FACILITATING CRITICAL THINKING AND CLINICAL JUDGMENT IN CLINICAL NURSING EDUCATION

by

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Abstract

Nurses who can critically think and make clinical judgments in the clinical setting are crucial to safe and effective nursing care. This type of critical thinking and clinical judgment is best developed during clinical education, which provides students with the opportunity to bridge the theory to practice gap. Clinical instructors guide students’ development of critical thinking and clinical judgment in the clinical setting. Despite clinical instructors having such a significant impact on critical thinking and clinical judgment there is limited research on how they facilitate students’ development of critical thinking and clinical judgment.

This qualitative analysis explored how clinical instructors facilitate the development of critical thinking and clinical judgment of nursing students. This study used interpretive description to analyze interviews with eight clinical instructors to develop themes and subthemes within the data. These themes were discussed in relation to definitions of critical thinking and clinical judgment, indicators for evaluation, clinical teaching strategies, and contextual facilitators and barriers.

Clinical instructors who took part in this study defined the concept of critical thinking as: The process that leads to clinical judgment, the decision. Evaluation was based on broad indicators of patient safety, effective communication, students’ confidence in their ability to critically think and make clinical decisions, and taking ownership of their patient care. Clinical instructors identified a variety of clinical teaching methods that they adapted and individualized to specific student needs. Clinical instructors also use multiple strategies to meet student needs, which they then adapt for each cohort. Contextual factors also impact students’ development of critical thinking and
clinical judgment such as buddy nurses, the school of nursing curriculum, clinical
instructors, and the nursing student themselves.

This study identified suggestions for curriculum development, clinical instructor
development, and potential areas for future research in relation to clinical education.
Clinical instructors are key components of nursing education and the development of
critical thinking and clinical judgment in nursing students; as such, it is important to
understand their perspectives on how they develop these student abilities.
Lay Summary

Clinical education and clinical instructors are integral components to the development of undergraduate nursing students’ critical thinking and clinical judgment which is needed to provide safe patient care. This study explored how clinical instructors facilitated the development of critical thinking and clinical judgment in the clinical education setting. Participants identified critical thinking to be the process that leads to the decision that is the clinical judgment. Participants used a variety of indicators to evaluate critical thinking and clinical judgment. To facilitate their development, participants used a combination of teaching strategies that focused on meeting individual students’ needs. Participants identified contextual factors that could both support or inhibit nursing students’ development of critical thinking and clinical judgment. Recommendations included curriculum and clinical instructor development as well as continued research into clinical instructors’ roles in facilitating nursing students’ development of critical thinking and clinical judgment.
Preface

This study is my original, unpublished work. I, Sarah Desrosiers, was responsible for conducting the interviews and transcribing and analyzing the data under the supervision of my thesis committee: Dr. Jennifer Baumbusch, Kathy O’Flynn-Magee, and Dr. Sally Thorne.

This research, titled *Facilitating Critical Thinking and Clinical Judgment In Clinical Nursing Education*, was completed with ethical approval from UBC Behavioural Research Ethics Board, along with the ethics approval from the associated schools of nursing that I utilized in my research. The ethics certificate number from UBC is H15-03490.
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Dedication

I would like to dedicate this research to all of the clinical instructors out there. Without you we would not be able to support the development of new nurses. I applaud you for the work you currently do and the work that you will hopefully continue to do in the future.
Chapter 1: Problem Identification and Purpose

1.1 Overview

New nurses are transitioning into a chaotic health care system, in which they need to be able to think and act quickly while keeping patient safety in mind and juggling multiple roles and responsibilities (Benner, Sutphen, Leonard, & Day, 2010; Boychuk Duchscher & Cowin, 2006; Etheridge, 2007). The health care system is changing; there is now increased patient acuity, complex technology, innovative medical therapies, patient-centred care, decreasing length of stays for patients, and increased interprofessional collaboration (Benner et al., 2010; Ruth-Sahd, 2014). This complex work environment coupled with decreasing orientation times and diminishing support from overworked senior staff nurses leads to decreased time for senior staff to mentor and advise and support new nurses (Etheridge, 2007). Orientation and mentoring from senior staff are a crucial part of the development of clinical judgment skills or learning to “think like a nurse” (Etheridge, 2007, p. 24, see also Boychuk, Duchscher & Cowin, 2006). When orientation and mentoring do not happen, or are inadequate, patient safety is at risk (Cheek & Jones, 2003; Clarke & Aiken, 2003). The changing atmosphere of the health care system along with the decreased support for new nurses has led to diminished confidence in their nursing abilities and the frequent criticism that they are not prepared for the realities of current nursing practice (Benner et al., 2010; Wolff, Pesut, & Regan, 2010). Subsequently, leaders in nursing education and health care management are looking at the educational development of prelicensure nurses and how they can better prepare nursing students for the realities of practice, in particular the development of critical thinking and clinical judgment (Benner et al., 2010; Wolff, Pesut, et al., 2010;
Wolff, Regan, Pesut, & Black, 2010). Nursing students develop critical thinking and clinical judgment through clinical rotations, which are frequently guided by their assigned clinical instructors. The aim of this study was to extend nurses’ and nurse educators’ understanding of how clinical instructors foster critical thinking and clinical judgment among prelicensure nursing students.

1.2 What are Critical Thinking and Clinical Judgment and Why are they Important to Nursing?

Critical thinking and clinical judgment are key components of nursing and assist in the provision of safe, effective patient care (Victor-Chmil, 2013). Critical thinking is a concept that nurses and others have tried to define and analyze, as well as to determine attributes and attitudes that best exemplify it (Chan, 2013; Scheffer & Rubenfeld, 2000; Victor-Chmil, 2013). In a recent literature review, Chan (2013) reviewed thousands of articles to examine critical thinking in the context of nursing education. Given the number of published articles as well as the variety of definitions and conceptualizations of what critical thinking is and how it applies to nursing, it is difficult to detect a singular or standardized definition that includes what critical thinking is, how to do it, and how to best facilitate it in others. Recognizing the variety of definitions available and comparing these with the College of Registered Nurses of British Columbia’s (2015) expectation of newly graduated nurses, I have chosen to use a definition of critical thinking developed by nurse educators, one that includes nurses’ ways of knowing and skills. Scheffer and Rubenfeld (2000) completed a Delphi study of international nursing education experts that asked participants to develop a consensus definition for critical thinking in nursing.
From that Delphi study, the following definition of critical thinking in nursing was developed:

Critical thinkers in nursing exhibit these habits of mind: confidence, contextual perspectives, creativity, flexibility, inquisitiveness, intellectual integrity, intuition, open mindedness, perseverance and reflection…. [Critical thinkers possess] the skills of analyzing, applying standards, discriminating, information seeking, logical reasoning, predicting and transforming knowledge. (Scheffer & Rubenfeld, 2000, p. 357)

Scheffer and Rubenfeld’s (2000) definition is inclusive of the variety of mental processes required, but the focus is primarily on knowing, which does not encapsulate the act of doing. The definition does take into consideration a contextual perspective; however, it focuses on knowledge components or habits of mind instead of on nursing care that includes the embodied physical, emotional, and spiritual components necessary to function effectively as a registered nurse (RN) today (Benner et al., 2010; Tanner, 2006; Victor-Chmil, 2013).

