowledge and remembering: comprehension, application, analysis, evaluation, and creating (Wratcher, 2016). This, effectively, places conceptual mastery within the framework of conceptual understanding.

This study investigated how a concept-based curriculum, within a college/university healthcare program of study, creates a framework in which students learn skills that are most desired by employers within that market: critical thinking, problem-solving, communication, professionalism, and teamwork capability. This study provided evidence of outcomes linked to a concept-based curriculum for students, educators, and in turn, employers. It created a

comparative analysis of aspects between and among the traditional content-based curriculum and that of a concept-based curriculum. In doing so, this study threaded the theoretical learning patterns of both the continuum of learning theory and conceptual change theory (Learning Theories/Models of Learning, 2011) into the defense that curriculum style can advance student capabilities in areas highly sought after by future employers in the healthcare setting. A “new science of learning” (Kolb & Kolb, 2005, p. 193), focused on improving the process of teaching and learning in the academic setting, combines experiences and theory to advance the capacity for knowledge.

A concept-based curriculum is designed to capture the dimensions of factual content and skills with concepts, generalizations, and principles (Erickson, 2011). Further, a concept-based curriculum creates a focus on the learning process that promotes “big picture” thinking, leading students to think as though a practitioner would if they were in that position (Transforming Learning Environments through Global and STEM Education, 2013). This style of instruction, in turn, demands critical thought at higher levels of assessment (Erickson, 2011). To better understand levels of comprehension, frameworks for assessment, such as Bloom’s Taxonomy, are utilized to determine student knowledge and comprehension (Anderson & Krathwohl, 2001). Most importantly, concepts are augmentations to the content in the learning process, bringing context and purpose to the overall discovered content (Transforming Learning Environments through Global and STEM Education, 2013).

Significance

Validating a useful model of curriculum design in higher education, specifically within health science professional programs of study, is the purpose of this study. Also, this study displays the alignment of a concept-based curricular design with specific learning outcomes in

the area of critical thinking, teamwork, decision-making skills, and communication—all skills highly sought after by future employers. From an educator perspective, this learning methodology promotes integrated thinking patterns, which connects knowledge at the conceptual and transferable level of understanding (Erickson et al., 2017). In turn, this facilitates greater information retention, deeper understanding, and increased motivation among the students (2017). It also creates foundational promotion of active learning, increased student engagement, and a desire to continue the learning process beyond baseline assessment (Transforming Learning Environments through Global and STEM Education, 2013).

“Conceptual approaches to learning may fit the different ways students can function in various settings” (WebPath, 2017. para. 1) that include learning through experience, abstract conceptualization, experimentation, and observation (WebPath, 2017). This learning pathway promotes the organization of time, space, and methods that the student learns best (WebPath, 2017) and creates the building blocks of critical thought and problem-solving (North & Shriver, 2016). Therefore, foundations of student learning will become the building blocks of professional skills needed beyond the classroom, as healthcare providers in today’s workforce (Elliott, 2015). The understanding of how best to prepare students to transition from academia to professional life, as skillful and competent employees, is the subject of ongoing research and analysis from executive industry professionals to governmental leaders.

Critical thought must be addressed at the curricular level, despite the rank or status of the student, according to The Council for Aid to Education, in collaboration with Use Inspired Basic Research (UIBR) (Benjamin, 2017). Better student outcomes are realized when critical thinking is taught, encouraged, and nurtured within the academic setting, embedded within curriculum design and assessment styles (Benjamin, 2017). Educators must consider the impact that

traditional curriculum models have on the overall development of college graduates to meet the needs of professional life. “The lesson for young grads? Having a college degree and technical skills isn’t enough for them to land their first job,” (Elliott, 2017, para. 6); it is a combination of skills gained that supersede knowledge competency, including critical thought, problem-solving, and communication.

The value of promoting educational models that create deep thinking, problem-solving, broad scope critical analysis, communication, and leadership capability is immeasurable and requires a deep understanding of where knowledge leads us. An educator who engages synergistic thinking between higher and lower skill levels prepares all students for the full range of situations beyond the classroom (Erickson et al., 2017). When used as a launch pad for creating discovery, analysis, and inquiry, the classroom can send students into the world with competency (Godin, 2017). Unfortunately, the skills of leadership, diligence, contribution, communication, and accuracy are but a few skillsets missing from the curriculum meant to prepare the future workforce (Godin, 2017). “Real skills can’t replace vocational skills, of course not. What they can do is amplify the things you’ve already measured,” (Godin, 2017, p.4). Employers in the healthcare market have high expectations of new graduates entering their workforce, where the quality of patient care is of primary focus. Today’s healthcare employers expect providers of all disciplines to be able to think critically, use sound clinical judgment, provide advocacy for patients, be lifelong learners, collaborate, work well with coworkers, be open-minded, and consider other points of view (North & Shriver, 2016). Problem-solving skills, critical thinking applications, communication and leadership remain largely absent in the newest of graduates moving into the workforce, as seen by future employers (Elliott, 2015). In a survey by the Council for Aid to Education it was found that forty-six percent of employers reported

that recent college graduates had poor problem-solving skills (Elliot, 2015), consequently labeling them a generation of over-"syllabused"(para. 9) individuals who are deficient in decision-making skills (Elliot, 2015). Engaging vocational, clinical, and subject matter mastery, along with active learning strategies to employ quick adaptation in real-world practice, requires a shift from content-based curriculum to a model that engages students to think like the professionals they will become.

This shift in curriculum is meant to help students learn the art of filtering information in an ever-changing landscape. The movement poises students to gain the skills necessary to see beyond a single dimension, preparing them to focus on the larger multidimensional aspects of their craft (McCallum, 2009). Content is still a part of the curriculum; however, part of the shift to a concept-based curriculum is to engage the student in the mastery of asking questions versus the master of answering questions, as this skill sets the tone for lifelong learning (McCallum, 2009). The development of a concept-based curriculum is a shift from an instruction-centered focus to a learner-centered focus, where the student engages in the act of navigation through cognitive subcategories of knowledge and remembering, comprehension and understanding, application and applying, analysis and analyzing, followed by evaluating, synthesizing and creating (Wratcher, 2016), effectively, placing conceptual mastery within the framework of conceptual understanding.

Problem Statement

Identifying and understanding the connectedness between curriculum design, learning methodologies, and student outcomes in the areas of critical thought, problem-solving, decision-making, teamwork, communication and leadership skills was the emphasis and aim of this study. More specifically, this study examined how students within a health science profession program

of study benefit from a concept-based curriculum, preparing them for post-graduate employment in their field of study. Further, this study utilized the foundations of the conceptual change and continuum of learning theory to defend the concept-based learning model as a method of curriculum that promotes the skills most sought after within the healthcare industry (North & Shriver, 2016).

Organization

The organizational outline of this study began by defining the qualities and outcomes associated with a concept-based curriculum, specifically within healthcare programs of study. A review of pedagogy, within the method of teaching and learning, was also included. Lastly, an alignment between theoretical foundations of learning was examined, utilizing the conceptual change and continuum of learning theories. Both learning theories were defined and exemplified as models that support and defend the value of a concept-based curriculum, creating pathways for improved student outcomes and leading to benefits for student, educator, and employers, in specific areas: critical thinking, decision-making, teamwork capacity, communication, and leadership skills.

Conceptual Framework

A conceptual framework provides organization to concepts, theories, and methods that his study will argue. A roadmap for the study that lies ahead, the conceptual framework will guide the reader through concepts and methodologies to support, defend, and advocate the connection between teaching style and learning outcomes in the area of healthcare curriculum and post-graduate employment skills. As a tool, the framework provides a foundation for how the study evolved, connecting teaching and learning methodologies with student preparation in the areas of critical thinking, problem-solving, teamwork capacity, desire for ongoing learning,

communication, and leadership—skills and characteristics highly sought by employers (Elliott, 2015).

Choosing concepts may be the most challenging aspect of the shift to a concept-based approach to teaching (Transforming Learning Environments through Global and STEM Education, 2013). Identifying concepts and utilizing exemplars help students to think beyond facts, therefore connecting factual knowledge to ideas of significance and relevance within the field of study (Lippincott Nursing Education, 2017). The examples of concepts, within a curriculum, drive the mapping of content allowing students and educators to connect patterns that link toward outcomes: patient care, hospital administration, quality, and safety (2017).

Table 1

Examples of Some of the Many Different Concepts in Nursing Curriculum

Concept	Exemplar
Accountability	Competence, Development
Advocacy	Patient-Centered Care, At-Risk-Population
Assessment	Assessing Abnormal, Assessing Normal
Behaviors	Addiction, Alcohol Abuse, Assaultive Behavior, etc.
Clinical Decision-making	Nursing Process, Problem-solving, Critical Thinking
Critical Thinking	Clinical Decision-making, Concept Mapping
Collaboration	Case Management, Chain of Command, Conflict Resolution, Management Theories, Interdisciplinary Team
Development	ADHD, Failure to Thrive, Cerebral Palsy, Down Syndrome
Diversity	Abilities, Age, Gender, Race, Sexual Orientation

Table 1 (continued)

Concept	Exemplar
Ethics	Professional Code of Ethics, Patient Rights
Evidenced-Based Practice	Best Practices, Community Preferences, Patient Care Guidelines

Table 1. Adapted from: “Benefits of a Concept-Based Curriculum in Nursing,” by Lippincott, January 28, 2017 from concepts.nursingeducationuccess.com. Copyright 2017 by Wolters Kluwer.

Theories that complimented this study’s examination are the conceptual change theory (Duit & Tregust, 2010) and the continuum of learning theory (Novak & Canas, 2008), both of which were cross-examined and utilized to fully understand and frame the basis for what drives learning outcomes in the identified areas of this study. Variables that existed and may influence learning and teaching methodologies were also investigated. These included generational characteristics and expectations of both teacher and learner, as well as barriers and predisposition to teaching and learning (Bradshaw & Hultquist, 2017).

The value of higher education is a topic of great consideration and discussion from high school classrooms to organizational boardrooms, governmental departments to university campuses. “On virtually every measure of economic well-being and career attainment—from personal earnings to job satisfaction to the share employed full time—young college graduates are outperforming their peers with less education,” (The Cost of Not Going to College, 2014, para. 1). While the scale of opportunity appears to rise with a college degree (Hackett, 2015), one might question what particular characteristics of that degree increase the odds of

employability, from an industry perspective. Is it advanced knowledge of a topic, aptitude and skillset, or a well-rounded balance? In the area of healthcare, for example, both direct care providers and administrators are expected to be competent in skillsets of their chosen field, but also have a conceptual fluency in the areas of critical thought, problem-solving, strategic balance, effective communication and leadership (North & Shiver, 2016). Much goes into the development of future healthcare providers, from the elementary building blocks of curricula to the expansive knowledge gained through hands-on experience (Bradshaw & Hultquist, 2017). As a result, the role and importance of undergraduate education is of great value in the development of evidence-based competencies that incorporate concepts, knowledge, and skills (Leotsakos et al., 2014). Equally important is the call to understand how these concepts are enlisted within the curriculum and whether they are adequate to meet the needs of competency outside the classroom (Duit & Tregust, 2010).

Further examination and comparative support for a concept-based curriculum was made through the definition and explanation of theoretical foundations of the conceptual change and continuum of learning theories. The conceptual change theory is based on separate theories by Piaget's learning theory and Kuhn's concepts of science revolution (Learning Theories/Models of Learning, 2011). These theorists create a connection between learning and observation, feedback, peer interaction, elicitation and demonstration (Learning Theories/Models of Learning, 2011). Much like concept-based learning, promotion of student engagement and deeper learning application occurs through approaches that engage learning and application concurrently (North & Shriver, 2016). The continuum of learning theory further expands on the evolutionary process of learning as it occurs over a period, perhaps a class, a program, or a lifetime (Learning Theories, 2001). Both theories create a foundation of support for the concept-based curriculum.

This study will investigate and argue that a concept-based curriculum is better suited for students who are moving from academic life into work life within the healthcare setting.

Table 2

Conceptual Framework for Study

Change Agent	Knowledge	Variable	Impact/Outcome
Educator	Curriculum shift to concept-based	Generational characteristics and expectations of both teacher and learner	Improved grades and competency assessment
Student	Flipped classroom, interprofessional learning models, oral teach backs	Barriers to teaching and learning	Competency in desire for ongoing learning, teamwork capability
	Deeper learning, Student self-assessment and engagement, student ownership	Predisposition to teaching and learning	Competency in critical areas-communication, critical thinking, problem-solving, and leadership
			Employability

Review of Research Literature and Methodological Literature

The merits of a concept-based curriculum as a model for teaching and learning are known to "efficiently deliver increasing amounts of instructional content while helping the student develop critical thinking skills needed to succeed" (Wratcher, 2016, para. 1), particularly in the healthcare environment. This style of curriculum enhances the likelihood of faculty delivering a more comprehensive, practice-oriented level of instruction designed to both identify gaps in knowledge and accommodate the need for further educational preparation of a topic (Wratcher, 2016). While challenges may exist for educators to transition to a concept-based approach of curricular design, the onus for academic success is not the faculty alone (Wratcher, 2016).

Students are expected to have a higher level of participation and engagement in their academic

experience, taking a more active approach to their learning (North & Shiver, 2016). A concept-based curriculum engages students to be more participatory with its student-centered approach, allowing students to develop and hone skills sought after by employers, including leadership and critical thinking skills (Wratcher, 2016).

While curriculum and teaching styles differ among programs of study within an academic setting, it is of importance within this study to determine which mode is most useful for those students who are preparing to enter the workforce within the healthcare field. The measurement of student success does not rest solely on the competency of content; it also includes capacity for skills that enhance the application of content knowledge, such as communication, professionalism, critical thinking, teamwork and decision-making. Despite awareness that these skills are valuable for students and future employers, there is little understanding of how or if educators are aware or equipped to teach them (Huang et al., 2016).

Over the past decade, healthcare programs of study were forced to revisit and reform their educational strategies to better prepare graduates to successfully work in an ever-changing healthcare system (IOM, 2003). This need is primarily based on the valuation of current educational structures that produce students who are often lacking in areas that allow them to be successful in their chosen careers: critical thinking, communication, problem-solving, teamwork, and leadership capabilities (North & Shiver, 2016). These skills, referred to as soft but better described as real (Godin, 2017), are the very elements of foundational knowledge that help to prepare healthcare providers to work at the top of their game, ultimately reducing the risk for error and poor patient outcomes (IOM, 2003).

Studies indicate that there is much to be learned about how academia prepares students for life in the workforce beyond the basic program of study competency (Huang et al., 2016).

Increasing demands within the healthcare field is evidenced by workplace expectations where expansive knowledge is required, the capability to work within interdisciplinary teams is mandated, and ability to think both critically and collaboratively is demanded (Ellenbecker, 2010). The gap in knowledge is closing between academia and industry; federal grants are earmarked to help launch further studies into how best to prepare students and create a balance between academic preparations that meets an evolving workforce (College Value Globe Newswire, 2015). Such grants provide financial resources for industry or academia to research and design programs that benefit both industry and students, either singularly or in tandem, to improve the growth and development of both academia and industry (Funding Opportunities, 2017).

USA Funds awarded 3.5 million dollars in grants to state, business, research, and policy organizations to develop new models of measurement of value for higher education and training programs (College Value Globe Newswire, 2015). This is but one funding repository for researchers interested in gaining knowledge to advance the design of education in preparing tomorrow's workforce. Grants such as those offered through USA Funds are meant to aid in the determination of educational models that enhance outcomes and thus close the gap in knowledge and expectation for educators, for students, and for employers.