Clinical judgment extends beyond critical thinking, making it relevant to practising RNs; the literature referred to it as how to “think like a nurse” (Etheridge, 2007, p. 24). Victor-Chmil (2013) described three levels of thinking and knowing. The first is critical thinking, a mental process. The second is clinical reasoning, which starts to take into consideration the contextual concepts of patients, their family members, and the practice situation. The third level is clinical judgment, which encompasses the mental and contextual influences and extends to the embodied and affective aspect of nursing care. Clinical judgment is the reality of dealing with the minute-to-minute changing situations
in health care and patient care, including the challenges providing specific patient care that may be new or challenging for the nurse, the patient, or both and that could be complicated by the contextual factors of the unit and associated family. Clinical judgment in this interpretation would also take into consideration the nurse’s state, including how the nurse would feel and be reacting to the multiple influencing factors listed above, such as feeling tired, overwhelmed, or torn about making the decision to do care with one patient over another patient who may or may not need assistance. Tanner (2006) created a model that described clinical judgement as being the interpretation or conclusion about a patient’s needs and taking action on that individual’s needs. The action could be through a standard approach or something improvised to best suit the particular patient’s need within the context of the specific patient and family situation, as well as the metacontext of what else the RN may be juggling in terms of patient load and ward or workplace expectations (Tanner, 2006). Tanner’s (2006) definition of clinical judgment assumes that nurses evaluate the care provided to determine if it had the desired effect and use that information to plan the next round of treatment. Similarly, Victor-Chmil’s view of clinical judgment “is that of the cognitive, the psychomotor, the affective processes demonstrated through actions and behaviours with the four phases of noticing, interpreting, responding and reflecting” (p. 36).

1.3 The Role of Clinical Instruction in Developing Critical Thinking and Clinical Judgment

Many new graduate nurses struggle with learning to “think like a nurse” (Etheridge, 2007, p. 24). Learning to think like a nurse involves learning to balance the demands of patients’ needs along with how to work within the context of the unit, which
includes other nurses, physicians, and allied health professionals. Contextualized patient care requires creativity, intuition, and clinical judgment, not only for meeting the needs of patients, families, and health care providers, but also for understanding when something looks or feels wrong (Clarke & Aiken, 2003). These common situations can be discussed in class or simulated in laboratory scenarios, but the reality of patient care cannot fully be understood or appreciated until nursing students begin their clinical practice (Etheridge, 2007; Fox, Henderson, & Malko-Nyhan, 2005; Gaberson & Oermann, 2010). According to Gaberson and Oermann (2010), commencing clinical practice brings forth those ideals of communication that are patient centred, interprofessional, respectful, and responsive to the needs of patients, families and health care providers at the time. Clinical practice occurs when health care practitioners spend time in direct patient or client and family interactions and when working with other members of the health care team. Generally, during clinical practice, nursing students have the chance to integrate theory and transition lessons learned into authentic practice scenarios. Clinical practice inherently tests and challenges nursing students to move beyond the theoretical knowledge to critically think, contextually analyze the information, and make decisions, thereby further developing clinical judgment. This process is an important component of how nursing students learn to “think like a nurse” (Etheridge, 2007, p. 24) and is highly influenced by a number of elements beyond the patient interaction. An important component of clinical instruction is the role of the clinical instructor.

Clinical instructors, for the purpose of this study, refers to Registered Nurses (RNs) who take groups of four to 10 nursing students into the clinical setting to instruct them on clinical practice; these settings can include chronic, acute, or community care.
Clinical instructors are generally nurse experts who take on a teaching role. Although nurses may have little to no teaching experience at the beginning, they build teaching experience with increased clinical placements and specialized education (Dahlke, Baumbusch, Affleck, & Kwon, 2012; Davidson & Rourke, 2012). As integral components of, and resources for, nursing students’ education, clinical instructors are generally contract workers who divide time between patient-care-based positions and their teaching roles (Davidson & Rourke, 2012). Clinical instructors act as the liaison between the school of nursing, the nursing students, and the clinical practice area. School of nursing faculty and administration expect clinical instructors to be able to assist nursing students in translating theoretical knowledge to specific patient-care situations (Gaberson & Oermann, 2010). Nursing students use clinical practice environments to continue to develop critical thinking and clinical judgment in relation to different care situations, such as when and how to give medication. Nursing students also learn how to prioritize and decide upon specific assessments or nursing interventions (Cheek & Jones, 2003; Etheridge, 2007). Critical thinking and clinical judgment are essential components in making decisions about patient care, eventually effectively communicating with physicians in relation to a patient’s plan of care (Gaberson & Oermann, 2010).

The clinical instructor in an instructor-led clinical education program has many responsibilities and expectations; I use examples from Gaberson and Oermann (2010) as well as my own personal experiences to discuss the role further. Clinical instructors choose appropriate patient scenarios; spend individualized time with nursing students throughout the day; and strive to be present for new skills, patient assessments, and other nursing student activities. Clinical instructors encourage nursing students to think beyond
the task, assessment, or skill and to critically think through why they are doing what they are doing and the impact it will have on the patient. Clinical instructors need to be able to effectively evaluate nursing students, not only on their skills but also on their perceived ability to critically think and make clinical judgments in relation to patient care situations. Clinical instructors utilize direct observation and discussion with RNs who are buddied with the nursing students during the shift and in some cases with the patients and patient’s family members as a means of evaluating nursing students (Davidson & Rourke, 2012). Clinical instructors need to be able to provide effective formative and summative feedback to nursing students to assist them in developing strong nursing skills, critical thinking, and clinical judgment. Clinical teaching is contextually based so clinical instructors must be able to adjust with the changing characteristics in the clinical area, which includes working with different patients, nurses, and allied health professionals in order to find the best learning opportunities for nursing students. Given that clinical instructors have a large role in the development, monitoring, and evaluation of nursing students, it is important to understand how and what clinical instructors do to facilitate this (Davidson & Rourke, 2012).

1.4 Problem Identification

At the time of this research, I found many articles defining and describing critical thinking and clinical judgment as well as numerous methods on how to teach and facilitate development of these skills in the classroom setting (Cappelletti, Engel, & Prentice, 2014; Chan, 2013). However, there is much less information available about how clinical judgment and critical thinking are developed in the clinical practice environment, including the role of clinical instructors in fostering nursing students’
development of critical thinking and clinical judgment. It is important to understand the role that clinical instructors take in helping nursing students to “think like a nurse” (Etheridge, 2007, p. 24), taking into consideration the contextual factors that are present in the clinical practice setting. Having a grasp of how clinical instructors view the concepts of critical thinking and clinical judgment would make it easier to understand how they teach, facilitate, and evaluate it within the clinical setting. It is also important to understand the contextual factors that clinical instructors believe have an effect on how they teach and evaluate clinical judgment in the clinical setting. My intention in this study was to explore clinical instructors’ perceptions and understandings of how they facilitate critical thinking and clinical judgment, especially considering the crucial role that they play in the development of nurses and their critical thinking and clinical judgment skills.

1.5 Statement of Purpose

The purpose of this study was to gain a better understanding of how clinical instructors foster critical thinking and clinical judgment in undergraduate nursing students while they are in the clinical setting. My overarching research question was as follows: What can be learned from clinical instructors about how critical thinking and clinical judgment can be fostered in nursing students?

I explored possibilities for answering the main research question by using the guiding framework of the following specific questions:

1. How do clinical instructors define and interpret critical thinking and clinical judgment?

2. How do they evaluate critical thinking and clinical judgment?
3. What strategies do clinical instructors utilize to foster critical thinking and clinical judgment?