Educator Expectations

Educators are often propelled to examine approach and design of curriculum in an effort to develop professionals in a field of study. Our world has changed from an industrial mindset to the age of information, requiring people to filter through mass amount of information and have the innate ability to know how and when to use that information (McCallum, 2009). "Education does not occur in a vacuum; indeed, much of what is learned lies outside of formal academic

coursework” (IOM, 2003, p. 9). Pedagogical flexibility is vital. Faculty must be comfortable with enhancing conceptual understanding through different curricular approaches and teaching methodologies. The educator’s approach to teaching concepts should embrace more than just content, utilizing case study, role play, concept mapping, and flipped classrooms to engage an active learning within the classroom (North & Shiver, 2016). A concept-based curriculum aims to "utilize common attributes; concepts are timeless, universal, abstract and broad" (McCallum, 2009, para 2).

Historically, the role of the educator was to launch a student into the workforce with as much knowledge as possible, in as many areas as possible, with the thought that more will prepare that student better for the road that lies ahead (McCallum, 2009). Leaders in healthcare education are recognizing the value of a concept-based curriculum to prepare students to maximize both their conceptual understanding and content-based proficiency (North & Shiver, 2016). Curricular frameworks analyzed in a nursing curriculum present a roadmap of organizational pillars: goals (learning outcomes), instructional delivery (activity), and evaluation of competency (learning assessment) (North & Shiver, 2016). Educators are an integral part of the development process of both curriculum and student. Support to educators is an essential facet to ensure outcomes are delivered inside the classroom that “shape the values and attitudes of future health professional,” (IOM, 2003, p. 9). As expressed by Bradshaw & Hultquist (p.297, 2017), “the delivery of safe and quality care in today’s complex and ever-changing healthcare system relies on effective interprofessional communication and team functioning.” Meeting the needs of a complex and ever-changing healthcare system requires the adaptation of a curriculum that creates independent knowledge competency and interprofessional collaboration skills among those being prepared to enter the workforce.

Student Expectations

Student success is measured from a variety of different perspectives. One measurement of success is a student's proficiency with the integration of thinking (Erickson, 2011). Integration of thinking is a direct outcome of synergistic thinking where thoughts are beyond facts and skills and are elevated to conceptualize relationships, patterns, and principles (Erickson, 2011). Student perspectives on how learning occurs within the higher education setting are important (Almajed et al., 2016). These perspectives help the educator to understand better how to "adequately prepare graduates to practice in a continually changing context," (p. 1). One such study of student perceptions assessed the effects of collaborative learning as a method for improving comprehensive knowledge in order for students to be successful after academia (Almajed et al., 2016). This study was able to explain how students' perspectives related to the facilitation of positive learning experience impacted outcomes on overall learning. It also identified specific ways in which educators can implement methods for increased learning through collaboration: group organization, accountability, tutor support, relaxed environment and workload assignment (Almajed et al., 2016).

Understanding the variances in learning styles and perceptions of students within academic programs of study in higher education not only enhances academic outcomes but also helps to support the lifelong learning of students once they enter the workforce (North & Shiver, 2016). Students entering into healthcare professions are expected to have a well-rounded knowledge base of both traditional and refined skills (North & Shiver, 2016). Traditional skills of competency are fact driven, while refined skills of clinical judgment, evidenced-based practice, and leadership, are more concept-based (North & Shiver, 2016). Health professionals entering the workforce immediately after graduation often face elements of change that can be

overwhelming and stressful to sustain long-term, as life as a practitioner is so much more demanding than that of a student (Kovner et al., 2014). The stressors of life as a new nurse impact retention rates within the profession, as a whole (Kovner et al., 2014). One in three nurses (33.5%) leaves the profession after just one year of employment, raising a connection between the preparation new nurses receive before entering the workforce (Kovner et al., 2014). The need for further examination of how students are prepared to enter the workforce becomes more apparent when evidence indicates retention within the profession is affected after just one year of practice.

Employer Expectations

The modern healthcare system is not a simple nor easily defined entity, described as a “dizzying array of highly decentralized sectors,” (IOM, 2003, p. 47). The complexity of this environment requires new graduate healthcare professionals to have basic skills sets and awareness of how to function with confidence and flexibility. The Quality Chasm report (IOM, 2001), indicates that quality measures form an operational perspective within healthcare settings nationwide, and identifies specific reasons why the ideal and real worlds of healthcare do not align (IOM, 2003). This analysis points, in part, to the overall need to re-assess key factors utilized when educating our future healthcare providers, particularly curricular and assessment design and methodology (IOM, 2003).

With the projected growth of jobs in the healthcare market increasing significantly (with a projected 23% healthcare support and 16.4% healthcare practitioners), it becomes evident that attention must be given to ensure graduates are prepared in the skills that will allow them the greater success in their field (Carlson, 2017). While hard skills (hands-on technical skills) are essential, they are not the only skills a new employee needs when entering the professional

workforce (Carlson, 2017). Soft skills, or skills not necessarily associated with competency skillsets, are vital for success in the workforce, despite the field of study (Carlson, 2017; Godin, 2017; James, 2015). These skills are communication, critical thinking, problem-solving, teamwork, collaboration and leadership (Carlson, 2017; Godin, 2017; North & Shiver, 2016; Thompson, 2014).

When measuring “relative importance of attributes in evaluating graduates for hire by industry,” (Thompson, 2014, table 2) components evaluated for value include college GPA, college reputation, the relevance of coursework, extracurricular activities, volunteer experiences, college major, employment during college, and internships. The healthcare industry was included in this poll for input on what student attributes employers valued most when hiring new graduates (Thompson, 2014). An internship was the attribute that was most desired by employers in the healthcare setting, but not unique to this industry, as it was the number one attribute of all industries polled in this Chronicle of Higher Education study (Thompson, 2014).

The industry has an opportunity to impact the educational development of students who will one day enter the workforce (Carlson, 2017). The role employers’ play in helping institutions of higher or technical education programs prepare students for future employment can vary. Creating relationships with academic settings is key. Acting as a resource for internships, guest lecturing, or advisory board involvement positions the employer as a contributing member of the educational process. Employer perspective on what defines a successful candidate for employment includes skills often left out of the curriculum within the academic setting: the ability to communicate, lead, bounce back from failure, and empathize with different people (Carlson, 2017).

In all, preparing students for the workforce requires a shift from an educator-only perspective to a collaborative approach (educator and industry) to ensure much-sought skills are being taught to those who will enter the field. Perspectives and expectations do not exist in silos; rather, they are interconnected between and among the educators, accreditors, industry, and students. Creating avenues to enhance education, build student readiness, and supply the industry with qualified graduates is essential and necessary (Carlson, 2017).

Review of Methodological Issues

The studies which make up the literature review must also be analyzed based on their research methodology, in addition to their evidence of outcome and findings. The research methodologies that were observed within the composite of studies analyzed fell into the categories of quantitative, qualitative and mixed methods, which were primarily a combination of case study and meta-analysis. The data retrieved, while not reflective of all data available, provides a composite view of the types of research completed in areas of focus: curriculum design, post-graduate employability preparation, healthcare professional programs of study, critical thinking, communication, interprofessional teamwork capability, professionalism, and workforce needs.

Quantitative Study Issues

The quantitative research study is designed to provide a measurement that is both accurate and precise (Creswell, 2015). A more scientific approach to gathering data, the quantitative study, has a focus that is concise and narrow, objective, and utilizes analysis which is numerical and statistically based (Research methods, 2017). A study conducted at Arizona State University in 2005 shows mean data analysis that supports the value of higher education in the areas of earnings, employment, and workforce growth (Hill, Hoffman, & Rex, 2005).

Statistical evidence of the benefits of a higher education from both the individual and societal perspectives was quantified within this study (Hill, Hoffman, & Rex, 2005). “Quantitative research encompasses a range of methods concerned with the systematic investigation of social phenomena, using statistical or numerical data,” (Watson, 2015, para. 2), therefore assuming that whatever is studied can be measured. Trends and patterns are measured and analyzed to effectively validate or verify theory within this style of study (Watson, 2015).

This research approach can be utilized singularly to validate a theoretical perspective but can also be coupled with other research methods such as qualitative, case-study or meta-analysis. Quantitative data collection involves interrelated steps to gathering information needed to complete a comprehensive study (Creswell, 2015). In the quantitative study conducted by The Chronicle of Higher Education (Carlson, 2017), wage analysis was a singular subset of data gathered that was compared within the comprehensive study on the valuation of higher education and the future of employment for new graduates. The quantitative steps of data collection is “more than simply gathering information,” (Creswell, 2015, p.139); it systematically approaches research from the perspective of organized gathering and detail processing of data, as in the measurement of student academic attributes most valued by employers (Thompson, 2014) Empirical (quantitative) research is produced through experiment and observation, basing knowledge on specific cause and effect relationships (Creswell, 2015).

Qualitative Study Issues

A qualitative study design explores a problem and develops a study to understand better the phenomenon that causes, or effects the problem, utilizing a literature review as a prominent mechanism for which analysis occurs (Creswell, 2015). Qualitative research addresses a research problem in which the variables are unknown, unlike quantitative research, where the

variables are known (Creswell, 2013). Qualitative studies can also involve non-numerical research such as open-ended questions and informal or semi-structured interviews (McCleod, 2008). In North & Shiver's (2016) qualitative review of concept-based curriculum, the basis for knowledge was present from experience, observation, application, and interview of teaching and learning style that enhances the comprehensive development of future nurses.

Differences vary in relation to a qualitative approach of the research design, all of which are rigorous and detailed in nature. Qualitative research designs explore universal themes of individuals to develop a grounded theory (Creswell, 2015). Case study, active research, or narrative styles to qualitative research design can create a foundation that forges quality outcome improvement in the healthcare setting (Creswell, 2013; IOM, 2003). Exploring the shared culture of a group of individuals in qualitative research develops an ethnographic research study (Creswell, 2015); interdisciplinary education within the curriculum for students in healthcare programs of study leads to best practices in the healthcare setting (Hall & Weaver, 2001). Narrative research design focuses on individuals' stories to create the basis of knowledge and understanding (Creswell, 2015).

While a qualitative research study has more flexibility than its quantitative counterpart, it also has limitations as well. Qualitative approaches require the researcher to be diligent in practice, to avoid biases and influence in a particular area (Anderson, 2010). It also requires a great deal of rigor (to ensure the quality of data being reviewed and analyzed), organization (to manage large amounts of data appropriately), and diligence (the qualitative study is not always accepted in the scientific community) (Anderson, 2010). Qualitative research, while an effective method for data analysis, can create obstacles that a traditional quantitative approach may not as a result of its structure, focus, and fact-driven nature.

Summary of Issues Related to Methodological Review

There are limitations and strengths to every method of research. Choosing the best method of research depends on a variety of factors from the topic of research, to the resources available, to the theory under examination, and the previous studies available. Quantitative research often requires a large sample size, a controlled environment for study, structured methods of analysis (questionnaires), and extensive statistical analysis to be comprehensive (Datt & Datt, 2016). Failure to meet the specific elements of an empirical study may mean the validity of the outcome is minimalized or diminished. It is also dependent on the topic. Not all elements of a research study need or require empirical elements to prove a theory valid or invalid. Therefore, fully understanding the topic, problem, and the need for further research is necessary to ensure the research engages in the best method of data collection to defend a theory.

The research analyzed for this literature review was mainly qualitative. While the data provides a composite view of evidence related to employability readiness and curriculum design in the higher education setting, it does so from a singular perspective—that of the employer. This study was developed to connect the outcomes of a concept-based curriculum (within healthcare programs of study) with the development of real (Godin, 2017) skills needed to advance students into a professional role, post-graduation. The areas of focus for this study were curriculum style and its impact on student preparation of skills highly sought after by employers. In doing so, this study analyzed input from students, educators, and employers to support or negate whether the imposition of a concept-based curriculum, inside health professional programs of study, is most aligned to prepare students to become professionals in the healthcare workforce, through the lens of a qualitative study.

Synthesis of Research

In the review of research, several themes of similarity emerged among the different sources of information reviewed. Curriculum models, employer expectations, higher education responsibilities, and student perceptions and outcomes were highlighted as focal points from which data was retrieved, either in research studies or journal reviews. The predominant message from the literature indicates a gap in readiness of new graduates entering the workforce from the perspective of soft skills—critical thinking, communication, teamwork and decision-making capabilities.

Employers set high expectations within the healthcare field, and they include readily accessible skills of new graduates to think critically (decision-making skills), utilize sound judgment (clinical application), advocate for their patients (communication), be an ongoing learner (willingness to learn more), display teamwork (inter-professional approach), and openness to varying viewpoints (collaboration) (North & Shiver, 2016). The gap in new graduate skills, as identified by employers (Sorrel, 2015), has prompted a thoughtful review of how the curriculum can influence preparation before graduation (North & Shiver, 2016). The solution recommended through quantitative analysis and qualitative review was similar to that garnered by Wratcher (2016), when she analyzed and theorized that educational leaders recognize “a concept-based curriculum to accommodate students’ diverse learning styles, to efficiently deliver increasing amounts of instructional content, and to help them develop the critical thinking skills they need to succeed” (para. 1). Mapping this type of curricular model from an educator’s perspective validates the educational perspective of how students can become better prepared to close the gap and increase overall employment readiness (North & Shiver, 2016; Wratcher, 2016).

The gaps in knowledge are identified in the areas of leadership capability, teamwork, communication, and interprofessional collaboration. The challenges that have presented themselves within the healthcare setting, create short-term and long-term deficits in quality patient outcomes (IOM, 2003). All areas of the workforce (healthcare) infrastructure are affected when soft skills (Godin, 2017; Sorrel, 2015) are under-developed or non-existent.

Both long-term and short-term approaches to reduce the gaps in knowledge among current and future healthcare professionals is essential to create and realize change within the industry. Educational opportunities for current healthcare professionals should focus on leadership development, effective communication, and interprofessional approaches to care delivery (Sorrel, 2015). Results yielded will be short-term. Curricular changes within the academic setting, where students are being prepared to enter the field of healthcare, must also take responsibility for developing leadership, communication, teamwork, lifelong learning, decision-making, and critical thinking skills. This long-term approach will change the landscape of healthcare exponentially, setting a standard for which all new graduates are prepared to enter the workforce with skills additional to clinical aptitude (IOM, 2003).

Identification of needs from the healthcare workforce (IOM, 2003), along with evidence of value in a concept-based curricular design (North & Shiver, 2016), will allow for a cross-sectional view of where improvements can be made to enhance quality outcome and retention within the workforce (Carlson, 2017). This also allows an opportunity for academic institutions to evaluate and adjust the curricular design to promote competency in skills most often sought after by employers, as well (Carlson, 2017). In turn, this will create a motion to advance educational outcomes while meeting industry standards.

The identification of needs among healthcare industry professionals is succinct; healthcare professionals must advance in the areas of leadership, communication, critical thinking, decision-making and interprofessional development (IOM, 2003; North & Shiver, 2016; Wratcher, 2016). Where the gaps exist (curriculum), the needs arise (healthcare professional development), forging an avenue that industry and academia can align to create pathways to narrow the margins of inequity in workforce readiness. Evidence indicates that skills which extend beyond clinical competency are essential to the overall continuity and success of the new healthcare professional (Sorrel, 2015). Need identification, from the perspective of the future employer, combined with insight and creativity of curriculum requirements by the academic professionals can advance the preparation of the student entering into a healthcare profession. Complementing core knowledge competency with skills designed to enhance success in the healthcare setting in the areas of interprofessional engagement, critical thinking, communication, decision-making, and leadership capability, is the benefit of a concept-based curriculum, that aides in the movement from student to professional life (Maharajan et al., 2017).