4. What do they identify as facilitators and barriers to fostering critical thinking and clinical judgment?

5. What recommendations do clinical instructors have for fostering critical thinking and clinical judgment among nursing students?
Chapter 2: Literature Review

2.1 Overview

In this chapter, I explore how the concepts of critical thinking and clinical judgment are addressed in clinical nursing education. I begin this literature review with an analysis of the current definitions and conceptualizations of critical thinking and clinical judgment. I then review the research literature that is relevant to the pedagogy of clinical teaching. Understanding what is known about critical thinking and clinical judgment in clinical nursing education assisted in establishing a base as well as the relevant need for research.

2.1.1 Identification of studies.

To identify relevant literature I accessed databases that were available through the University of British Columbia (UBC) library. I primarily performed the search through the main UBC library portal, and then further focused my search in the Cumulative Index to Nursing and Allied Health Literature, Web of Science, and PubMed, as each of those online databases have a focus on nursing and allied health, including their educational practices. I also searched other databases such as the Education Resources Information Center system, but found these provided no new or relevant literature. Search keywords included critical thinking, clinical judgment, clinical teaching, clinical education, nursing, teaching, and evaluation. During the search, I further identified results by using the following relevant keywords: clinical teacher, clinical instructor, and clinical reasoning. I selected additional articles by reviewing the table of contents of journals relevant to nursing education. I also used the articles themselves as sources to identify additional articles, websites, and nursing texts that had not come up in the original search. With the
nature of the search, as it was specific to clinical education, I eliminated all articles that focused on classroom teaching and simulation. I set few limits due to the small number of articles that were appropriate for the literature review. Articles included in this literature review were available in English and in the online databases.

As this literature review covers a variety of topics, the limits of my search were quite broad. To explore the definitions of critical thinking and clinical judgment, I delved into systematic reviews, Delphi studies, and frequently cited nursing texts in nursing literature in relation to critical thinking and clinical judgment. To review clinical teaching pedagogy, I examined literature that focused specifically on research related to clinical teaching strategies used to facilitate development and evaluate critical thinking and clinical judgment. My aim in this part of the literature review was to understand what has already been researched in relation to clinical teaching strategies for fostering critical thinking and clinical judgement and what is missing.

2.2 Review of the Current Literature

2.2.1 Defining critical thinking.

In this thesis, I compare and contrast my findings with the definition of critical thinking formed by Scheffer and Rubenfeld (2000) in their Delphi study. In their final round of consensus, Scheffer and Rubenfeld arrived at a multifaceted approach to critical thinking that included both habits of minds and skills used. The definition focused on individuals as adaptable, open, and aware of not only the context but also the relevant theoretical and policy-derived implications and able to rationally think through a situation. While this is a broad description of critical thinking, it is not the only definition provided within the literature. In this section of the literature review, I explore other
wording and descriptions of critical thinking with the aim of identifying why I chose to use Scheffer and Rubenfeld’s definition of critical thinking.

Although critical thinking is a topic that has been widely studied in nursing, in a broader generalized format it is not focussed on health care. Two other groups that have created definitions of critical thinking have been the American Philosophical Association and the Critical Thinking Community. Facione (1990) formed the following definition proposed by the American Philosophical Association in the 1990s through a Delphi process: “We understand critical thinking to be a purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation and inference as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which judgment is based” (p. 2). Hicks-Moore and Pastirik (2006) also used this definition in their study related to enhancing critical thinking with clinical concept maps. Similarly, the Critical Thinking Community defined critical thinking as “an intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from or generated by, observation, experience, reflection, reasoning, or communication as a guide to belief and action” (Scriven & Paul, 2013, Summary section, para. 1). While both of these definitions cover a lot of information, they do not refer to the same qualities as the definition presented by Scheffer and Rubenfeld (2000), nor do they quantify all of the attributes that nurses identify in critical thinking.

The term critical thinking is used frequently in the nursing literature. When completing the literature review, I found nine different systematic reviews related to critical thinking in nursing, and the literature samples ranged from 1980–2016. Analyzing
one of the more recent reviews, Chan (2013) focused on studies of critical thinking examining either students’ or clinical instructors’ perceptions using a qualitative research perspective. Chan’s systematic review looked at the conceptualization of critical thinking by breaking it down into component parts. Chan noted no consensus but found five similar components to critical thinking: “(i) gathering and seeking information, (ii) questioning and investigating, (iii) analysis, evaluation, and inference, and (iv) problem solving and (v) application of theory” (p. 237). Scheffer and Rubenfeld’s (2000) definition addressed the above-mentioned components and extended them with the habits of mind of perseverance, open mindedness, flexibility, as well as reflection. According to Jenkins (2011) and Lin, Hsu, and Tasy (2003), Scheffer and Rubenfeld’s definition lacked cultural perspectives. In a cross-cultural qualitative study, Jenkins asked nurse educators in the United States and Thailand about critical thinking. The results identified that in Thai culture critical thinking involved different values such as happiness (Jenkins, 2011). Lin et al., in their qualitative study, interviewed Taiwanese nursing faculty in relation to clinical judgment development in nursing education. Lin et al. discussed how cultural expectations shape practice, noting seniority and experience are to be trusted and not questioned, which was in opposition to Scheffer and Rubenfeld’s definition of critical thinking. Twibell, Ryan, and Hermiz (2005) explored nurse educator thoughts on teaching critical thinking to nursing students in clinical settings; they noted that synthesis or “putting it all together” (p. 71) and thinking leading to action were both important components of critical thinking, which Scheffer and Rubenfeld did not identify in their definition. In contrast, Victor-Chmil (2013) conducted a literature review and concluded that critical thinking was a cognitive process; this author considered action and
synthesis to be a different process. In a recent Delphi study, Paul (2014) explored assessment of critical thinking and determined that to assess critical thinking educators need to be flexible and use a variety of methods to determine if students are critically thinking in the clinical setting. Clinical instructors should have special education in assessing critical thinking. In describing their understanding of critical thinking, the educators who participated in the Delphi study believed it to be an innovative problem-solving process.

From my review of the literature, Scheffer and Rubenfeld’s (2000) definition of critical thinking covers many of the important components discussed in Chan’s (2013) literature review; as such, their definition provided a basis for me to compare and contrast my findings. Scheffer and Rubenfeld’s definition extended beyond other definitions in their expectation for perseverance, flexibility, and open mindedness, as well as the having the ability to apply practice standards. Although Twibell et al. (2005) viewed lack of synthesis and action as drawbacks, I agree with Victor-Chmil’s (2013) analysis, in which critical thinking is presented as the precursor to action. Critical thinking is a cognitive process that does not encompass the contextualized and action-oriented nature of nurse decision making in clinical practice.

2.2.2 Defining clinical judgment.

For this study, in addition to Scheffer and Rubenfeld’s (2000) work, I also used Tanner’s (2006) definition of clinical judgment to compare and contrast my findings. This author described clinical judgment as “an interpretation or conclusion about a patient’s needs, concerns or health problems, and/or decisions to take action (or not), use or modify standard approaches, or to improvise new ones as deemed appropriate by the
patient’s response” (Tanner, 2006, p. 204). Tanner conceptualized clinical judgment and considered critical thinking to be an interchangeable term with clinical judgment, but considered clinical reasoning to be the process by which nurses make judgments, which is more in line with the previously discussed concept of critical thinking. Tanner developed definitions of clinical judgment and clinical reasoning through extensive literature review and research that started in 1998 and carried forward through to the author’s 2006 article. The available nursing literature frequently uses Tanner’s definition of clinical judgment, but other scholars have put forward definitions and conceptualizations of clinical judgment. Standing (2008) presented two different views of clinical judgment: the intuitive–experiential and the analytical–rational. Lin et al. (2003), in their literature review, outlined clinical judgment in a similar fashion to Standing: the information-processing model and the intuitive-reasoning model. The information-processing model assumed that assessment of a clinical situation would create values to determine a decision to influence the outcome. This model also assumed that human beings are rational decision makers who make choices that lead to the best outcomes. On the other hand, the intuitive-reasoning model assumed that decision making is based on knowledge influenced by a nurse’s personal, professional, and ethical experience. Experienced nurses, who have taken part in a number of similar clinical situations, use intuitive reasoning more frequently than do new nurses who have not created that experiential background (Benner, 1982; Lin et al., 2003).

In presenting a model of clinical judgment, Tanner (2006) introduced five assumptions about what affects clinical judgment. Cappelletti et al. (2014) further explored Tanner’s model and added a sixth assumption. Tanner’s assumptions about
clinical judgment link the information processing, rational, and analytic models and the intuitive-reasoning, experiential models and include Benner’s (1982) assumption that clinical judgment improves with experience and having repeatedly seen similar cases. The first assumption is that clinical judgment is developed through experiential learning, such as in the clinical learning environment and previous life experiences (Gaberson, Oermann, & Shellenbarger, 2015; Tanner, 2006). The second assumption is that the unit culture and context in which the clinical judgments were occurring influence clinical judgment. The third assumption is clinical judgment is impacted by the relationship to the patient, knowing the patient, understanding what the patient wants, as well as how he or she will react physiologically, psychologically, or spiritually to different treatments. Knowing the patient and the unit can also affect nurses’ methods of decision making or processing of thoughts. Tanner’s fourth assumption is that nurses use several different methods to make decisions—intuitive, analytical, narrative, paradigmatic, or detective work—as individual processes or in tandem if the situation warrants. The fifth assumption is that nurses have the ability to reflect in and on practice and acknowledges that most reflection happens when there is a break in decision making or an error. The sixth assumption, introduced by Cappelletti et al. (2014), is that education specifically focused on developing clinical judgment will affect nurses’ clinical judgment abilities.

In an effort to form a definition, Tanner (2006) created a model for clinical judgment. Tanner’s model took into consideration the five assumptions about how clinical judgment occurs and identified that there were four steps that nurses went through to make clinical judgments. In the model, nurses work in a graduated pattern through the four specific steps. Tanner also noted, in the process of making decisions,
individuals could move between the steps, outside of the usual sequence, depending on
the nurse’s needs. Tanner’s model included the following four steps: notice, interpret,
respond, and reflect. Tanner explored each step further with actions such as analysis,
expectations, reflection in and on practice, actions, outcomes, and clinical learning.
Lasater (2011) further developed these steps by creating a rubric to evaluate clinical
judgment. Lasater’s rubric has been selectively studied in evaluating simulation practice,
but has yet to be transitioned into evaluating clinical nursing education. Lasater’s rubric
seems promising as an evaluation tool, but it has yet to be studied in the clinical setting.
Lasater’s rubric contains 11 categories that are derived from Tanner’s four steps. Each
category is graded on a qualifier of exemplary, achieved, or developing. While the
grading is somewhat ambiguous the information provided to assist in grading could
support clinical instructors in evaluating clinical judgment while in the clinical setting.

2.2.3 Critical thinking and clinical judgment in the nursing literature.

Critical thinking and clinical judgment are both important factors in clinical
nursing education and for becoming an effective, safe, and ethical nurse. It is also
important to understand the relationship of critical thinking to clinical judgment. When
initially looking at the definitions of critical thinking and clinical judgment, as previously
discussed, it could be assumed that, as in Tanner’s (2006) work, there is no
differentiation between the two. In further reading through the available research and
definitions, I found evidence that the two concepts are not considered to be the same, as
Tanner identified another term, that of clinical reasoning, to be a separate component to
clinical judgment. Beyond the initial definitions, other articles have separated these terms
(Chan, 2013; Tanner, 2006; Victor-Chmil, 2013). To summarize, critical thinking is a
mental process that takes up information, analyzes it, and interprets it for the sake of creating a decision (Victor-Chmil, 2013). Clinical judgment is the actual decision, outcome, and action, or lack thereof, of the thinking process affected by the contextualized nature of nursing (Victor-Chmil, 2013). One would initially assume that critical thinking would be sufficient to cover the concept of making decisions in clinical placements, but it lacked the connection to action. I also believe that critical thinking alone does not equate to the complex processes involved in nursing. It takes a specific knowledge level, affective connection between the patient, the patient’s family, and the nurse as well as the psychomotor ability to perform the necessary action or outcome. As critical thinking and clinical judgment function as different processes, it is important to examine how clinical nursing education research has addressed these elements.

Clinical nursing education focuses on bridging the theory to practice gap and further developing critical thinking and clinical judgment in undergraduate nursing students. This leads me to question what research is available to understand how these concepts are taken up in practice? While there have been several articles written about what critical thinking and clinical judgment are at the theoretical level (Chan, 2013; Paul, 2014; Scheffer & Rubenfeld, 2000; Twibell et al., 2005; Victor-Chmil, 2013), it is important to understand how have they been interpreted at the practical level.

In the literature related to clinical nursing education and clinical teaching strategies, I found a variety of definitions utilized for critical thinking and clinical judgment. In other literature, critical thinking and clinical judgment were the expected outcome, but scholars provided no definitions for what critical thinking and clinical judgment actually were (Daroszewski, Kinser, & Lloyd, 2004; Marchiango, Eduljee, &
Harvey, 2011; Staun, Bergström, & Wadensten, 2010). Nursing educators expect critical thinking and clinical judgment to be outcomes of clinical nursing education and assume nursing students will gain a variety of skills including enhanced communication skills (Daroszewski et al., 2004), improved critical reflection (Daroszewski et al., 2004; Shieh, 2005), and the ability to thoughtfully and safely adjust to varied health care situations and new technology (Marchiango et al., 2011). Although expected outcomes included critical thinking and clinical judgment, many studies did not explicitly frame their questions with specific definitions (Daroszewski et al., 2004; Marchiango et al., 2011; Staun et al., 2010), whereas in other studies specific definitions of critical thinking and clinical judgment assisted in the development of research questions (Angel, Duffey, & Belyea, 2000; Hicks-Moore & Pastirik, 2006; Naber & Wyatt, 2014).

Some research focused on clinical teaching strategies along with how they affected critical thinking and clinical judgment. In Hicks-Moore and Pastirik’s (2006) study, the American Philosophical Association’s definition of critical thinking was used to guide the research and included using an evaluation rubric created by Facione and Facione (1994), which they termed the “Holistic Critical Thinking Scoring Rubric (HCTSR)” (p. 1). The intention of the HCTSR is to evaluate students’ ability to think critically, but in Hicks-Moore and Pastirik’s (2006) research, the discussion focused on how the HCTSR did not adequately assess nursing knowledge. Angel et al. (2000) used another theorist’s scheme of intellectual and ethical development to research how nursing care plans evaluated nursing students’ critical thinking. Their conclusion indicated that the scheme of intellectual and ethical development model did not effectively assess nurses’ ways of knowing. Using Paul’s (as cited in Naber & Wyatt, 2014) model of
critical thinking as a basis for their study, the authors also based their instructions on how to write effective reflective journals from components of Paul’s (as cited in Naber & Wyatt, 2014) understanding of critical thinking. Naber and Wyatt (2014) compared nursing students’ pre and postintervention scores on the California Critical Thinking Skills Test (Facione & Facione, 1992) and the California Critical Thinking Dispositions Inventory (Facione, 1996). The intervention of reflective journaling had a significant impact on nursing students’ truth seeking with no other significant differences noted between the experimental and control groups.