Critique of Previous Research

Evidence to support the value and impact of curriculum and instructional models as foundations for learning and development is abundant (Erickson, 2011). There is no one path by which education is more or less efficient, making room for different models of teaching and learning based on subject, audience, and desired outcomes (Gill, 2017). Unfortunately, the path to learning and development focuses on core knowledge and skills relative to the target subject of study, often overlooking the need to prepare students for life outside the classroom and inside the workplace, particularly within the healthcare field (Maharajan et al., 2017). Creating flexibility within the curricular design is a way to allow healthcare professional students with the

opportunity to step in and step out and still maintain a pathway toward an educational outcome (Westwood, Leinster, & Weinberg, 2008).

A broad scope of data related to many different professions and perspectives is Carlson's (2017) workforce study. This study provides information and detail on the future of industry growth and the need for adjusted initiatives between workforce and educational institutions (Carlson, 2017). The focus was not specific to the healthcare field, however, which limited the scope and specificity of the study outside of the healthcare industry. Carlson's research (2017), identifies high growth markets, trends in education, and opportunities for employer involvement in preparing students to enter the workforce, but does not explicitly identify ways that healthcare academia can improve from a curricular perspective in preparing a future workforce.

Curricular evaluation from the perspective of North and Shiver (2016) and Wratcher (2016), explore the advantages to nursing students who engage in a concept-based curriculum. The focus identifies outcomes that advance the nursing student's capabilities within the modern healthcare workforce (North & Shiver, 2016). These studies expand to detail the key components of a concept-based curriculum that promote student competency in the areas of critical thinking, teamwork capabilities, lifelong learning, communication and leadership skills (North & Shiver, 2016; Wratcher, 2016). Unfortunately, however, despite the similarities between nursing and other healthcare professions, the focus of these studies looks only at nursing in their analysis.

The literature provided many studies that focus on improving student success, post-graduation, but are generally singular in focus; either from the perspective of the employer, the educator, or the student. As was found in the study on collaborative learning models in higher education settings (Almajed et al., 2016), the focus was related to improving student outcomes in

the classroom, less about the long-term advantages of this educational style (teamwork and inter-professional ability). The evidence provided in the reviewed studies offers significant clarity on singular topics, all valuable from individual perspectives and significant to a larger meta-analysis within a qualitative study. However, the connection between curricular development within healthcare professional programs of study and workforce readiness is not significant, nor abundant.

Summary and Conclusion

Expectations of readiness for new graduates entering into the healthcare field is critical. What defines readiness, however, is subject to analysis in the literature review and is identified as skillsets beyond strictly academic proficiency. While research indicates that students with a four-year degree are 70% more likely to land a career in the field of choice (Instructure, 2015), it is also noted that what keeps a new graduate from success in the chosen field is often identified as the absence of non-academic skills, including critical thinking, decision-making capabilities, interprofessional teamwork, communication and leadership qualities (Carlson, 2017). How these skills, often referred to as soft (Godin, 2017), are taught is the subject of further inquiry and inspection by academics, business and industry, and government organizations.

Creating an atmosphere for higher learning and skill development in higher and vocational education, up until recently, has not focused on the impact of student capabilities outside of the classroom, in the real and ever-changing workforce. Creating future leaders, those who are confident and comfortable in their roles within the interdisciplinary team, is of essential importance for educators and the healthcare industry, alike (IOM, 2003). This awareness has promoted increased focus in areas of curricular development, realignment of educational

requirements, and engagement of community and industry, all to promote the growth of the student, academia, industry, and society, as a whole (Knight & Yorke, 2003).

Creating methods for which advanced knowledge of a specialty can be delivered, while increasing knowledge in skills used within the industry to promote career success, was the focus of the research review. In consideration of the multitude of ways in which individuals can teach, learn and understand a topic, the research gathered was mainly focused on practices in academia and within healthcare industries. Knowledge gained created balance and proficiency in academic competence, skill aptitude, and professional development particular to interprofessional development in the areas of communication, leadership, critical thinking and decision-making skillsets for the lifelong learner in the healthcare field (IOM, 2003; North & Shiver, 2016; Wratcher, 2016). The need to understand further how to advance best the knowledge and readiness of healthcare providers entering the workforce will be the perspective of research and analysis for this study.

Chapter 3: Methodology

Modern healthcare professionals require a variety of skillsets to ensure success in their individual and collaborative roles within the industry. Expectations of healthcare professionals have increased to accommodate the growing needs of an ever-evolving industry. However, challenges exist for educators on how to best prepare students (in classroom or clinical settings) to meet these expectations (Institute of Medicine [IOM], 2003). A modern healthcare provider is expected to think critically, interact on an interprofessional level, foster and promote teamwork, communicate, educate, and engage in leadership (North & Shiver, 2016). Education for healthcare professionals, within the higher education and technical education settings, is rich with structure and objectives that focus on disease processes, clinical competencies, processes and protocols (IOM, 2003). Beyond the core curriculum, however, the concentration on much-needed skills, often described as soft skills (Godin, 2017), is left for students to learn once they enter the workforce as a professional.

These skills are often referenced among interprofessional groups within the healthcare industry, from direct care (providers) to oversight (administrators) identified as crucial and critical to personal and organizational success (Carlson, 2017; Ellenbecker, 2010; IOM, 2003). Success, as defined from this aspect, reflects on the capacity to engage in activities most sought after within the field: critical thinking, decision-making, teamwork, communication, and leadership skills. The desire to promote and enhance these skills within college, university, and technical training programs for healthcare professions is not only the objective of future healthcare employers, but also for educators and students alike (Bradshaw & Hultquist, 2017). Students looking to advance their skills and knowledge look toward outcomes: success rate in licensure exams, affordability of education, length of time to get degree/certification, and most

certainly employability rates (Fishman, 2015). As a result, it is expected that students demand that educators have the tools, equipment, and knowledge to help them reach their goals.

Curricular design and formatting remain a focus for educators of healthcare professional programs of study with an emphasis on improving student outcomes, in the classroom and the clinical setting (North & Shiver, 2016). Transformations within healthcare demand increased competence and accountability in providing safe, quality care to patients with increased complexities (IOM, 2003). These changes have prompted educators to re-examine their approach to core content delivery in the classroom and clinical settings in order to better prepare students to be quality caregivers (North & Shiver, 2016). Teaching styles and practices along with adjustment of the curriculum are ways to impact the student outcomes in areas identified as insufficient or absent among new graduates entering into the healthcare field (North & Shiver, 2016). More specifically, educators are charged with the responsibility to foster an environment where students learn to connect the dots of course content with real-world practices, which is the foundation for a concept-based curriculum (North & Shiver, 2016).

Conceptual change theory defines learning as that which changes an existing conception: belief, idea, or way of thinking (Davis, 2001). Teaching for conceptual change is neither a simple nor effortless process (Davis, 2001). It requires that educators are well-developed facilitators, possess comprehensive knowledge of the topic presented, and are patient leaders willing to create a supportive classroom where students feel comfortable in sharing and questioning ideas (Davis, 2001). Further, this theory promotes a more in-depth learning and conceptual understanding of a topic, in turn, allowing students an overall understanding of not just a concept, but rather, how they developed their belief in that concept (Davis, 2001).

Coupled with the conceptual change theory is the continuum of learning theory which allows a concept to expand and develop within the learner over time and under different conditions (Bradshaw & Hultquist, 2017). This theory is at the epicenter of a concept-based curriculum, where building upon core concepts is foundational (Wratcher, 2016). Here, students gain knowledge, advance comprehension, develop analysis skills, and apply learned materials in new and different ways (Wratcher, 2016).

To best align both known literature and theory about this ever-evolving topic, this exploratory case study was designed to examine the impact of a concept-based curriculum within an interprofessional education model. Critical thinking, decision-making, teamwork, communication, and leadership skills are characteristics most sought after by healthcare employers (Wratcher, 2016), but do educational programs of study, aimed at preparing future healthcare providers offer this type of preparation? Understanding how these skills become developed in conjunction with core competency skillsets will offer educators, students, and employers enhanced opportunity and growth in their respective areas.

The purpose of this case study was to examine the perceived readiness of the student to enter the healthcare setting from the perspective of both the student and the educator and to understand and explore the strengths and limitations of new graduates entering the healthcare workforce from the employer perspective. Concurrently, this study also explored the attributes of a concept-based curriculum for students in health professional programs of study as experienced by allied health and professional nursing students, analyzing the benefits for educators, students, and employers. This study attempted to draw a connection between teaching methods, learning styles, academics, and soft skill development (Elliott, 2015).

The foundation for this research study formed through the argument of discovery (research interest) and argument of advocacy (critique of research) (Machi, 2016). For this study, research surrounded both curriculum and workforce preparedness within the healthcare field. More specifically, the research questions for this study were:

- RQ₁: How does curriculum design within health science professional programs of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy and continuous learning?
- RQ₂: How can a specific curricular design best align with and reinforce characteristics most sought within the workforce by both the employer and the interprofessional team members that a new graduate will be joining?

The dynamics of educating and preparing individuals to enter the workforce, preparing them to work both independently and as a vital part of a team, is considered both essential and necessary to the overall quality of healthcare being delivered (IOM, 2003). This study examined curricular pathways and best practices for educators to advance student educational outcomes, skill development, and in turn, employability with necessary characteristics sought after within the workforce. Perspectives from educators, students, and industry employers created the backdrop for this case study, providing a landscape for what was an identified need (skillset) from employers and what was provided by educators (curriculum), in an effort to enhance opportunity (employment) for students as it related to higher education in the health science professions.

Research Method and Design

According to Schramm (1971), the purpose of a case study was to try and explain or expand upon a decision or set of decisions that direct the researcher when gathering data for the

intent of answering specific questions the study is trying to define (Yin, 2014). Decisions, singular or in a set, are the focus by which the researcher is concentrating through data collection and comparative analysis (Yin, 2014). In this exploratory case study, the focus was on curriculum and employment readiness in specific areas of healthcare.

Case study methodology allows the researcher to study the meaning of people's lives under real-world conditions, acknowledges the potential relevance of multiple sources of evidence rather than a single source (Yin, 2016). Further, an exploratory case study presents the researcher with the opportunity to capture real-world perspectives of the study's participants (educators, students, and employers) further aiding in the ability to answer the focal questions that drive the research study itself (Yin, 2016). A case study also investigates through empirical inquiry, seeking to examine a topic in depth and within its real-world context, of the topic may not be evident (Yin, 2014). Through semi-structured interviews, uniform and specific self-created questions were utilized to gather information related to educational preparation and workforce readiness, among the three identified groups. Interviews were face-to-face, via phone, or web-conference with individual participants via GoToMeeting software, which scheduled, recorded and provided interactive communication between two parties. Detailed in the informed consent was the approval to record the dialogue.

An exploratory case study also allowed the opportunity to study complexities within a given context (Baxter & Jack, 2008). Further, this methodology allows a researcher insight into the perspectives of a particular group through a collection of experiences and perception (Benner, 1996). In this exploratory case study, the complexities and variables explored existed within the realm of education of students in health science professional programs of study and preparedness to enter the workforce upon completion of that program of study. Collected data

was recorded, interpreted, and evaluated to determine validity, contradiction, or conflicts (Yin, 2014). Case study researchers are like detectives; they rely on inferences based on convergent evidence from previously acquired knowledge to solve the mystery (Yin, 2014). Therefore, the data collected throughout this case study was analyzed concurrently with the use of coding software, Dedoose® to ensure congruence to the efficacy of the study itself. The findings were aligned to support or negate the researcher's theorization that curricular design does impact the preparation of allied health and nursing students to enter the workforce as active members of the interprofessional team, particularly in areas of decision-making, critical thinking, leadership, and teamwork capabilities.

Research Population

An exploratory case study also allows the researcher to explore areas to support or deconstruct a theorized phenomenon (Baxter & Jack, 2008; Yin, 2003). This case study examined experiences and perceptions from the perspectives of educators, students, and employers of health science professional programs of study and those that employ healthcare professionals. The goal and purpose were to identify congruence between curriculum design and employability. The conversational, semi-structured interviews were with educators, students, and employers who prepare, experience and employ allied health and nursing professionals in a Midwestern urban setting (college and hospital/community healthcare system). The sources chosen for data collection were specific to the perspectives of educator, student, and employer within the allied health and nursing field of study and profession.

The goal of the researcher was to secure as many potential participants as possible for the semi-structured interviews. The ideal sample size was determined to be between 10 to 20 participants, equally divided among the specifically identified group (educator, student, and

employer). This range was determined based on the understanding that qualitative research studies are reflective of the quality of participants interviewed (Ritche et al., 2003). The goal was to reach a saturation point, a litmus for determining solvency for collected data; if 12 participants achieve enough data, the interviews can end whereas if further data was required to reach saturation adequately, continued interviews will be required (Ritchie et al., 2003). Saturation was achieved when enough information to replicate the study was attained and when further coding was no longer feasible or was not producing new information (Fusch & Ness, 2015). The saturation point reached for this study was met with 16 research participants.

Sampling

Purposive sampling is a manner in which instances, or samples, are selected for the study; it is a deliberate selection process in which specific samples are chosen to yield the most significant outcome (Yin, 2016). The outcome desired is “relevant and plentiful data” (Yin, 2016, p. 93) providing a wide range of perspectives and information on the study (Kuzel, 1992). In order to ensure maximum variation methodically, each variant relies on a different purpose for selecting the sample (Kuzel, 1992; Yin, 2016).

Educators. The first group of identified participants for this case study was allied health and nursing educators. The educators were sought and selected from a private health science college within the Midwest. Additionally, educators chosen were from nursing and allied health programs of study, which prepare students in the fields of Emergency Medical Services, Polysomnographic Technology, Health Care Administration, Community Health, and Nursing. The educators were a combination of full-time faculty and adjunct faculty, as well as administrative directors, as long as they were involved in the curriculum development, design

and/or teaching process of students in these areas. The educators selected were from programs that exhibit higher volumes of students within the selected Midwestern College.

Students. The student population for this study was graduates from within the same Midwestern College, from the programs of study that the educators were examined. The students were employed within the field of study from which they graduated or completed, at either the college-affiliated health system or community health organization. The students graduated or completed their program of study no more than two years before 2018. The rationale for selecting students in this time bracket was to improve reliability. Choosing students who had completed their program of study within two years of the interview provided the ability to reflect on events that are recent to both their educational experience and their role as new professionals entering the workforce.

Employers. The employer participants selected for this case study were hiring agents from within the college affiliated health system and community health organization that employ the graduates from the field of study (nursing and allied health) identified within this case study. The hiring agents within the affiliated health system or community health organization were human resource representatives or departmental level supervisors with hiring capability; these individuals have access to knowledge of employee readiness and skill capabilities. The employers knew a breadth of employees, whether they were graduates of the affiliated college or not; thus, the group will provide information regarding the overarching theme of employability factors within these professional areas.

The selection of educators, students, and employers were recruited through email invitation. The researcher made a formal letter outlining the request to the intended participants (educators, students, and employers) and detailed the nature and intent of the research study. In

order to solicit participation, the researcher sent a survey via email (Qualtrics Survey Software, 2017) to faculty, students, and affiliated employers for the identified allied health programs (polysomnographic technology, community health, emergency medical technology, healthcare administration, radiologic technology, and nursing). Within the survey, participants were asked to respond affirmatively or reject the request for participation as shown in Appendix A. Email addresses for potential candidates, obtained through the outlets of the college registrar, offices of clinical affiliation and human resources within the healthcare and community health organization settings provided the pool for which recruitment occurred. Utilized were emails in which the students have provided approval for release from the college community. Positive replies to the email survey identified the voluntary participants. Letters outlining the purpose of the study, along with the request for participation via interview, were then sent to target individuals within the population sought for this case study (educators, students, and employers). Provided to participants was the full disclosure of the intent and desire for participation in the research process. Also included were the confidentiality statements and objectives for individuals within the college and healthcare organizations that chose to participate. All identifying information was removed (de-identified) to protect the anonymity of the participants. Table 3 provides a reference listing of participants by group and acronym.