In Hsu’s (2007) research related to clinical post conferences, the author used transformative learning and critical reflection as a guide to assess the effectiveness of how clinical instructors conducted clinical postconference on the potential development of nursing students’ critical thinking. Lechasseur, Lazure, and Guilbert (2011) used different ways of knowing in nursing, such as empirical, personal, ethical, aesthetic, and emancipatory knowing from theoretical nursing literature, to assess nursing students’ critical thinking during clinical experiences that nursing students perceived as stressful. The research described new ways of knowing in nursing, but did not build or define a practical method of developing critical thinking or clinical judgment (Lechasseur et al., 2011). Naber, Hall, and Schadler (2014) used narrative thematic analysis of nursing students’ reflective journals and the theoretical focus of Paul’s (as cited in Naber et al., 2014) understanding of critical thinking to identify how nursing students critically think in the context of clinical education. Naber et al. determined that there were six subthemes to nursing students’ critical thinking: transferring knowledge, collaborating, centring on patient care, recognizing consequential issues, examining the self, and the overarching
theme of conceptualizing the whole. Khan, Ali, Vazir, Barolia, and Rehan (2012) used Kolb’s (1984) theory of experiential learning to guide a study that researched four distinct learning strategies that helped to develop nursing students’ skills, knowledge, and attitudes. In their article, Kahn et al. did not discuss how often clinical instructors utilized the specific learning strategies or if they adjusted their clinical teaching strategies to specific nursing students’ needs. The authors also did not examine how the clinical teaching strategies affected critical thinking and clinical judgment (Khan et al., 2012).

Gerdeman, Lux, and Jacko (2013) conducted a research study to assess how an evaluation rubric created from Tanner’s (2006) model of clinical judgment could identify nursing students’ clinical judgment development. Nursing students used Tanner’s clinical judgment evaluation rubric as a method of stimulating critical self-reflection in practice; the feedback from the study was that students thought the rubric was too wordy and that many of them did not fully read it (Gerdeman et al., 2013). Gerdeman et al. also used clinical judgment as an underlying concept, but it was difficult to understand how it was actualized in the clinical setting. With every strategy examined, I noted difficulty in moving the theoretical concepts of critical thinking and clinical judgment into a practical method of a clinical teaching strategy. Furthermore, in the available literature reviewed, I found no consensus in defining both critical thinking and clinical judgment, nor did the authors provide common descriptions for the associated practical clinical teaching and evaluation strategies (Gerdeman et al., 2013; Khan et al., 2012; Naber et al., 2014).

2.2.4 Research literature related to clinical teaching strategies.

In this component of the literature review, I examine the available research as it relates to clinical teaching strategies and its impact on critical thinking and clinical
judgment. This includes discussion of the types of research used to explore clinical teaching strategies and how the strategy affected nursing students. Another part of the literature I will explore is that of the participants and the focus of the research. First, I will look at the types of research methods throughout the available literature.

The available literature demonstrated various research methods, including quantitative (both experimental and descriptive), qualitative, and mixed-methods research. The main research method in the literature was that of mixed-method styles of research. The majority of the research literature examined nursing students and how they perceived the effectiveness of specific clinical teaching strategies (Daroszewski et al., 2004; Kautz, Kuiper, Pesut, Knight-Brown, & Daneker, 2005; Khan et al., 2012; Khatiban & Sangestani, 2014; Marchiango et al., 2011; Shieh, 2005; Staun et al., 2010). In reviewing the research, I noticed that the primary participants were second- to fourth-year undergraduate nursing students, and in two of the studies participants included clinical instructors, unit staff, clinical supervisors, and nurse educators (Hsu, 2007; Staun et al., 2010). The quantitative components consisted of descriptive statistics, which addressed an array of foci including students’ perceptions of the effectiveness of clinical teaching strategies on several different factors, generalized evaluation of the clinical teaching strategies, and tests that score students’ critical thinking or clinical judgment. I discuss the overall results from these studies further in this section.

The qualitative components of the mixed-methods research enabled students and staff to provide opinions as to the effectiveness of the clinical teaching strategies used. The forms in which the data were collected consisted of written questionnaires (Daroszewski et al., 2004; Khan et al., 2012; Khatiban & Sangestani, 2015; Shieh, 2005;
Staun et al., 2010), focus groups (Hicks-Moore & Pastirk, 2006), and verbal protocol analysis of students’ reflective journals (Kautz et al., 2005). The different data collection forms and variety of participants along with the range of methods utilized for data analysis provided similar discussion and conclusions.

Along with mixed-methods studies, the qualitative studies had different foci and types of participants. The qualitative research ranged from hermeneutics (Mun, 2010) grounded theory (Lechasseur et al., 2011), narrative thematic analysis (Naber et al., 2014), and participant observation (Hsu, 2007); the subjects in these qualitative studies included students, nursing staff, and clinical instructors. The qualitative studies looked at critical thinking and clinical teaching strategies from diverse perspectives. Mun’s (2010) study examined students’ written narratives of an event to determine the context in which they used critical thinking in intense clinical situations. Mun surmised that understanding the context of critical thinking would assist clinical instructors to best support or question their students. Mun concluded that creating reflective journals provided valuable insight for both students and clinical instructors. Naber et al. (2014) also studied students’ reflective writing assignments, and they determined that understanding clinical critical thinking and the different themes that evolve from it would help clinical instructors to structure their activities to promote and evaluate critical thinking. Lechasseur et al. (2011) used explication interviews to draw out types of thinking nursing students’ used while making clinical judgments during stressful situations. Lechasseur et al. identified eight types of knowledge used by nursing students, and determined that the different types of knowledge were used in varying proportions based on contexts and needs. Hsu’s (2007) study, on the other hand, focused on clinical instructors’ interactions with students.
during clinical postconference. Hsu (2007) used participant observation to study the interactions between clinical instructors and students in clinical postconferences. Hsu’s (2007) focus was on the type, complexity, and flow of questions clinical instructors were asking during clinical postconference and how the questions influenced students’ critical reflection and critical thinking. The author concluded that clinical instructors with limited experience and those who were working outside of their area of expertise asked lower level questions that only stimulated knowledge recall (Hsu, 2007). However, experienced clinical instructors and those who were working in their areas of expertise asked higher level questions that instigated critical thinking and assisted in students’ development of clinical judgment (Hsu, 2007). The range of qualitative studies viewed critical thinking, clinical judgment, and clinical teaching strategies from a variety of lenses.

Other research method used was that of a quantitative methodological approach. In the literature, two examples had a quantitative experimental pre and posttest design. Angel et al. (2000) studied how creating nursing care plans through structured assignments or less formal assignments affected the development of critical thinking. The researchers tested nursing students with a standardized critical thinking exam at the beginning of the course, and then graded the same students on case studies they had completed on the first and last day of the clinical course (Angel et al., 2000). The researchers then compared the before and after grades to assess students’ development of critical thinking during the clinical course (Angel et al., 2000). The researchers included student demographics to determine if they factored into nursing students’ overall development of critical thinking; demographic factors included age, previous life experience, and whether or not the student worked during the school year. In one of their
conclusions, Angel et al. (2000) noted that learners directly out of high school had increased critical thinking development with structured assignments and specific guidelines, whereas students with more life experience had improved critical thinking development with a less structured approach. Naber and Wyatt (2014) studied the intervention of structured reflective journals and how they could affect critical thinking. These researchers used a pre and posttest design as well as an experimental and control group who did not receive specific guiding questions in relation to their reflective journals (Naber & Wyatt, 2014). Their results identified that the only significant change was in students’ truth-seeking abilities; otherwise there was no difference between the two groups (Naber & Wyatt, 2014).

Specific clinical teaching strategies addressed in the research included concept maps (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khan et al., 2012), nursing care plans (Angel et al., 2000; Marchiango et al., 2011), directed critical reflection (Daroszewski et al., 2004; Kautz et al., 2005; Marchiango et al., 2011; Mun, 2010), storytelling (Shieh, 2005); problem-based learning (Staun et al., 2010), and clinical postconferences (Hsu, 2007). In the few studies in which the same clinical teaching strategies were researched, the focus of the research differed. With the variety of clinical teaching strategies studied, none of the research addressed the clinical teaching strategies in the same way, so it is difficult to compare effectiveness or make judgments as to what strategies best foster critical thinking and clinical judgment. The next section of this literature review explores the underlying connections I noted throughout the literature in relation to the different clinical teaching strategies.
Throughout the studies reviewed, I noted common elements as inherent to student development of critical thinking and clinical judgment. Instead of looking at the individual teaching strategies and their specific learning outcomes, I pulled out common themes present in the literature. Among all of the different clinical teaching strategies studied, three common themes emerged. The first is how instructor feedback helps in the development of critical thinking and clinical judgment. The second is that critical self-reflection plays an important role in students’ development of critical thinking and clinical judgment. The third theme is that utilizing a variety of clinical strategies fosters critical thinking and clinical judgment.

In the research articles, the discussion section frequently mentioned regular clinical instructor feedback as an integral part of the clinical teaching strategies. Students stated that regular interaction through either verbal or written communication fostered critical thinking and clinical judgment. In Shieh’s (2005) study, students noted that discussion and questions in relation to their storytelling assignment fostered their critical thinking by encouraging them to examine and analyze situations in different ways. Staun et al. (2010) noted that their problem-based learning method created space for formative feedback, which improved students’ grasp of specific clinical situations and assisted students in understanding areas of strength as well as those that needed improvement. In studies that looked at concept maps, students commented that regular feedback on the their weekly concept maps enabled them to fill in the blanks and see the whole picture, thereby fostering critical thinking and clinical judgment (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005). Students also believed that enhanced communication and feedback from clinical instructors decreased stress in the clinical area.
and improved their capacity to learn and develop critical thinking (Marchiango et al., 2011; Mun, 2010). Nursing students believed that having close communication with their clinical instructors assisted in the development of autonomy and in taking responsibility for their own learning (Staun et al., 2010). On the other hand, if clinical instructors had a less involved approach, nursing students’ learning was negatively impacted (Hsu, 2007; Mun, 2010). As such, students believed that enhanced communication and feedback from instructors was important to developing critical thinking and clinical judgment. In some of the studies, scholars also looked at what clinical instructors thought of frequent feedback and communication.

Although clinical instructors were not the focus of the studies, many of the discussion sections included anecdotal clinical instructor comments (Angel et al., 2000; Gerdeman et al., 2013; Hicks-Moore & Pastirk, 2006; Kautz et al., 2005; Marchiango et al., 2011; Staun et al., 2010). The comments indicated that the clinical instructors were able to see students’ thinking through their specific teaching strategy and then were able to evaluate and guide students to points of information that they were missing or provide different ways to link data (Gerdeman et al., 2013; Hicks-Moore & Pastirk, 2006; Marchiango et al., 2011). Students also appreciated clinical instructors’ guidance, as the instructors were able to focus students’ thinking and ask questions that brought the students to deeper levels of understanding. Clinical instructors also mentioned that providing regular feedback improved students’ confidence and increased their comfort in approaching clinical instructors for support or with questions (Angel et al., 2000; Kautz et al., 2005; Staun et al., 2010). Clinical instructors also noted that with certain clinical teaching strategies the workload could be heavy in relation to marking several clinical
teaching strategy assignments and trying to understand the evaluation criteria (Angel et al., 2000; Daroszewski et al., 2004; Hicks-Moore & Pastirk, 2006). The heavy workload made it difficult for some clinical instructors to provide the full support that they wanted to give to students. In one study Hsu (2007) identified that cultural norms could negatively affect clinical instructor and student interactions. In addition, Mun (2010) noted that limited or negative interactions between students and clinical instructors could lead to increased nursing student anxiety, which could result in decreased learning and development of critical thinking and clinical judgment.

Although regular feedback and communication from the clinical instructors was not a focus of the research, I found it to be a common thread throughout the literature. The literature noted that evaluation and communication were both integral to development of critical thinking and clinical judgment. The ability for instructors to understand nursing students’ thought processes through strategies such as journals, concept maps, case studies, questioning, or journals was essential to providing appropriate feedback. Regular feedback and communication between clinical instructors and nursing students assisted students to understand knowledge that may have been missing, clarify thinking, or enable them to explore a concept further. In order to improve their own learning, the expectation was that students should explore and critically self-reflect on their practice.

Self-reflection is the ability to reflect in and on practice in a critical manner and it plays a key role in the development of critical thinking and clinical judgment (Daroszewski et al., 2004). Critical self-reflection was directly researched in a few of the studies (Daroszewski et al., 2004; Kautz et al., 2005; Staun et al., 2010), and it also arose
Students were expected to analyze their own actions and reactions both during and after clinical experiences. Students who were able to reflect on specific clinical situations and contemplate what worked or what they may change or do differently in similar situations developed increased confidence as well as critical thinking (Daroszewski et al., 2004; Kautz et al., 2005; Staun et al., 2010). The ability to self-reflect through directed forms such as journals (Daroszewski et al., 2004; Kautz et al., 2005; Khan et al., 2012; Marchiango et al., 2011; Staun et al., 2010) or through other guided methods such as debriefing, interviews, and overall evaluation of students’ own work (Gerdeman et al., 2013; Lechasseur et al., 2011; Shieh, 2005) gave students the ability to hear and critique their own actions. These strategies also encouraged students to delve into their overall decision-making processes, understand how and why they made decisions, and foster clinical judgment.

The research literature currently available in relation to clinical teaching strategies discussed a variety of teaching strategies studied in many different forms. The overall research indicated that different clinical teaching strategies assisted with the development of critical thinking and clinical judgment. I was able to identify common threads in the research articles discussion sections, even though the studies did not examine the same clinical teaching strategies. Within every effective clinical teaching strategy I found a component of enhanced communication with the clinical instructor either through regular written or oral feedback (Angel et al., 2000; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khatiban & Sangestani, 2014), or increased presence with the students (Khan et al., 2012; Staun et al., 2010). The clinical teaching strategies that were considered effective
were those that provided clinical instructors with the opportunity to understand their students’ thinking patterns and to guide students in situations when they were not doing enough or heading in the wrong direction (Angel et al., 2000; Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Khan et al., 2012; Naber et al., 2014). There was also a common finding that regular student interactions and feedback also increased student autonomy, confidence, and critical thinking (Daroszewski et al., 2004; Staun et al., 2010).

In situations in which evaluation tools had positive effects, it was because they created a stable template for clinical instructors to use, helping the instructors to understand not only what students were learning but also what critical thinking and clinical judgment actually were (Hicks-Moore & Pastirik, 2006).