Table 3

Participant Designation

Educator	Student	Employer
S. January	F. A. January	M. September
M. February	T. May	S. C. March
T. March	W. November	T. October
W. April		T. December
S. July		W. May
A. September		F. September
F. June		

Interviews

The semi-structured interviews consisted of open-ended questions focused on understanding the central phenomenon in the study (Yin, 2016). The researcher and participants arranged a time for the meeting(s) at the convenience of the participant and at a neutral location within one of three locations: the affiliated hospital, community health organization, or college identified earlier within the study. The selection of setting for the interview was essential to provide balance and not create an imposition of power between researcher and research participant (Elwood & Martin, 1999). If a phone interview was more convenient for the participant, the researcher secured a time and made the call at an agreed upon time that was convenient to the participant. The interviews lasted no more than 60 minutes and were recorded, including participant's consent, for later transcription and analysis. Validation strategies, such as triangulation, will occur throughout the analysis process to corroborate evidence of research participants against other sources to better understand a theme or perspective (Saldaña, 2011).

Member checking, an additional validation technique, was also beneficial, allowing the researcher an opportunity to re-address respondents on areas that needed clarification while assessing the adequacy of preliminary findings and confirming aspects of research (Cohen & Crabtree, 2006). Further, this analysis and validation identified codes or themes across different sources, creating triangulation or validity to the findings (Saldaña, 2011).

Seven stages of a qualitative interview were followed for this research study (Kvale & Brinkmann, 2009), that engage the researcher in logical sequences from formatting the inquiry, the design, the process, or interviewing, to transcription, analyzing, verifying, validating, generalizing, and reporting the study (Saldaña, 2011). The interview questions were designed to engage the individual participants (educator, student, or employer) similarly to speak and describe elements that impacted the overall outcome of the student education, in turn preparing them for professional life as seen in Appendix B.

Data Analysis

To determine the readiness of core competency and soft skills (Godin, 2017), a detailed analysis of data must occur. Through comparison and contrast, this study examined both educational expectations and employment expectations with an emphasis on educational models and curriculum plans for these programs of study. Based on the data retrieved, a five-phase cycle of analysis was completed: compiling, disassembling, reassembling, interpreting, and concluding (Yin, 2016). This analysis created a landscape for analysis of information retrieved during the interviews with educators, students, and employers. All the information was de-identified to protect the individuals and organizations participating in the interview process. Pseudonyms provided for those individuals and organizations named within the written analysis as a secondary layer of protection for research participants.

The formal analysis began with the compiling and sorting of the data amassed from the fieldwork (interviews) (Yin, 2016). Disassembling and reassembling occurred in the second phase of analysis where the compiled data was broken down into smaller fragments and reorganized based on grouping and sequences (Yin, 2016). Interpretation of the data required the researcher to create the narrative of the qualitative case study, its basis and core study analysis (Yin, 2016). The final portion of analysis brought an interpretation of the data through concluding the entire study construction in the summarization (Yin, 2016).

In order to best analyze the data retrieved, Dedoose® software was utilized to assist in the coding and identification of parallels, themes, knowledge, and data related to this case study. Dedoose® is a registered and copyrighted software system that is part of SocioCultural Research Consultants, LLC. Coding involved aggregating the data retrieved into smaller categories of information, making connections among the data, identifying variables, and providing a label or code to those databases (Saldaña, 2011). Concept coding, more specifically axial coding, was the primary method of analysis for this research study. Concept coding is an analytic coding that assigns levels of meaning to data, suggesting meaning broader than a single item or action (Saldaña, 2016). This type of coding looks at a big picture (concept) beyond the “tangible and apparent,” (Saldaña, 2016, p. 119), which aligned most closely to this qualitative research study.

Coding represents information researchers expect to find before the study, surprising information the researcher found but did not expect, or conceptually interesting or unusual information to the researcher (Saldaña, 2011). Identifying themes within the data was the purpose of the coding, thus creating patterns and sequences among the data (Gibbs, 2007). In order to move from description to analysis when coding the interview commentary, line-by-line and constant comparison was utilized to develop resounding themes in content (Gibbs, 2007).

The organization of patterns creates a visual understanding of the chronology, the themes, and the variables among the data collected. Further, the application of analysis looks for connections (triangulation) (Yin, 2016) between and among participants to examine how teaching and curriculum methodology influences and prepares students within health professional programs of study to become successful employees, with solid skillsets of critical thinking, decision-making, communication, teamwork, and leadership capabilities.

Limitations

Qualitative research encompasses the collection, analysis, and interpretation of data, much of which is not easily translated into a numerical value (Anderson, 2010). Validation of qualitative research is often compared to its quantitative research equivalents, though it can be very different (Saldaña, 2013). While parallels exist, it is often in the areas of experimental design and survey research (LeCompte & Goetz, 1982).

Because of the style and mode by which qualitative research is measured, through perceptions, feelings, and thoughts, it can be considered less valid, rigorous, or comprehensive than a quantitative approach that begins the presence of limitations within the study. Maxwell (2013) outlined eight specific approaches to reducing the risk for threats in the validation and credibility: intensive involvement (a long-term commitment), rich data (full field observations), respondent validation (feedback), intervention (utilizing visualization), rival test (opposite), triangulation (converging data), number usage, and comparison of results across settings. This study utilized intensive involvement, rich data, respondent validation, and triangulation as methods to reduce the risk for validation threats. Further, threats to credibility exist within qualitative research and must be strategically addressed and combated throughout the life of the

study (Yin, 2016). For this research study, respondent validation was utilized to reduce the risk of threats in the validation of data.

Validation and Reliability

In this exploratory case study, it was necessary to rigorously apply elements of these strategies to the overall research process. Through analysis, validation of truthfulness was sought by way of pattern matching (Yin, 2016) the recorded and transcribed data from interviews. Examining a phenomenon as it occurred in a specific group or among a specific population was the purpose of this qualitative case study, for which validation and reliability of conclusions were gathered (Brooks, 2017; Yin, 2016). The validity of data acquired was examined based on the extent and consistency of the repeatedly performed findings, which is different for quantitative studies versus qualitative (Brooks, 2017; Yin, 2016). In a qualitative case study, the onus for rigor and repetition is replaced with the commitment by the researcher to be as thorough and comprehensive in throughout the interview process to protect the overall validity of the outcome.

The objective of this study was to gain knowledge on the subject from the perspective of three different groups: educators, students, and employers. Each of these participants had an opportunity to provide input from their perspectives relative to curriculum, educational preparation, and employment readiness. The expectation was that truthfulness and unbiased perspectives would be reflected in the answers of the participants; however, there was no guarantee. Healthcare professionals, however, are rated among the most trustworthy, honest, and ethical of professions (Gallup, 2016), lending credence to the assumption that participants presented honest perspectives during interviews.

Data saturation or failure to reach such a state was also a possible limitation with qualitative case studies (Fusch & Ness, 2015). The number of participants interviewed, and the amount of data retrieved during the interviews, as well as the variability of that data, can become a limitation, effecting overall validity, as well (Yin, 2016). The interview process could also act as a limitation and barrier (Yin, 2015). Therefore, the researcher should be fluent in guided conversation (Rubin & Rubin, 1995) to aid in ensuring the focus of the interviews remain on topic and thus help facilitate a quality conversation (Yin, 2015).

Pilot Study

Before initiating the formal research process, a pilot study was conducted to further create a strategy for reliability and validation of the interview process. This pilot study was conducted among a peer group of non-study research participants and engaged four individuals in trial interviews. This process allowed for refinement of the data collection process for the study (Yin, 2009). The outcome of the pilot testing provided security that the format for which conducted research (interview design) provided both thoroughness and rigor. Information gained from this pilot study provided insight into the strengths and limitations of the interview questions, which was the format that the researcher gained knowledge to support the study.

With the understanding of the specificity and detail that surrounds a case study on behalf of both the researcher and participants in the study, a plan was formalized to gain the information needed for construction before initiation of the field study (Yin, 2016). The selection process of interview participants for this case study, as described, was purposeful based on the criterion established. The formation of a pilot study, with volunteer clinical healthcare professionals, helped test and refine the aspects of the study's design, fieldwork procedures, data collection, and analysis and also validated the interview questions being used (Yin, 2016).

Expected Findings

The purpose of this exploratory case study was to expand both knowledge and understanding of how curriculum drives interprofessional education and preparation for those students who enter the healthcare workforce, as allied health and nursing professionals. In doing so, the approach was to interview educators, students, and employers within these areas of healthcare preparation and employment. Interviewing individuals from these three groups provided understanding on the impact curricular preparation has had on the student gaining highly sought-after skills by employers: critical thinking, decision-making, communication, team work, and leadership capabilities.

Curricular designs create foundations for teaching and learning that equate to life beyond the classroom, particularly in healthcare professions (North & Shiver, 2016). The focus of this study was to determine if a foundation for teaching and learning (curricula and model) positively impacted workforce readiness for specific allied health and nursing professionals.

The researcher sought individual participation in semi-structured, open ended, in depth interviews from participants from three different groups: educators, students, and employers. The researcher used the same self-composed questions for all participants that are referenced in Appendix D. The perspective of the participants created the basis of understanding of how curricular design influences outcomes of competency and capability in areas such as critical thinking, problem-solving, teamwork, advocacy and continuous learning.

Ethical Issues

Researching for medical or educational purposes requires adherence to investigative protocols. The Common Rule or the federal human participants' regulations (45CFR46), defines research practices as systematically designed research, investigation, testing, and evaluation, for

the development or contribution to generalizable knowledge (United States Department of Health and Human Services, 2001, §46.102). The protocols outlined for guidance were within the Institutional Review Board (IRB) (Pozgar, 2016). The charge of the IRB was to assess prospective research to ensure they are in line with the three ethical principles of the Belmont Report (1979). The three principles outlined in the Belmont Report (1979) were respect for persons, beneficence, and justice. These were realized through IRB assessment and determination of risk versus benefit, honesty and clarity through informed consent, and avoidance of exploitation of the population studied (McGough, 2001).

The IRB is a committee designed to review, approve, and monitor research proposals to ensure the protection of subject rights (Pozgar, 2016). On approval by the IRB, the process of engaging research participants began. All participants were provided an informed consent that described the nature of the study, the request for voluntary participation, the format of how data was collected, analyzed, and disseminated, along with confidentiality practices. This information was prefaced by the introduction of the researcher and her objective to complete this study as part of her doctoral program of study at Concordia University–Portland. Raw material with identifiable characteristics was codified through the research process to ensure confidentiality. All recordings were destroyed immediately upon transcription. All transcripts of study documents will be stored in a locked and secure location for three years from the completion of the study; after which they will be destroyed.

Summary

A qualitative case study allows the researcher to study complexities rigorously, exploring a phenomenon from a variety of different data sources, to construct or deconstruct a theory (Baxter & Jack, 2008). A popular research method, the case study creates a foundation for

which analysis of a problem, process or program can be studied to gather more in-depth understanding and apply it to real-life situations (Ponelis, 2015). The paradigm of this study examined the preparedness and employability of allied health and nursing students through the perspectives of educators, students, and employers. Preparedness within this study equated to the desired qualities sought by employers: critical thinking, decision-making, teamwork, and leadership skills. In addition to these skills, there was a focus on the long-term desire to continue learning and growing within the profession that students were prepared. Case studies explore through multiple lenses, rather than a single lens, to best approach research from a “constructivist paradigm,” (Baxter & Jack, 2008, p. 545). This case study expected to thoroughly examine theory through the assessment and observation of those most intimately involved in the process of education and workforce employment: educator, student, and employer. The explored theory was that of a specific curriculum style that lends its way to preparing students within the health science professional program of study for future employability success, more specifically, that a concept-based curriculum best prepared students for the skills most often sought after by employers within the healthcare setting: critical thinking, decision-making, communication, teamwork, and leadership skills (North & Shiver, 2016).

Chapter 4: Data Analysis and Results

The purpose of this qualitative case study was to understand readiness, aptitude, and competency of nursing and allied health students in the areas of critical thinking, decision-making, teamwork, communication, and leadership skills in the workplace setting. This qualitative case study explored the required data to assess readiness from three groups: educators, students, and employers of nursing and allied health professionals. More specifically, this study poised to create a better understanding of the connection between specific curricular models and student outcomes as it relates to successful employment in the new health science graduate's chosen area of study.

Educating individuals to enter the healthcare workforce is a structured preparatory process. Gaining competency in skillsets is paramount in curricular development. Preparation is noted to occur in different settings throughout the course studies for healthcare professionals, the primary two being the classroom and clinical setting. Clinical experiences are structured processes for educating and learning. These experiences are paralleled with the corresponding classroom learning, bringing affirmation and connectivity to concepts taught (Peters et al., 2017).

Specifically, this study looked at how that preparation created fluency in areas beyond skill competence, with a soft skill focus. Additionally, the skills sought after are both clinical competence as well as soft skill development in areas of communication, decision-making, critical thinking, professionalism, teamwork, and lifelong learning capabilities, that are the skills identified as vital to the overall development of the healthcare professional who is responsible for delivering quality healthcare services (Institute of Medicine, 2003). Further, examination of curricular pathways and best practices for educators illuminated the way in which students are

prepared in the health science professional fields of study, how this impacted their successes outside the classroom, and defined their readiness as professionals to enter the workplace.

Preparation for Study

Institutional Review Board (IRB) approval from both Concordia University and the institution where research was conducted were secured before the initiation of this study. Criteria for the study aligned with the purpose of the study. As an example, invited to become participants were educators involved in the teaching, curriculum development, and administration of the selected programs. The students were graduates of the selected programs, completed no more than two years before the study began, and were working in the field of their education. Human resource professionals and direct supervisors made up the employer group of individuals for the study. More specifically, the individuals from the employer group were directly engaged in the hiring or supervision of professionals from the nursing and allied health programs of concentration for the study. From the allied health program perspective, emergency medical technology, polysomnographic technology, community health, and healthcare administration made up the representation of the educator, student, and employer participants. Affiliation of employment by the primary researcher at both the healthcare system and college provided an optimal setting for the study. Personal connection to these locations as an employee allowed access to the population for this study.

A statement of intent was drafted and sent to the academic institution and healthcare organization governing bodies, to explain the purpose of the study and clarify the position of primary researcher. The statement of intent expressed that the information gained in the study, through research participant interview and literature research, would provide a valuation to the importance of concept-based curricular model integration. An examination would prove that the

concept-based curriculum would serve as a method for better preparation of the nursing and allied health student to gain and sustain functional employability, valuable to both the graduate and the employer.

Upon approval of the IRB and governing body entities within the institution and healthcare organizations, the process of soliciting engagement and participation began. The solicitation occurred by way of email survey requesting participation. The desired populations targeted were individuals within the three specific groups identified (educators, students, and employers). A minimum of 12 participants was the desire for this study, but additional participants were required to reach adequate saturation levels. As a guide, Guest, Bunce, and Johnson (2006), suggested that 12 participants are the typical number to reach saturation in qualitative case studies, but the typical range for homogeneous participants ranges between 15 to 20 participants. The primary researcher relationship with the participants was solely as a faculty member and employee with the college and healthcare organization from which research participants were attained. The relationship between the primary researcher and the research participants fell into two categories: professional colleague (having worked together) or co-worker (from the same organization but not having worked together professionally).