In the studies that discussed perceptions of students who received regular feedback, students described experiencing greater confidence in what they needed to learn and being able to take steps to address their individual learning needs (Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khan et al., 2012; Khatiban & Sangestani, 2014). Some of these strategies also promoted student interaction and discussion, which encouraged students to share their experiences and to learn from each other (Daroszewski et al., 2004; Hsu, 2007; Khan et al., 2012). Students also believed that many of the strategies helped with putting all of the pieces together by methods of viewing the connection (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khan et al., 2012; Khatiban & Sangestani, 2014) or critically reflecting on experiences (Daroszewski et al., 2004; Kautz et al., 2005; Khan et al., 2012; Naber et al., 2014; Staun et al., 2010). In one case, students were asked to create stories about patients with specific health problems, which resulted in positive learning and fostering of critical
thinking, as they had to delve into not only the biomedical knowledge but also the psychosocial components of illness (Shieh, 2005). Students also believed that if they were provided the ability to choose their patient assignments, that choice could lead to increased autonomy and reflection and attainment of self-identified learning needs (Staun et al., 2010).

Students’ major issues with the different learning strategies focused on the instructions and evaluation. If the instructions were too complicated or long, students tended to either skim the information (Gerdeman et al., 2013) or they were unable to adequately follow them (Angel et al., 2000). Some students also found it difficult to readjust their thinking if the patient condition changed, so work that may have been done already became pointless in their opinion and required an excessive amount of work to fix (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006). To counter that idea, some students were able to learn how to adjust their priorities and rework the concept map to meet the perceived needs of the patient. The ability to reprioritize may have been affected by the clinical instructors themselves. Some students noted that clinical instructors with experience in the relevant clinical area were able to ask questions that stimulated higher level thinking and integrating data (Hsu, 2007; Khan et al., 2012). I found no other indicators as to what else stimulated higher level thinking and development of critical thinking for students and no direct input from clinical instructors regarding their methods.

2.4 Chapter Summary and Gaps in the Literature

School of nursing faculty and nursing administrators expect both critical thinking and clinical judgment as outcomes of nursing clinical education. While critical thinking has been extensively studied, including the creation of a variety of definitions and tests, I
found a lack of specific nursing focus for clinical teaching and evaluation. I also noted a variety of definitions for clinical judgment in both medical and nursing literature; while the definition created by Tanner (2006) is frequently used in nursing literature, it is not the only one. Considering this, it is difficult to both teach and evaluate critical thinking and clinical judgment, as there may be no specific goals or evaluation criteria to work from.

The research literature available in relation to clinical teaching strategies covered a variety of strategies from several different viewpoints. The majority of the research focused on students’ perceptions of clinical teaching strategy and whether these strategies helped develop critical thinking, clinical judgment, skills, and knowledge. In only one study by Khan et al. (2012) were the clinical teaching strategies of demonstration, reflection, problem-based learning, and concept maps compared to one another. Otherwise, every study addressed the clinical teaching strategies as unique approaches without discussing the impact that other techniques might play in nursing students’ development of critical thinking and clinical judgment.

The research literature currently available primarily focused on students’ perceptions of specific teaching strategies. I found no published research that focused on clinical instructors and their unique experiences in relation to clinical teaching, their use of different teaching strategies, their methods of evaluation, as well as their understanding of what critical thinking and clinical judgment are. Clinical instructors also can provide insight into the different clinical teaching strategies that they utilize while in the clinical education setting. In addition, the literature offered limited discussion as to facilitators and barriers that are present in the clinical environment to developing critical
thinking and clinical judgment. After conducting this review of the current research literature, I conclude there is an evident gap in the knowledge related to clinical instructors’ lived experience of teaching and evaluating students’ critical thinking and clinical judgement in nursing clinical education.
Chapter 3: Research Methods

3.1 Overview

In this chapter, I describe the research methods of the study. The aim of my study was to gain a better understanding of how critical thinking and clinical judgment are fostered by clinical instructors in the clinical setting. I chose a qualitative method of inquiry, as I planned to explore clinical instructors’ thoughts about how they foster critical thinking and clinical judgment in undergraduate nursing students. This chapter addresses how the study was done, including the research design, sampling plan, and recruitment methods. Following that is a description of how I collected, stored, and interpreted the data, including ethical and rigour considerations. The chapter concludes with the plan for dissemination of the main study findings.

3.2 Methodology

3.2.1 Interpretive description.

Interpretive description is a methodology that was developed by Thorne, Kirkham, and MacDonald-Emes in 1997 as a method of acknowledging the unique contextualized quality of human experiences and its interactions with the applied discipline that is nursing. Interpretive description was inspired by phenomenology, grounded theory, and ethnography, but allows for a more systematic practical approach to the research (Thorne, 2008). As such, interpretive description uses as its structure the applied disciplinary knowledge that can come from an applied discipline such as nursing. This structure and integrity of purpose can also function as the theoretical basis for a research study, just as the entire foundation of nursing knowledge can create the structure (Thorne, 2011). Interpretive description allows for and acknowledges that nurses come
into the field of research with biases as well as their own insights into the human experience that need to be examined and identified as the research continues (Thorne, 2008).

In certain types of qualitative research, the expectation is to come to the study with no preconceptions and let the process inductively lead the researcher during the analysis (Holloway & Wheeler, 2010; Thorne, 2008). In interpretive description, nurses’ background knowledge and overall understanding are used to inform the structure of the design. Interpretive description suggests that the researcher has a firm understanding of the available information in relation to a study. Having a firm grasp on the literature and other available information helps to inform the researcher as to the necessity of the research. The literature also assists in guiding and providing a strong rationale as to choices made during the research process. Interpretive description also identifies the importance of coming into the research with the honest intention of creating and supporting nursing practice as well as making available new knowledge that could help guide practice goals (Thorne, 2008).

Acknowledging the methodological attributes that comprise interpretive description was an appropriate fit for my study, as I explored clinical instructors’ perspectives of what facilitates or inhibits critical thinking and clinical judgment development in clinical nursing education. Interpretive description allowed me to research this from the clinical instructors’ viewpoint, capturing the thematic patterns as well as individual instructors’ experiences and words. It also helped me to look beyond individual perspectives and engage in an interpretation of their relevant experiences. This then may help to guide future understanding of how critical thinking and clinical
judgment are fostered in the clinical setting. Interpretive description allowed me to adhere to qualitative inquiry without the potential for methodological slurring that can occur when trying to match other methodologies to the applied discipline of nursing practice (Thorne, 2008).

3.2.2 Positioning of the researcher.

The focus of this research came from my personal experience as a clinical instructor and a full-time faculty member who supports clinical instructors. While I have not taught undergraduate nursing students, I believe that there are similarities that influenced my choice to do this study. I recognized through my own practice that there were several areas, including my understanding of critical thinking and clinical judgment, that I had not fully explored, and this could and did impact student learning. I have also spent hours in clinical practice devising and implementing clinical teaching strategies to support students’ development of critical thinking and clinical judgment. I am curious about the strategies other clinical instructors use to support nursing students’ development of critical thinking and clinical judgment. Throughout the research my own experiences, education and readings have influenced and guided my decision making. Throughout this study I have used critical reflection and journaling to note these influences so that they would not impede the overall themes that emerged from the data.

3.3 Setting

My research focused on exploring undergraduate clinical nursing instructors’ experiences of facilitating critical thinking and clinical judgment. To accomplish that I chose to research two undergraduate nursing programs associated with large universities in the Lower Mainland of British Columbia as the settings for my study. These
undergraduate nursing programs prepare students to practice as RNs across a range of health care settings. I selected these two undergraduate nursing programs through applying specific criteria. There are seven schools of nursing in the Lower Mainland that provide programs that prepare students to be RNs (College of Registered Nurses of British Columbia, 2015). Within the seven schools of nursing there are several variances regarding how the programs are run, and I utilized this information to determine which undergraduate schools of nursing would be the best setting for my study. The undergraduate schools of nursing have different entrance qualifications, with some accepting students directly out of high school, others requiring a previous university degree, and some enabling nurses to transition from licensed practical nurse to RN designations (Paoluzzi, 2012). There are also differences in the length of program from 2 to 4 years. The undergraduate nursing programs also have different educational methods, including the manner in which they provide clinical education. Since my study specifically related to nursing clinical placements led by clinical instructors, the schools I chose had programs that delivered instructor-led clinical education; however, the programs varied in entrance requirements, program length, and class and clinical group sizes.