The Study Focus

The focus of this exploratory qualitative case study was twofold: a) to determine the perceived readiness of the student to enter the healthcare setting from both the student and the educator perspectives and b) to determine the strengths and limitations of new graduates entering the healthcare workforce from the employer perspective. Further, this exploratory case study gathered information through individual interviews to answer the following questions:

RQ₁: How does curriculum design within a health science professional program of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy, and continuous learning?

RQ₂: How can a specific curricular design best align with and reinforce characteristics most sought within the workforce by both the employer and the interprofessional team members that a new graduate will be joining?

Individual interviews were conducted with educators, students, and healthcare employers in order to answer these questions. An interconnection was present among participants through their respective roles as educators, students, and employers of nursing and allied health professionals. Five specific and identical questions were asked of each participant to gain the knowledge needed to answer the research questions posed. These five questions were:

1. Describe, based on your experience(s), the most notable or visible strengths that programs of study with which you are affiliated (teach, learn, hire) provide?
2. In your opinion, do you believe that there are variables/limitations within programs of study which you have an affiliation (as educator, student, or employer) which may equate to the overall readiness of students to enter the workforce?
3. Based on your knowledge as an educator, student, or employer how well do you feel new healthcare providers are prepared to enter the workforce from the perspective of critical thinking skills, decision-making capability, teamwork capacity, communication fluency, leadership capability, and desire for lifelong learning?
4. Based on your knowledge of what is needed in preparing healthcare providers to work in today's healthcare setting, what would you wish to see added to the

curriculum, clinical orientation, or professional development to improve these outcomes for educators, students, and employers?

5. Please describe your background, your current role, and/or position as it relates to working in a healthcare setting; describe your perspective on curriculum or educational models to better prepare students entering the workforce.

These questions were identical, yet framed for the individual, whether they were an educator, student, or employer. Digital recording and handwritten notes acted as the manner for collection of interview content. The digital recordings were later transcribed, analyzed, and coded. The transcription process resulted in minutes which represented the individual interviews. Minutes were labeled and uploaded into the analysis software for coding. The analysis process began during the transcription and integration of handwritten notes. Throughout the process of analysis, themes and sub-themes became evident. As similarities began to present themselves during the analysis of data, answers to the research questions posed at the beginning of the study also formulated.

This chapter provides an overview of the exploratory qualitative case study which has been described. Further discussed is a detailed explanation of the study sample, setting, research methodology, and analysis. Lastly, the conclusion presents a summary of the research findings along with the presentations of the emerging themes.

Description of the Sample

This exploratory case study focused on gathering data from specific groups of individuals in both the higher education and healthcare organizational settings. The participants were individuals who served as educators, students, and employers of nursing and allied health professionals. A single source, the identified Midwestern private college of health sciences,

provided the educator and student participants for this study. Within the chosen college are several divisions that represent separate majors of study. Educators within these majors hold minimally a degree higher than that which the student they teach is looking to achieve. Each major is health science profession specific. In most cases, the degree level for the educator must be a master level of preparation or above. This institution of higher education holds accreditation through the Higher Learning Commission (HLC) which is one of six regional accreditors in the United States (HLC, 2018). HLC accredits post-secondary educational institutions that grant degrees. (HLC, 2018). HLC is the governing body for the North Central region of the United States and is responsible for the accreditation in 19 states within that region (HLC, 2018).

The employer participants were from a variety of healthcare operational settings in the same Midwestern location. Each of the healthcare operational settings actively employed students who were graduates of the academic institution included in this study. The healthcare operational settings held recognized accreditation through a variety of quality evaluating entities, such as the Joint Commission (JC) and the National Committee on Quality Assurance (NCQA). The focus of the accreditation within the healthcare setting is to promote the highest level of safety, quality, and patient satisfaction based on industry standards (JC, 2018).

Potential candidates received an initial email survey that requested interest to participate in the study. If candidates agreed to participate, a full explanation of the study purpose and procedures, disclosure, informed consent, and the scheduling of the interview occurred. Candidates that chose not to participate received an email thanking them for their time and consideration. An initial 100 emails were sent to potential participants for this study, of which a total of 16 individuals agreed to engage in the interview process. All 16 of these participants

completed their portion of the study, so no attrition was recorded. The individual participants who engaged in the qualitative case study varied demographically by age, sex, experience in field or length of education. To follow are charts (figures 1, 2, 3, and 4) which represent the demographics of the study's participants.

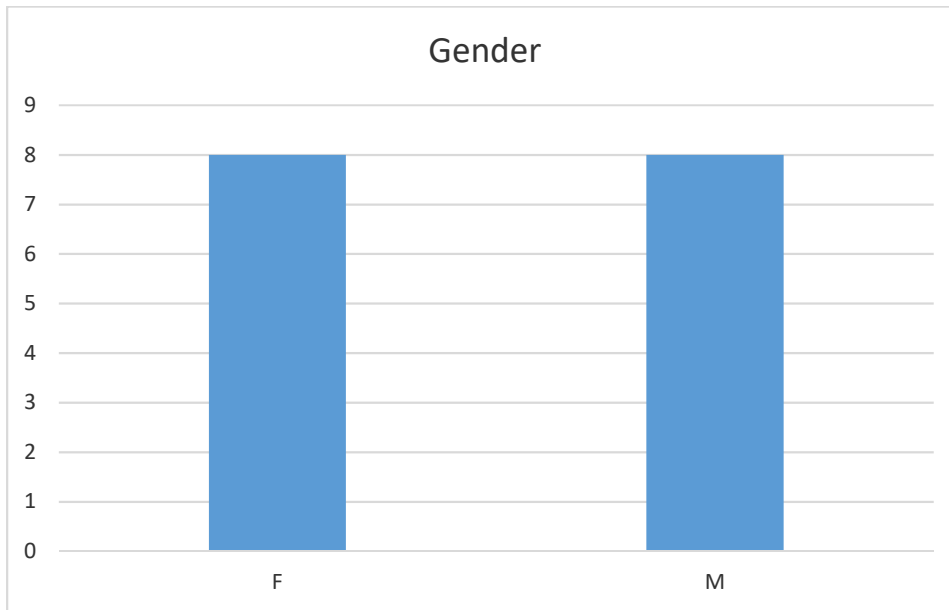


Figure 1. Gender of study participants.

The graph above displays the number of the study participants by gender. The index on the left side of the chart represents the number of participants in the study. The index on the bottom of the chart represents the gender as identified per the candidates: F for female and M for male. This figure displays the equality of participants in this study based on gender representation.

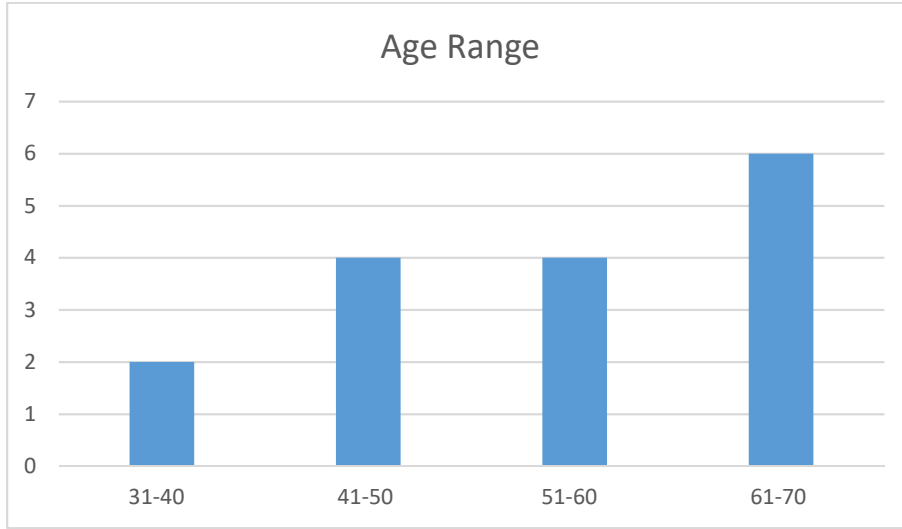


Figure 2. Participant Age Range.

The above graphic depicts the age range of the research participants for this study. The index on the left side of the graph represents the number of participants that fell into an age range depicted on the bottom of the graph. The average age of the educators in this study fell into the 51-60 range. Students in this study had an average age the between 31-40 range. Lastly, the average employer age fell in the 51-60 range. This graph represents the specific age ranges per educator, student, or employer.



Figure 3. Study participants years of experience.

The years of experience for each representation is provided in this graphic. Those with the fewest years of experience were representative of the student population while the highest level of experience represented the educator and employer population. The individual students who participated in the study averaged between one and three years in the field from which their education was derived (nursing or allied health). The study proposed to speak to students who were no more than two years post-graduation from their formalized studies in allied health or nursing. The students in this study were currently engaged in education to advance their degree in the chosen field of study (nursing or allied health) and were working in their current profession.

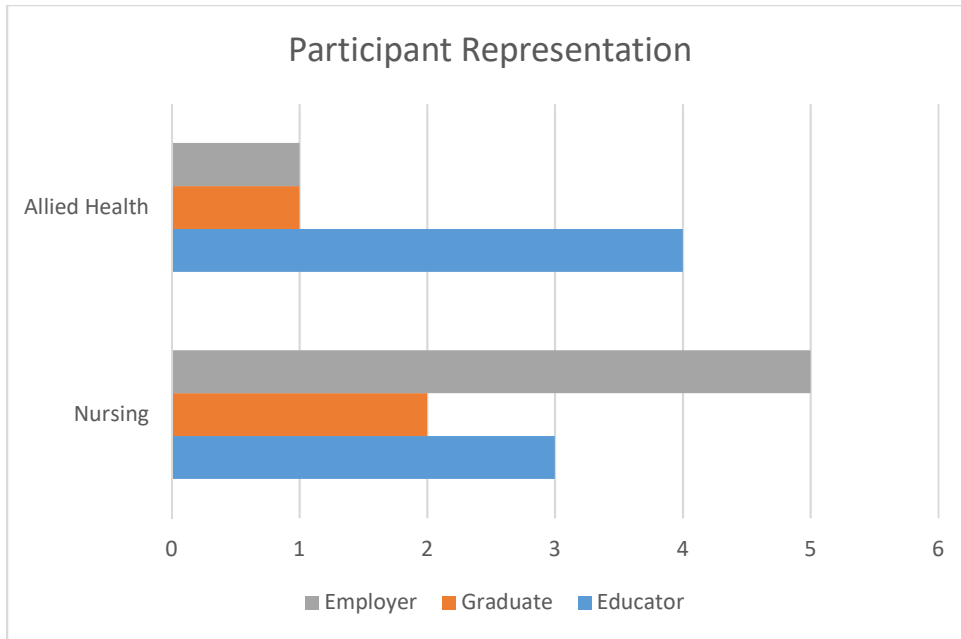


Figure 4. Participant representation based on field of study.

This bar graph provides a visual representation of all participants engaged in this qualitative research study. Educator, student, and employer are represented on the left side of the table while the program of study with which a participant is affiliated at the time of this study is represented along the top of the table. The designated "x" represents a presence from a research participant to the program of study. There is more designation represented than participants in order to represent crossover (employers/educators that hire/teach in more than one category).

Eight females and eight males evenly split the content pool. To protect the identity of the participants, the decision was made to not label with specificity those candidates who were educators, students, or employers. The highest level of degree for the educator and employer participants was a doctoral level degree. The student participants were primarily female and were all in pursuit of higher education at the time of the study. Employers had held their positions for more than five years, but less than 15 years, and each was actively engaged in the hiring process for their departments/organizations.

The educator participants represented a professorial, clinical educator, lecturer, and advisory role in the nursing and allied health programs of study. Further, the educators represented in the most significant proportion were for the nursing programs of study (associate and baccalaureate). The student participants represented both nursing and allied health programs of study; of the participants, each was working in his or her field of study and was continuing his or her education to an advanced degree level. Lastly, the employers represented in the study were actively involved in the hiring of individuals who were graduates of nursing, community health, and healthcare administration programs of study.

Research Methodology and Analysis

The gathering of data to answer the questions posed in research, relative to the topic of investigation, is the methodology by which an exploratory case study is based (Yin, 2014). Further, the parameters set forth by case study research allowed the researcher to engage in the assessment of real-world perspectives (Yin, 2016). These perspectives represent the knowledge and perceptions of the study's participants relative to readiness to enter into their professional field upon completion of their educational program of study. Focal questions drove the research study itself (Yin, 2016). In this study, individual, semi-structured interviews with participants were held. The three groups included those who were involved in the allied health or nursing profession: educators, students, and employers.

The participants of this study agreed to spend approximately 60 minutes engaged in either a face-to-face or telephone interview. Regardless of medium, each interview followed a semi-structured format that asked five specific questions. Four of the interviews were face-to-face, one via video conference, at a time and place of the participant's choosing. The completion of the remaining twelve interviews occurred via telephone at a time of the participant's choosing.

The interviews were conversational and flowed around the specific questions asked, but also included follow-up, probing questions to clarify further perspectives of the participant regarding their experiences and understanding of the discussed topic. While participants were invited to bring an artifact to represent their understanding of experience, none of the participants chose to do so, instead allowing their memory/current experience to stand alone.

In drawing from both the conceptual change theory (Davis, 2001) and the continuum of learning theory (Bradshaw & Hultquist, 2017), this study created both an opportunity to glean a better understanding of teaching methods and lesson evolution in varying circumstances. The way in which educators teach and how students learn forms the basis for how new professionals respond in the clinical settings, thus utilizing these theories has been invaluable in helping to create provoking and thoughtful questions for the research study.

The concept of preparatory learning and readiness to enter into the healthcare profession provided the basis for this exploratory case study, allowing the researcher an opportunity to study complexities within a context, such as a curriculum and learning outcomes within nursing and allied health programs of study (Baxter & Jack, 2008). In this study, the contextual assessment was whether curriculum and educational models within these programs of study (nursing and allied health) were sufficient to prepare individuals for the workforce. This study, as with most case studies, sought to examine a contemporary phenomenon in a real-world context, where connectivity and boundaries are not clearly evident (Yin, 2014). The goal of this study was to utilize participant perspectives as a base for knowledge relative to gained experience and readiness to enter a professional role.

Coding

Upon completion of the interviews, the process of coding began. Provided during the analysis process was a mechanism for protecting the virtue of the study, created to protect the confidentiality of each research participant, as well as the research location(s). Pseudonyms were assigned to participants to ensure this level of confidentiality. The pseudonyms were created using a process in which the identification of each name was by a first initial. The assignment of first initial corresponded to a day of the week. Assignment of last names was given a month of the year. There were more participants than the days of the week and months of the year; therefore, middle initials followed once a repeat of the day of the week occurred.

Following the application of pseudonyms, the aggregation of data into smaller categories began. This movement of data into smaller categories where similarities exist is the process known as coding (Saldaña, 2011). This study utilized concept coding, an analytic approach of assignment, that yielded broader meaning and bigger picture concepts that were not necessarily tangible or apparent (Saldaña, 2016). Concept coding reflects on the possible links, connections, and overlaps among the patterns, themes, and assertions of the data, as well as the solid connections to weave the study together (Saldaña, 2013). Concept coding, along with essential word identification, acts as a mechanism for piecing together parts of the study to clarify meaning and understanding of the data collected (Saldaña, 2013). Concept coding closely aligned with the objective of this qualitative research study.

While the overall objective was to retrieve the themes from the data gathered, connections and similarities among the concepts were made that formulated both themes and sub-themes. The coding process was evolutionary; upon the development of connections and similarities, created were categories of information that ultimately led to the finalization of labels

or codes (Saldaña, 2011). Concept coding, the primary method of analysis for this study, produced information that was expected and conceptually interesting but did not represent surprising information that was unexpected (Saldaña, 2011). As the data was analyzed, levels of meaning, which were broader than a single item or action, were applied (Saldaña, 2016). The analyzed data which resulted in codes, themes, and sub-themes presented connection or triangulation (Yin, 2016) between and among participants related to curricular influence on employment readiness in health professional programs of study.

Data collected was transcribed and entered into Dedoose®, a software designed for use in analysis and coding of qualitative research materials. This software allowed for an organization of data into identifiable codes and themes. The process of coding the data occurred in three stages over three separate rounds of analysis. Each phase of coding further aided in the organization of analyzed data into common or similar subsets. The three stages of coding were categorization into codes, clarification, and interpretation (Stuckey, 2015). The three rounds of coding produced the overarching codes, followed by the themes and sub-themes. Coding provided a representation of the relative material collected, moving it from generalized data into conceptual categories (Charmaz, 2014; Emerson, Fretz, & Shaw, 2011).

Table 5 provides a representation of patterns and similarities of extrapolated concepts throughout the analysis of data among all participants. The table represents the research participants (educator, student, and employer), as well as the similarities that formulated during the first round of coding among all participants. The codes in this table represent the aggregated overarching commonalities that existed among the participant pool from individual interviews. This table represents the research participants who participated in the study and the applicable codes that commonly appeared in the interview data. Also, not all codes were reflective of each

group of research participants. Thus, a breakdown, as seen in Table 2, links research participants by group (educator, student, and employer) and the codes that commonly occurred, as found in the analysis of the findings they presented during the interview process. The coding, in this case, aided in the organization of the data presented during the interview process, as well.

Table 4

Coding

Participants	Codes
Educator Student	Education settings; Classroom, Clinical Team work Active learning Evidence-based
Educator Student Employer	Experience Preparation Time Communication Employment Competency Professionalism

Upon identification of initial codes, a reassembling (Yin, 2016), took place. This phase of reassembling (Yin, 2016), allowed for the identification of themes between and among the answers of each participant. It also allowed an opportunity to interpret the data for completeness, fairness, empirical accuracy, value, and credibility (Yin, 2016). The analysis process presented codes aligned with the research questions that are the foundation for this study. Thus, it created an understanding of data "richness" (Yin, 2016, p.221) and allowed the researcher to assuredly move toward mapping the themes and sub-themes to best align efforts toward conclusion. The following chart exhibits the themes and sub-themes identified through reassembly of data in the second round of coding.

Table 5

Themes and Sub-Themes

Themes	Sub-Themes
Expectations	<ul style="list-style-type: none"> Classroom expectations Clinical expectations Ready to work new employees Real world learning students Strong educators
Pedagogical alignment	<ul style="list-style-type: none"> Competency and skills (hands on) Concept knowledge-proficiency Licensure examination readiness and passage Simulation/clinical exposure Group learning opportunities
Outcomes, Objectives, and Goals	<ul style="list-style-type: none"> Confident application of skills Engaged environment-learning/work Employment readiness Academic readiness Desire to continue learning Growth

Discussion of Emergent Themes

Theme 1: Expectations

The first theme identified among the codified data was that which surrounded expectations of educators, students, and employers respectively. The theme of expectation was directly related to the curriculum from the vantage point of the interviewed individuals and the group that they represented (educator, student, or employer). The educators had identified expectations of students and the students of educators. Employers, in turn, had similar expectations that related to the student (graduate) readiness to enter the field, not merely a responsibility of the student, but also the education that they received.

Subtheme 1: clinical and classroom expectations. Expectations relative to the curriculum were identified early in the analysis process. Similarities existed between each response that addressed the topic of educational expectations in both the classroom and clinical setting. It was clear that while the individuals represented different groups, the overall expectations were aligned. M. September, an employer, stated that "there appears to be a disconnection between the classroom and the work setting, but it is unclear if this is relative to a curriculum deficit." Similarly, educator, S. January stated that much of the learning in the classroom is rote memorization, skill development, and repetition. S. January (educator) went on to reveal that this type of learning does not necessarily promote "independent critical thought." This participant questioned "how much critical thinking can you teach? What is innate and what can be taught?" T. May, a recent graduate stated that students acquire about 70% of their proficiency in the academic setting and 30% through experience in the workforce. They went on to state that increasing opportunities for students to achieve specific skills is vital, but time is limited, and the curriculum is already full.

T. May's (graduate) commentary aligns with evidence that nursing and allied health programs of study are often bound to very specific and outlined curricular expectations. These expectations are dictated, in part, by licensing boards and national accrediting committees (American Association of Colleges of Nursing [AACN], 2018; Board of Polysomnographic Technologists [BPRT], 2018; Michigan Community Health Worker Alliance [MiCHWA], 2018). This is a fact acknowledged by each educator interviewed for this study.

Subtheme 2: ready to work and real-world learning. Employers, like students, demonstrate a need for new graduates to be both ready and confident when they enter the workforce. T. October, an employer, made note that new graduate readiness to work on an interdisciplinary team is essential. October went on to explain that one of the many purposes of new healthcare provider residency programs (particularly nursing) is the growth and development of the new graduate in organizational knowledge and interdisciplinary team functions. Further, October stated that "learning to work with multiple moving parts by multiple groups is often overwhelming even for seasoned professionals, let alone new graduates entering the field." Residency programs reflect the complexity of healthcare professions, not the inefficiency of the schools that graduate the students entering the profession (Bleich, 2012). Knowledge for proficiency, gained in the academic setting, but the opportunity for solidification occurred in a variety of settings (i.e., hospital residency programs) (Bleich, 2012).

Additionally, educator, F. June, stated that balancing time is necessary inside and outside the classroom in order to promote success for students in their professional field of study. June also stated that introducing professionalism through the creation of relationships with potential employers is also a desire of educators in the final phases of a student's educational program. F. June goes on to state that time constraints make this challenging to realize and that this is

something curriculum committees work toward when assessing curricular content and models; "how can we get to where we need to be in order to advance the educational outcomes for the students?" The sentiment was expressed as a desire for student T. May, as well. May reflected on access to experiences that provide a competitive edge once entering the workforce. "Working within an interdisciplinary team is a topic which educators focus on in the classroom," (T. May). May went on to state that clinical experiences (those that occur outside the classroom and in the work environment) are with like disciplines. S. July, educator, also acknowledged that students don't feel like they get enough time, but it isn't clear that more time will increase the expected learning outcome.

The insight gathered during interviews aligns with the premise of the continuum of learning theory that focuses on expanding concepts over time and under different conditions (Bradshaw & Hultquist, 2017). In order to meet necessary expectations, a need for a balance of time is required for both educators and students, and futuristically employers. Critical thinking, decision-making, team work, communication, and leadership skills are embedded components of the curriculum, but based on the responses from the research participants, realizing these expectations may be more than teaching the concepts, but rather experiencing them through different episodic exposure (Watcher, 2016).

Subtheme 3: Strong educators. A final sub-theme identified under expectations and outcomes was that of influential educators, in both curricular concept design. T. March (educator) identified three characteristics that impact educational outcomes both in the classroom and out: instructor knowledge base, life experience, and clinical experience. When probed further, March stated that a strong educator is not just one who has theoretical knowledge but has practiced and experienced life in the role that they are licensed and bring relevance to their

classroom. T. May (student), in a separate interview, identified concerns regarding seasoned and experienced educator availability to students both in the clinical setting and classroom. Faculty member, F. June, related in an interview that in order to prepare students to lead teams, practice professional behavior, and become empowered at the bedside, they must be educated by professionals who are competent in these areas, as well. Not all educators are created equally in the health sciences; many are leaders in their craft but have not experienced teaching that craft to others. Student interviews provide alignment with the foundations of the conceptual change theory (Davis, 2001). Described as a necessary component within the conceptual change theory, educators must be well-developed facilitators, possessing not only the comprehensive knowledge of the topic but comfortable teaching that to others (Davis, 2001). Teaching for conceptual change is neither a simple nor effortless process (Davis, 2001). It also requires learning environments to be creative, supportive, and inquisitive (Davis, 2001).

Theme 2: Pedagogical Alignment

Styles or strategies of learning also referred to as pedagogy, are methods utilized to promote disciplined ways of thinking (Chick et al., 2009). A common theme within the research data for this study related directly to learning styles. Subthemes characterized these further into groups based on the outcome achieved from the pedagogical application.

Subtheme 1: Competencies, concepts, simulations, and groups. Hands-on experiences reflect a more active learning method over lecture and rote memorization. A predominant theme among the participants in this study is learning outcomes that reflect active learning. Hands-on and active learning was a common theme for the student interview participants. The desire to learn in an environment that promotes the application of skills and promotes real integration into a work type setting was described by T. May as valuable. The use of simulation was a subtheme

repeated in the commentary of students and educators. Simulation was identified as a useful way to practice in a safe environment. T. May (student) stated that "increasing objectives for students to achieve" skills of communication, critical thinking, professionalism, and team work is critical (T. May). When probed further, May stated that simulation, labs, and clinical experiences create an opportunity to expand these skills outside the traditional classroom setting and help build confidence. S. January (educator) and M. September (employer), concurred with the thoughts of May when they revealed in their interviews that students have a foundation in the skills of critical thinking, team work capacity, communication, leadership, and lifelong learning but are novice in these areas until they gain time and experience in the professional setting.

Subtheme 2: Licensure requirements and expectations. W. April (student), reflected on the experience and expectation of curriculum. April notes that curriculum is designed by the framework of educational expectations set by licensure boards. April goes on to state that the manner in which the educator gets to the final curriculum outline for educational content is what creates the difference. "Employers also need to have robust education programs in the workplace setting to foster success" (W. April). April goes on to state that students are likely not as prepared to enter the clinical environment (post-graduation) as they or their professors would like. April goes on to note that students do leave their programs of study equipped with the knowledge that allows them to continue learning. Each student and educator participant echoed this sentiment.

The pedagogical design is commonly evaluated to ensure programs of study meet learning outcomes. The regular evaluation of content is particularly true of health science professional programs where licensure examination and accreditation standards much are achieved. S. July (educator) confirmed that a significant focus in the classroom focuses on the

readiness for the licensure examination. July states "passing licensure examination fogs the real work readiness," creating a learning experience that focuses largely on teaching concepts to pass the exams versus how to be successful in the workforce (S. July). Changing the way education is delivered to promote the highest level of education and competency development "involves a transformational process from the traditional conservative model of instruction where the student is the passive recipient of information to a critical model where the student is engaged in the process of developing autonomy and empowerment," (Allen, 2009, para. 1). Doing so requires the examination of pedagogy and the transformation of educators, which promotes the healthcare students to become future healthcare leaders (Allen, 2009). T. October (employer) confirmed these sentiments by stating that it is best to try and extend learning beyond the classroom into the workplace; try to integrate educators into the workforce and the workforce into the classroom.

Theme 3: Outcomes, Objectives, and Goals

Outcomes, objectives, and goals are frequently described in a similar context when it relates to education. Educational outcomes often vary based on core concepts and learning objectives established within individual professional programs of study. Course objectives are intentions that an educator has for his/or her students to attain by the conclusion of the course (DePaul, 2018). Objectives can be course oriented or program oriented but are different from learning outcomes. The anticipation of learning outcomes is not anticipated; rather, they are actual or observed and reflect what a student has learned (DePaul, 2018). Learning outcomes and objectives fall under goals (DePaul, 2018). Hence, the goal of the program includes both specific learning objectives that reflect the desired outcome.

Subtheme 1: Skills and environment. Educators, students, and employers in this study spoke differently about objectives, outcomes, and goals, and with varying levels of importance.

Educators spoke to both learning objectives and outcomes. As an example, S. January (educator) spoke to the improvement of academic outcomes through course learning objectives and creative pedagogy. January also noted the value of student success is measured not just by academic aptitude, but also by confidence in what they have learned.

Educators also reflected on the overarching goal of the programs of study that they represent. Course objectives, educational expectations, and ongoing assessment are all fundamental ways to measure the effectiveness of a course or curriculum within a program of study. Building a course to reflect the gaps in knowledge in the health sciences, whether that be programmatic or industry-specific, requires ongoing assessment for relevance, value, and effectiveness.

Student focus was reflective of goals. As an example, T. May (student) identified importance in preparing the student for the workforce as a primary goal. Further, May indicated that time should be focused on bringing the student into the real world of employment that they will be entering. W. April (student) also reflected on the goal of employment and job satisfaction in the chosen field is a focus. April went on to state that the licensure exam passage is a priority in order to attain employment and that is a primary focus for most students in this educational program of study.

In the interview question, *based on your knowledge as an educator, how well do you feel new healthcare providers are prepared to enter the workforce from the perspective of critical thinking skills, decision-making capability, teamwork capacity, communication fluency, leadership capability, and desire for lifelong learning*, the participant was asked to look toward outcomes versus objectives and goals. In response, S. July (educator) stated that students “are prepared in their ability to be exposed to skillsets of critical thinking, teamwork, communication,

decision-making, leadership.” Further, July stated that the students are of a novice level in preparation upon leaving their programs of study. In order to move from novice to experienced, students require guidance through mentoring that focuses on advancing their foundational knowledge in the workplace. July referenced a need for continued guidance in the workforce, that these skills cannot be mastered in the educational setting alone. F. A. January, (student), stated that a “foundation of knowledge was taught in these areas, but it was in the workplace that it was fully understood” (F.A. January). When asked to expand on this comment, January stated that the workplace was the setting that created a stronger understanding of how to communicate and critically think.

Subtheme 2: Lifelong learning. Mentoring was identified by S. January (faculty) as a way in which educators can assist student to meet their academic and professional goals and reach proficiencies in areas of novice level skill. Networking is an important part of helping students develop a professional awareness. F.A. January (student) stated that in order to feel confident interacting with professionals in the field, it is important to provide opportunities for students to network and communicate with other professionals while still in the education setting. F.A. January (student) answered this question by verbalizing a need for increased networking activities with potential employers to introduce professionalism through relationship creation.

Outcome is a term in where educators, students, and employers have commonality. Students focus on getting through a program and building knowledge in a particular area, their goal being to graduate and work in their chosen profession at the end of the educational experience. Employers focus on gaining competent new employees who are prepared to enter the workforce, able to perform on dynamic teams in a complex industry. Educators have the

ultimate responsibility to get the students prepared to work on these teams, ultimately needing to fill the gaps in knowledge to ready the student for their role in the profession of their studies.

Outcomes of importance for this study were identified as critical thinking, decision-making, teamwork capacity, professionalism, and communication. Educators and employers are in agreement that learning outcomes must be relevant in both industries (educational and employment) for graduates to succeed in a fast-paced and evolutionary industry, much like that of the health science professions (AAC&U, 2016). The 2016 President of the Association of American Colleges and Universities (AAC&U) identified critical thinking, communication, and problem-solving as necessary skills that college students leaving academia must have, but evidence shows they are greatly lacking (Schneider, 2016).

Learning outcomes establish a connection with an identified gap in knowledge or practice (Keating, 2011). This study's focus is to identify a gap in knowledge regarding curricular preparation of health professional programs of study, to prepare students in specific areas: critical thinking, problem-solving, and capacity for teamwork, advocacy and continuous learning. The focus of this study has been the identification of such gaps or surplus of experiences that relate to building the skills identified above in preparation for a career in nursing or an allied health field. Outcomes, objectives, and goals of the candidates participating in this study, though they may have been from different perspectives, were equally representative and identified as being both necessary and critical to the evolution of the student moving into their professional field of study.

Summary

The purpose of this study was to determine the readiness of students in nursing and allied health programs of study in the areas of critical thinking, problem-solving, and capacity for

teamwork, advocacy, and continuous learning. To accomplish this, a methodology was chosen and identification of gaps in knowledge were addressed. Equipped with knowledge of perspectives, this study began to take shape.

This qualitative, exploratory case study was designed to answer two primary research questions. The first question looks at whether curriculum designs within health science professional programs of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy and continuous learning? The second question looks at whether a specific curricular design best aligns with and reinforces characteristics most sought within the workforce by both the employer and the interprofessional team members that a new graduate will be joining? In order to gain the knowledge necessary for this study, a specific and structured set of questions was developed that would be the focus of the individual interviews with the research candidates. The answers to these specific questions would in turn present robust and critical answers and guide the researcher toward conclusion, and ultimately the answers to the research questions presented at the onset of this study.

The skills of critical thinking, problem-solving, and capacity for teamwork, advocacy and continuous learning were identified as being important to have when entering the workforce as a new graduate in the health profession fields (North & Shiver, 2016; Wratcher, 2016). To determine the perceived readiness of student to enter the healthcare workforce, the perspectives of students, educators, and employers was needed. This core group made up the pool of research candidates this study is centered around.

Candidates for this study were solicited by invitation. Volunteer participation created a pool of individuals from which information was gathered through a process of individual interviews. The answers provided during those interviews stemmed from five specific questions

that were constructed prior to the interview process and were identical among all participants, regardless of whether they were educators, students, or employers. The interview process was conversational in nature and provided in-depth perspectives of those who represented the education, learning, and employment of healthcare professional programs of study, specifically nursing and allied health. Nursing and allied health professional programs of study were the primary focus of this study.

The data collected was created from individual interviews with educators, students, and employers of specific sources. These individuals provided sufficient knowledge to answer the research questions for this study. In Chapter 5, a summary and review of the results is outlined. Included in Chapter 5 is the linkage between the research study results and the literature review provided in Chapter 2 of this dissertation. This will precede a formal summation and collective summary of the research study itself and identify any need for further research relative to this topic.

The emerging themes relative to this study's findings support the need for students leaving the workforce to be proficient in both content and skills-based knowledge. It also indicates that non-competency-based skills, such as critical thinking, professionalism, communication, and teamwork capabilities are also vitally important to the new professional entering the healthcare field. Chapter 5 will outline the specific connections between literature findings and summative data collected in this study and will provide a clear understanding of what the research from this study indicates in relationship to the literature reviews.

Chapter 5: Discussion and Conclusion

The purpose of this qualitative case study was to explore readiness, aptitude, and competency of nursing and allied health students in the areas of critical thinking, decision-making, teamwork, communication, and leadership skills in the workplace setting. Discussed throughout this chapter are the thematic findings of the study and their relationship to the identified educational theories that were the foundation for the study's construction: the conceptual change (Davis, 2011) and the continuum of learning (Bradshaw & Hultquist, 2017) theories. This chapter will offer summation to this research study and consideration of the future evolution of this topic while providing a definition of the prospective need for further research in this area of study.

The construction of this study aimed to gain knowledge to answer two specific research questions that facilitated determination of readiness, aptitude, and competency of nursing and allied health students in the areas of critical thinking, decision-making, teamwork, communication, and leadership skills in the workplace setting. Individuals from three groups made up the pool of research participants sought from two concentrated areas: a private health science college and an affiliated healthcare system and its associated community health centers. Educators, students, and employers of nursing and allied health professions comprised the research sample engaged in this study.

This chapter presents the findings of the data acquired through research with the intent to answer specific research questions. The research questions sought to bridge further understanding between curriculum design and student preparation in key and specific areas — skills identified as both necessary and relevant to professional life inside the healthcare field.

Most importantly, literature review provided a framework of support for the ideology of this study and implication for future practice, policy, and theory realization.

Themes and sub-themes provided significant clarification of the study findings. The themes and sub-themes, in turn, acted as a connector between the researched literature and theoretical framework and displayed relevance and significance behind the study findings. Though separate and unique, the identified themes and sub-themes tie commonality of thought and evidence between the primary research questions and the theoretical framework.

Summary of the Results

The purpose of this empirical qualitative case study was to relate curricular design and methodology with the preparedness of nursing and allied health students to enter the workforce. More specifically, this study examined the specific areas of critical thinking, problem-solving, and capacity for teamwork, advocacy, and continuous learning preparedness. Furthermore, this study explored the connection between curriculum design with skillsets that are both highly desired by employers in the healthcare field and identified as promoting professional success for healthcare providers (Carlson, 2017; Ellenbecker, 2010; Institute of Medicine, 2003; North & Shriver, 2016; Wratcher, 2016). Educators, students, and employers of nursing and allied health professional programs were asked to share their thoughts and experiences to allow the researcher opportunity to deduct logical and evidenced-based connection between curricular preparation and employment readiness in the specific areas defined.

The selection of educators, students, and employers was performed through email invitation. A formal letter outlining the request was made by the researcher to the intended participants (educators, students, and employers) and detailed the nature and intent of the research study. In order to solicit participation, the researcher sent a survey via email (Qualtrics

Survey Software, 2017) to faculty, students, and affiliated employers referenced in Appendix B. Participants were asked to respond affirmatively or reject the request for participation. Research participants were identified through affirmative replies in the survey email. Letters outlining the purpose of the study, along with request for participation via interview, were then sent to target individuals within the population sought for this case study (educators, students, and employers). Full disclosure of the intent and desire for participation in the research process was provided to each research participant. This included the confidentiality statements and objectives for individuals within the college and healthcare organizations that chose to participate.

Interviews with individual educators, students, and employers who voluntarily agreed to participate in the study produced significant amounts of data. Interpretation and evaluation of the data to determine validity, contradiction, or conflicts followed (Yin, 2014). Themes and sub-themes became apparent upon analysis of the data retrieved during the semi-structured interviews. Categorical coding occurred during analysis, a complex process that connected the content to context, situations, ways of thinking, perspectives, processes, and relationship (Bogdan & Biklen, 2003).

The results of this study evidenced that students exhibiting competency in the areas of critical thinking, problem-solving, and capacity for teamwork, advocacy, and continuous learning were more successful in their roles as healthcare professionals. Each educator who participated in the study provided commentary that indicated students assessed in their programs of study exhibited preparation in the areas assessed. The review of educator comments reflected that they perceived their students, though novice in their level of experience, as prepared to enter a workforce where the skillsets of critical thinking, teamwork, communication, decision-making, leadership, and advocacy were requirements for professional success in their field of study.

The findings also indicated that curricular design plays a fundamental role in not just what students learn, but how they learn it. The findings of this study further indicated that students with the greatest success in the healthcare setting are those who have experienced multiple learning opportunities that expand beyond the traditional classroom setting, whether that be in a clinical environment, simulation setting, laboratory workspace, or seminar lecture, further clarified by both educators and students in the interview process. F.A. January (student) stated that confidence in the workforce was not just because of classroom knowledge; it was because of increased opportunities in the clinical setting and in other embedded activities such as networking and mentoring projects with professionals in the field. Increased opportunities in non-classroom settings are indicative of a learning model that was both active and interactive by educator and student, using concepts to build competency of both knowledge and skillset. Evidence from educator interviews supported the theory reflected by the Institute of Medicine (IOM) regarding learning styles that points to competency realization through active learning (2010). Further, educators expressed engagement with students in simulation and hands-on learning environments, both of which are supportive of an interactive learning style that is an opportunity for inclusion and growth for students (Kistons-Reyonlds, 2009).

Discussion of the Results

Research Question 1

The first research question posed was: How does curriculum design within a health science professional program of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy, and continuous learning? The participants engaged in this research study provided insight into curricular foundations for specific health professional programs of study, including strengths and

limitations of teaching and learning models for those programs of study, as well as the capacity of preparedness in specific areas that translate into success in the healthcare workplace.

Educators, students, and employers provided personal perspectives related to their individual experiences in their roles. These experiences and perspectives, in turn, created a framework to answer the research questions posed by this study. The answers affirmed a solution to the overarching question relating curriculum model to preparedness in specific skillsets.

The first research question sought information on whether a specific curricular design was more effective in creating a foundation of knowledge and competency in the areas of specific soft skills (Godin, 2017) that align with success on the interprofessional team in the healthcare setting. The results of the study confirmed that skills of critical thinking, decision-making, teamwork capacity, problem-solving, advocacy, and continuous learning are essential for success in the healthcare setting. Educators and students individually identified these skills as being critical to the confidence of students who are leaving the controlled environment of the classroom and entering the broad and variable world of the healthcare setting. Employers agreed that the attainment of these skills, even at a novice level, are necessary components for students to feel successful in the healthcare setting, which is vital to interprofessional interactions and team functioning. As discovered early in the literature research, student success when entering the healthcare setting is also related to confidence and adaptability in a face-paced, ever-changing environment with multiple moving parts (Brooks, 2017; IOM, 2011).

Research Question 2

The second research question was: How can a specific curricular design best align with and reinforce characteristics most sought within the workforce, by both the employer and the interprofessional team members that a new graduate will be joining? This question focused on

the specific style of the curriculum that supports the development of skillsets most sought by employers in the healthcare setting. Answers to the specific interview questions provided insight aligning with a concept-based curricular model for enhancing a learning environment that promotes the skillsets identified in the study. While the evidence was indicative of the concept-based curriculum, only the educators provided a name to the specific curricular style. Students and educators provided descriptors for the learning style that achieved the desired outcome but did not definitively identify the curriculum as being concept-based: evidenced-based, hands-on, team collaborative learning, active, clinical setting, conceptual mapping.

The educators, versed with styles and types of curricula, were able to articulate the method that aligned best with student engagement and learning. Concept-based curriculum, in full fashion or combination with other curricular models, was quickly identified as a style that promoted active and learner-centered engagement (Elliott, 2015). The educators within this study indicated that the curriculum model even if not fully aligned with a concept-based model (modified concept-based or integrated with another model) was essential to applying components of this teaching/learning style to the educational outline for the program of study, for improved student success. F. June (educator) stated that in order to get where a student is both confident and competent, a classroom must be engaging and student-centric; the student should be as engaged in this process of learning as the educator. T. May (educator) clarified that teamwork is an excellent way for students to focus and gain knowledge of big-picture topics. Further, May (educator) points out that when working with a team of different disciplines it encourages open-mindedness, creativity, and collaboration, thus expanding the mind for learning. Similarly, a concept-based curriculum embraces the same characteristics to engage and enhance learning.

Students who participated in this study were able to articulate the advantages of learning methods that would impact their roles in the healthcare environment. These aligned most directly with a concept-based curriculum. Terminology and definition of a concept-based curriculum mirrored that presented in literature research: more in-depth knowledge, hands-on learning, application of learned techniques and skills, interactions with peers and clinical professionals, team approaches and learning, creative mechanisms to promote learning (Erickson et al., 2017). Each student interviewed in this study indicated that active learning, applying creative approaches to content, increased their engagement, and in turn knowledge on a concept. Descriptors provided by students indicated "team" and "interactive" approaches to education to gain stronger conceptual awareness of a topic.

Employer engagement in this study was viewed as contextual, meaning that hiring agents of graduate healthcare professionals (nursing and allied health) answered questions from the context of how healthcare professionals function best in the healthcare setting. Their exposure to the educational setting was limited and offered little acknowledgment of curricular methodology but provided descriptors that aligned best with the long-term success of professionals entering their workplace setting. The employers' focus was from a retention, quality, safety, and satisfaction vantage point. The descriptors they used were similar to those reflected in literature research from the Institute of Medicine (2003; 2011) that focused on ways to improve patient outcomes through judgment, communication, interprofessional teamwork and planning, and critical thinking.

Discussion of the Results in Relation to the Literature

Preparing students to enter the workforce, particularly in the field of healthcare, requires more than clinical and subject-matter mastery. It requires competency in the conceptual facets of

healthcare professionalism: communication, judgment, critical thinking, advocacy, teamwork, and lifelong learning capacity (North & Shriver, 2016; Wratcher, 2016). A traditional format by which students are educated and equipped with such knowledge and skillsets, often referred to as soft skills (Godin, 2017), was the focus of this study.

Curriculum for health professional programs of study requires ongoing evaluation and assessment to ensure that students are knowledgeable and prepared when entering the workforce. Each individual involved in this qualitative, empirical case study readily acknowledged that success in the healthcare setting is more than competency in specific skills used to safely and effectively care for patients clinically. Research participants reflected that mentoring, networking and embedded hands-on learning with professionals in the field would create substantial knowledge that would promote the soft skills (Godin, 2017) that are necessary for the workforce. This finding corresponds to the literature research that also demonstrates a need to know how to think, act, and react through communication, decision-making, and critical thinking—all skills that are required for caregivers to safely and effectively care for and respond to the needs of patients in real healthcare situations (Bradshaw, 2017; Brooks, 2017; IOM 2003, 2011).

Substantial thought and consideration from educators, students, and employers is given to developing professionals who are well prepared to enter the ever-changing and dynamic healthcare field (Giddens & Brady, 2007; NLN, 2003; Kistons-Reynolds, 2009). Studies have indicated that differences exist between employers and academics when assessing the readiness of healthcare professional graduates in areas of employability post-graduation (Jackson et al., 2016). Employers indicate that skills unique to the success of healthcare professionals are lacking in new graduates, particularly in the areas of critical thinking and communication (Jackson et al., 2016).

Historically, the role of educators has focused on the advancement of students toward mastery of specific skillsets, relevant to their intended roles in healthcare, through content saturation (Giddens & Brady, 2007; McCallum, 2009). Mastery of a specific topic required students to engage in the experience of excessive reading, content processing, and memorization (Diekelmann, 2002). Literature suggests that curricular management, of both content and application, are key challenges of educating health professionals (Giddens & Brady, 2007). Further, “overly crowded curricula” (IOM, 2003, p. 38) compound the challenges of education reform, which in turn reduces the learning outcomes in critical areas such as those identified in this study.

Leaders in healthcare education recognize the value of a concept-based curriculum to prepare students to maximize both their conceptual understanding and content-based proficiency (North & Shiver, 2016). Frameworks analyzed within nursing curriculum present a roadmap of organizational pillars: goals (learning outcomes), instructional delivery (activity), and evaluation of competency (learning assessment) (North & Shiver, 2016). Support for educators is an essential facet to ensure outcomes are delivered inside the classroom that mold the values and perspectives of the future health professional (IOM, 2003). Educators are an integral part of the development process of both curriculum and student.

Higher education healthcare professional programs of study are often content specific with structured curricula that emphasizes specific outcomes and fosters a linear thought process (Giddens & Brady, 2007; NLN, 2003). Educators are challenged to “adequately prepare graduates to practice in a continually changing context,” (Almajed et al., 2016, p.1). The focus among educators must entail the adaptation of pedagogy and curricula to meet the needs of students to better support the industry in which those students will become employed (Almajed,

Skinner, Peterson, & Winning, 2016). Measurement of student success transpired from a variety of different perspectives, such as integrative thinking (Erickson, 2011). Synergistic thinking, where thoughts are beyond facts and skills and conceptualization of relationships, patterns, and principles is the focus for educational model development, represents a concept-based curriculum, the format proposed as being highly effective in educating students in healthcare professional programs of study (Erickson, 2011).

Evidence from this study's independent research and literature review shows positive alignment between the application of a concept-based or modified concept-based curriculum and the cognitive continuum of learning theory as a formulary for teaching and learning that promotes "deeper conceptual understandings that transfer through time, across cultures, and across situations" (Erickson, 2017, para. 5). The creation of avenues that enhance education, build student readiness, and supply the industry with qualified graduates is a necessary focus for academia (Carlson, 2017). The enhancement of soft skills, or skills not associated with competency skillsets, is vital for success in the workforce, despite the field of study (Carlson, 2017; Godin, 2017; James, 2015). These skills are communication, critical thinking, problem-solving, teamwork, collaboration and leadership (Carlson, 2017; Godin, 2017; North & Shiver, 2016; Thompson, 2014).

Limitations

Sample

The findings of this study were rich with detail, provided in combination from literature review and data collected through the qualitative research process. Despite the robust aspects of the research design, limitations also existed. Sample size was a primary limitation of this study.

As a qualitative case study that uses one-on-one interviews to gather research, the number of participants was less than if the research was collected via survey or poll (Yin, 2011).

The setting for the pool of research participants included two sources, a private health science college and its related hospital system and community health centers. Educators, students, and employers of nursing and allied health professional programs of study were the targeted participants for this study. One hundred invitations to participate in this study were emailed to individuals within the college and affiliated healthcare settings and 16 chose to participate.

The participants were equally divided among educator, student, and employer population, though this was not by design. Employers were hiring agents for the nursing and allied health disciplines that also participated in the study. The educators and students varied based on programs of study (nursing or allied health). The programs of study varied in length, composition, requirements, and expectations. The only equal comparison for the professional programs of study was that they are offered from the same college and educate students to enter the healthcare field. The input from the research participants were voluntary, and the accuracy of data they provided was based on their honesty and truthfulness in responses.

Study Design

The construction of this empirical qualitative case study occurred by completing interviews with individuals from the three focus groups: educators, students, and employers. Interviews were face-to-face and were one hour in length and covered five pre-constructed and identical questions. The use of five identical questions was a limitation. It was noted early on in the analysis of data from the interviews that individuals from within the three focus groups had varying definitions, expectations, and requirements that defined their program of study or hiring

practices. The use of non-identical questions among the participants using language, expectations, and requirements familiar to their focus group would have limited the barriers in researcher interpretation of the answers provided by the participants. The intention of this study was also to attain artifacts, but no participants brought physical artifacts to the interviews, that caused a further limitation.

Additionally, the inability to utilize triangulation as a validation method, as well as the attainment of artifacts from the research participants, acted as limitations within this study. Triangulation is a validation strategy that corroborates evidence against sources to further understand a theme or perspective (Saldaña, 2011). Artifacts can be files, documents, or records that can foster understanding of the subject of study (Silverman, 2001).

Implications of the Results for Practice, Policy, and Theory

Practice

The gaps in knowledge identified in the areas of leadership capability, teamwork, communication, and interprofessional collaboration were the impetus for this qualitative research study. The challenges that have presented themselves within the healthcare setting create short-term and long-term deficits in quality patient outcomes (Institute of Medicine, 2003). Long-term and short-term approaches to reduce the gaps in knowledge among current and future healthcare professionals are necessary to formulate and realize required changes within the industry. Continuing education opportunities for current healthcare professionals should spotlight leadership development, effective communication, and interprofessional approaches to care delivery (Sorrel, 2015). Academic settings should focus on curricular changes where students are prepared to enter the field of healthcare with emphasis on leadership development, communication, teamwork, lifelong learning, decision-making, and critical thinking skills.

Application of curricular enhancements that have an impact on student development in areas relevant to a rapidly evolving workforce would set a standard for which all new graduates are prepared to enter their profession with skills additional to clinical aptitude (Institute of Medicine, 2003).

Policy

Gaps in knowledge identified through literature review and research participant interviews distinguish areas of need in preparing students of healthcare professional programs of study to enter the workforce. Assessment of needs from the healthcare workforce (Institute of Medicine, 2003), along with the identified value in a concept-based curriculum (North & Shiver, 2016), create a cross-sectional view where improvements can be made to enhance quality outcomes and retention within the workforce (Carlson, 2017). Curricular design, in turn, could be reflective of the needs of educator, student, and industry employers. Therefore, the primary objectives of curriculum design would reflect advancements in educational aptitude while meeting industry standard.

Theory

The primary learning theories utilized to support this study were the conceptual change theory (Duit & Tregust, 2010) and the cognitive continuum of learning theory (Novak & Canas, 2008). These theories, individually and together, promote a method of teaching and learning that is expansive beyond content, more in-depth and more thought-provoking into conceptual application across many different episodes of content. The role of healthcare professionals aligns much like that of the theories described; they are expected to have expansive knowledge that they apply across a continuum of care as well as in episodic caregiving (Bradshaw & Hultquist, 2017; Keating, 2011; Kern et al., 2016).

The cognitive continuum of learning theory (Novak & Canas, 2008) and the conceptual change theory promote evolutionary processes of learning that occur over a period of time—a class, a program, or a lifetime (Duit & Treguist, 2010; Learning Theories, 2001). The premise of this research study looks to align a foundational curriculum to promote evolutionary and lifelong capacity for learning in one’s field of study well beyond the classroom setting. For this, the evidence does point to an alignment between the concept-based or modified concept-based curriculum and the cognitive continuum of learning theory; as both teach beyond facts and skills to develop “deeper conceptual understandings that transfer through time, across cultures, and across situations” (Erickson, 2017, para. 5). Further, this type of curriculum model systematically “builds conceptual schemata in the brain so students can relate new knowledge to prior knowledge, transfer understanding from one context to another, and personally construct deeper understanding using facts and skills as tools,” (Erickson, 2017). The theories of the cognitive continuum of learning theory and the conceptual change theory engage the learner in health professional programs of study to think critically and function supportively within the interdisciplinary healthcare team.

Recommendations for Further Research

There are many avenues that could be researched to support the underlying theme and premise of this study. Such areas could include:

1. Pedagogical approaches to teaching a concept-based curriculum in the healthcare professions (nursing and allied health)
2. Licensure examination success rates for students educated strictly under a concept-based curriculum in healthcare professional programs of study (nursing and allied health).

3. Barriers to the implementation of a concept-based curriculum in healthcare professional programs of study and effects upon student outcomes.

The identified areas for further research provide evidence of the complexity of higher education preparation of healthcare professionals. There is no one design for education, nor one area of research that will apply to all programmatic designs. Thus, the value of this study was but one step toward full awareness of the best method for educating students in healthcare professional programs of study, specific to the identified skillsets: critical-thinking, judgment, communication, advocacy, lifelong learning, and teamwork capacity.

Conclusion

This qualitative case study aimed to inquire into and gauge knowledge of the development and preparation of students in specific nursing and allied health programs of study in the areas of critical thinking, decision-making, communication, judgment, advocacy, and lifelong learning. These skills were identified as essential to the individual success of the healthcare professional (nursing and allied health) as well as complementary to the success of the interprofessional team. Additionally, the identified skills were most sought after by employers in today's healthcare industry (Carlson, 2017; Godin, 2017; North & Shiver, 2016; Thompson, 2014). Further, this inquiry delved into the process by which this education may be best delivered to students in these programs to promote a broader and conceptual understanding, enabling a cognitive transfer of knowledge (Erickson, 2017).

Methods of teaching and learning are examples of creativity meant to engage individual learning of a topic or topics for future use or application. This study posed questions as to how students can best be prepared to gain knowledge in focused areas of critical-thinking, decision-making, communication, judgment, advocacy, and lifelong learning. The core skills identified

throughout this study, often referred to as soft skills, are crucial to success and sustainability in the workforce of 2017 and beyond (Godin, 2017; North & Shiver, 2016; Wratcher, 2016). The elements of this study created an exemplar of rationale as to the benefits of a concept-based curriculum in preparing students in the classroom for success in their chosen professions in the areas of focus and beyond.

Preparing students to enter the healthcare field as competent and confident professionals requires active engagement by educators, students, and employers. Educational preparation includes classroom and clinical preparation, exposure and interaction with interprofessional teams, and lifelong learning, all of which are critical to creating the foundation of knowledge for soon-to-be healthcare professionals. Independence and team-based collaboration are uniquely a synergistic activity that creates the platform for delivery of skilled and quality care, from the administrative level to the direct care employee, within the healthcare setting (World Health Association [WHO], 2010).

Curricular design plays a fundamental role in not just what students learn, but how they learn it. The findings of this study further indicated that students with the greatest success in the healthcare setting are those who have experienced multiple learning opportunities. These experiences expand beyond the traditional classroom setting, whether that be in a clinical environment, simulation setting, laboratory workspace, or seminar lecture, further clarified by both educators and students in the interview process.

Much thought and consideration from educators, students, and employers is given to developing professionals who are well prepared to enter the ever-changing and dynamic healthcare workforce (Giddens & Brady, 2007; NLN, 2003; Kistons-Reyonlds, 2009). Curriculum design, teaching methodology, and pedagogical approach are all factors that

educators must analyze to ensure gaps in knowledge are closed and outcomes are improved; with a focus on critical-thinking, decision-making, communication, judgment, advocacy, and lifelong learning. Preparing allied health and nursing students to enter the dynamic and multifocal healthcare field as professionals in their craft requires an adaptable learning environment, as well.

Success in the workforce is based on multiple criteria. As this study points out, critical thinking, judgement, decision-making, communication, advocacy, teamwork, and lifelong learning are also connected to competence and confidence in the healthcare setting, and in turn a criterion linked to success as a professional in the healthcare field (IOM, 2003; North & Shiver, 2016; Wratcher, 2016). Creating opportunity to gain knowledge and experience in the educational setting, translates into successful outcomes for educators, students and employers, alike.

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Appendix A: Qualtrics Survey

Request for Participation in Doctoral Research Study

From: [email redacted]

Dear ,

I am requesting your participation in my doctoral dissertation research study titled, IPE: How curriculum influences and develops future healthcare professionals. This qualitative case study invites your participation for no more than a 60 minute face-to-face, telephone, WebX, or GoToMeeting interview regarding Student Preparation for employment based on curricular standards in your area of study or employment.

Participation is voluntary. Should you choose to participate please click on the following link and complete the survey to start the process:

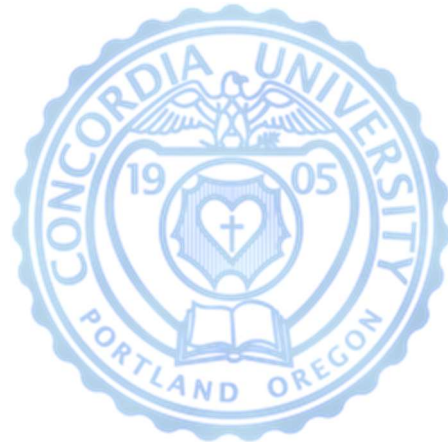
https://qtrial2018q4az1.az1.qualtrics.com/jfe/form/SV_eb1r1QvbEJrYHz

A follow-up email will be sent requesting date, time, and method for interview, along with an informed consent for your review and signature. Thank you for your time and consideration!

Sincerely,

Karen L. Keune

Investigator: Karen L. Keune, MJ, BSN, RN email: [email redacted]
c/o: Professor Brianna Parsons, EdD;
Concordia University–Portland
2811 NE Holman Street
Portland, Oregon 97221



Appendix B: Interview Questions

Interview Questions-Educator

1. Please describe, based on your experience(s), the most notable or visible strengths that programs of study with which you teach provide?
 - a. Can you provide examples of these observed strengths as seen in your classroom or clinical setting?
2. In your opinion, do you believe that there are limitations to the programs of study with which you teach which would equate to the overall readiness to enter the workforce?
 - a. If so, what are these limitations and what impact do you believe it has had in the workforce?
3. How do well do you feel new healthcare providers are prepared to enter the workforce from the perspective of critical thinking skills, decision-making capability, teamwork capacity, communication fluency, leadership capability, and desire for lifelong learning?
 - a. If positively, please provide examples. If negatively, please provide examples.
4. Based on your knowledge of what is needed in preparing healthcare providers to work in today's healthcare setting, what would you wish to see added to curriculum, clinical orientation, or professional development to improve these outcomes for educators, students, and employers?
 - a. Please provide examples and explanation.
5. Please describe your background as it relates to healthcare education, your current role and position as it relates to working in a healthcare setting, and your perspective on curriculum or educational models to better prepare students entering the workforce.

Interview Questions-Student

1. Please describe, based on your experience(s), the most notable or visible strengths that programs of study with which you are a student provide?
 - a. Can you provide examples of these observed strengths as seen in your classroom or clinical setting?
2. In your opinion, do you believe that there are limitations to the programs of study with which you are a student that would equate to the overall readiness to enter the workforce?
 - a. If so, what are these limitations and what impact do you believe it has had in the workforce?
3. How well do you feel you are being prepared as a new healthcare provider to enter the workforce from the perspective of critical thinking skills, decision-making capability, teamwork capacity, communication fluency, leadership capability, and desire for lifelong learning?
 - a. If positively, please provide examples. If negatively, please provide examples.
4. Based on your knowledge of what is needed in preparing healthcare providers to work in today's healthcare setting, what would you wish to see added to your curriculum, classroom or clinical, to improve these outcomes for students?
 - a. Please provide examples and explanation.
5. Please describe your background as it relates to healthcare education, your current role and position as it relates to working in a healthcare setting, and your perspective on curriculum or educational models to better prepare students entering the workforce.

Interview Questions-Employer

1. Please describe, based on your experience(s), the most notable or visible strengths that programs of study with which you employ graduates provide?
 - a. Can you provide examples of these observed strengths as seen in your workplace setting)?
2. In your opinion, do you believe that there are limitations to the programs of study with which employ graduates that would equate to the overall readiness to enter the workforce?
 - a. If so, what are these limitations and what impact do you believe it has had in the workforce?
3. How do well do you feel new healthcare providers are prepared to enter the workforce from the perspective of critical thinking skills, decision-making capability, teamwork capacity, communication fluency, leadership capability, and desire for lifelong learning?
 - a. If positively, please provide examples. If negatively, please provide examples.
4. Based on your knowledge of what is needed in preparing healthcare providers to work in today's healthcare setting, what would you wish to see added to curriculum, clinical orientation, or professional development to improve these outcomes for employers?
 - a. Please provide examples and explanation.
5. Please describe your background as it relates to healthcare education, your current role and position as it relates to working in a healthcare setting, and your perspective on curriculum or educational models to better prepare students entering the workforce.

Appendix C: Request for Participation

To follow are letters of inquiry that have been emailed to decision-making authorities of the institutions (college) and healthcare organizations (hospital/community health) by which participants will be solicited for this research study.

Dear [name redacted],

It is with great anticipation that I begin the final phases of my dissertation process through Concordia University–Portland. For my research I have chosen a qualitative case study utilizing a semi-structured interview with individuals from three specific groups to gain necessary information to answer the following research questions:

- How does curriculum design within a health science professional programs of study impact student capability and competency in areas of critical thinking, problem-solving, and capacity for teamwork, advocacy and continuous learning?
- How can a specific curricular design best align with and reinforce characteristics most sought within the workforce; by both the employer and the interprofessional team members that a new graduate will be joining?

My study, titled IPE: How curriculum influences and develops future healthcare professionals, is focused on gaining information from educators, students, and employers of nursing and allied health professional programs of study. My request is to be allowed access to faculty from the nursing programs and the allied health programs of emergency medical technology, radiological technology, health care administration, community health, and polysomnographic technology. My intent is to select participants to engage in individual interviews where five specifically defined questions will be asked to gauge understanding of curriculum and preparedness to enter the workforce. I would be happy to share these questions with you, along with all of the IRB approval documentation, for your review.

I would be happy to speak further with you about my study and answer any questions you may have at your earliest convenience. My IRB processing is in progress. I anticipate to begin the interviews in 2018.

Sincerely,

Karen L. Keune MJ, BSN, RN
Doctoral Candidate
Concordia University–Portland

Appendix D: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does “fraudulent” mean?

“Fraudulent” work is any material submitted for evaluation that is falsely or improperly presented as one’s own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate’s final work without full and complete documentation.

What is “unauthorized” assistance?

“Unauthorized assistance” refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another’s work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work (Continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University-Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*



Digital Signature

Karen Lynn Keune

Name (Typed)

11-29-2018

Date