3.4 Sample

The sample population was comprised of clinical nursing instructors who had taught an instructor-led clinical placement in an acute medical or surgical ward. The sampling strategy that I used was convenience with the aim of accessing clinical nursing instructors with a range of instructing experiences (Holloway & Wheeler, 2010). Inclusion criteria included clinical instructors who have done at least one clinical
placement an acute care medicine or surgical clinical placement within the past year. I also had clinical instructors with different educational backgrounds, including those with undergraduate degrees, graduate degrees, or specialty certifications in nursing, education, teaching, and learning or otherwise. Qualitative methodology and interpretive description allow for flexible sampling size, which can be guided by the ongoing concurrent analysis (Holloway & Wheeler, 2010; Thorne, 2008). Allowing for this, I was able to recruit eight nursing clinical instructors with a variety of teaching experience and educational preparation for my study.

3.5 Recruitment

In order to contact potential participants who would be current clinical instructors, I communicated with current faculty supervisors and support staff of current and recent clinical instructors at the two universities. I requested that they forward information related to my study to clinical instructors who met inclusion criteria, as mentioned above. I also directly contacted clinical instructors via email if their emails addresses were readily available online. Another method of recruiting clinical instructors that I used was putting up flyers around the schools of nursing with each university’s permission. The flyers were visible to prospective clinical instructors and nursing students who might pass on the information related to the study to their clinical instructors. I attempted snowball recruitment, with no success. Recruitment information included a basic description of the study as well as contact information for my supervisor and myself. From April 2015 to September 2016 eight clinical instructors who wished to participate contacted me via email or phone. I set up interviews at a time and place that was convenient for the clinical instructor and me.
3.6 Data Collection

3.6.1 Semistructured interviews.

To collect data for this study I used semistructured interviews. I arranged to conduct the interviews at a time and place that was both private and convenient for the nursing clinical instructor and me. I used a semistructured interview process, which contained a set of open-ended questions that helped to guide the interview process and to ensure that there was a certain amount of consistency between interviews (Holloway & Wheeler, 2010; Thorne, 2008). Over the course of data collection, I adapted the questions and added further questions to clarify information from previous interviews. The interviews included specific guiding open-ended questions and then finished with demographic information (see Appendices A and B). The interviews lasted between 45–90 minutes. I audio-recorded the interviews and documented observations and behaviours that the clinical instructor displayed, which I then integrated into the transcribed interview notes (Polit & Beck, 2012). I transcribed the interviews myself and removed any identifying information in the process of transcription. I then reviewed the transcripts to ensure accuracy of transcription. I then read through the interview transcripts to identify common themes from the interviews and analyzed the data using an interpretive description approach.

3.6.2 Participant demographic information.

I collected demographic information to assist me in understanding the composition of my participants. Specifically the information collected was that of gender, age, level of education in relation to nursing, years of nursing experience, the number of clinical teaching experiences, if participants had specific education related to nursing
education, and whether or not they had done all their teaching with the same school of nursing. The participant demographic questionnaire was asked at the end of the interview with the intention of ensuring that participants had the chance to talk about everything they believed was relevant to the interview questions. This approach also allowed me to further clarify components of the interview. The participant demographic information provided the context for describing the sample.

3.6.3 Reflective journaling.

To track where I was in the data collection and analysis, both conceptually and subjectively, I used a reflective journal. I kept copies of my coding so that I could go back and review why I had made certain decisions (Thorne, 2008). I also used the journal to guide how I inductively analyzed the data. The reflective journal was not necessarily part of the data for analysis; rather, I used the journal to record why I made certain choices in research structure, data collection, and data analysis (Holloway & Wheeler, 2010; Thorne, 2008). The reflective journal also assisted me in tracking and identifying personal biases that I held as I entered into the research as well as any biases I may have developed throughout the process of the research (Thorne, 2008).

3.7 Data Analysis

The goal of qualitative data analysis is to interpret the contextualized human perspectives into an understandable interpretation (Holloway & Wheeler, 2010; Polit & Beck, 2012). Data analysis needs to be able to capture participants’ words and create new knowledge that is relevant to the discipline of nursing. There are many different methods or methodologies to explore qualitative data; in this case, I chose to use interpretive description to analyze the data obtained in my study.
I began data analysis as soon as the first interview was completed. Interpretive description allows for constant comparative analysis, so as each interview provided new insights I was able to clarify the findings and further explore common themes or ideas that I saw in the data. The ability to adjust my interview questions to clarify data allowed me to explore specific subject areas further. I also used thematic analysis while interpreting the data; in doing so I took individual participants’ words, thoughts, pieces, and their “aha” moments and codified them into organizational themes. At the beginning of this process, my large themes related to the questions, and I coded data under each of these themes. Taking that into consideration, I remained aware of the importance of not becoming overly committed to a theme name or idea, as it might limit my ability to dig further into the data and instead encourage me to remain at a surface level of analysis. As each organizational theme was associated with data, I further broke the themes down into relevant subthemes that focused on the data with the aim of conceptualizing the themes into a cohesive theory or understanding of the topic. To verify the themes, I reviewed the interview transcripts to ensure the validity of the content in each theme. I then developed the information into a new theoretical understanding of how clinical instructors both understand and facilitate the development of critical thinking and clinical judgment in clinical nursing education.

Once I created the organizational themes, I spent time further working with the data, which I share in the next chapter. In the final chapter, following the advice of Thorne (2008), I situate the findings into the available literature and discuss how my findings are relevant to the current practice of clinical nursing education.
3.8 Rigour and Reliability

In all qualitative studies, it is essential for accountability and evaluative processes to be taken into consideration to assist both the researcher and the reader in assessing the quality of the research (Holloway & Wheeler, 2010). A variety of strategies can be used to create research study results that are considered trustworthy and of quality. Although there are no common agreed-upon standards of what assures validity and trustworthiness in qualitative research, the aim is to create a methodologically rigorous study in which the reader can understand how and why specific conclusions were reached (Holloway & Wheeler, 2010).

In my study, I used several strategies to demonstrate validity, trustworthiness, and rigour. Given that I applied the interpretive description methodology, I used the strategies Thorne (2008) discussed in the chapter on enhancing credibility as well as suggestions from Holloway and Wheeler’s (2010) section on establishing quality.

The first strategy that I employed was that of epistemological integrity, as described by Thorne (2008). I strove to ensure that the research questions that I asked fit within the overall design and goal of the study. I established epistemological integrity by basing my research questions on perceived gaps in the current literature, specifically as they related to how clinical instructors facilitate critical thinking and clinical judgment. I maintained epistemological integrity by ensuring that as I worked through the data gathered I focused on the research questions in relation to the design and understanding that I started the study with.

Another method I applied to enhance credibility was through the use of analytic logic (Thorne, 2008). This concept refers to the ability to clarify the researcher’s thinking
in relation to how the inquirer has made decisions related to the structure of the research design. To do this, I provided an auditable trail of thinking through the use of a journal, in which I documented my decision-making processes for myself as well as others to understand how I structured my research study. The journal helped me to critically reflect and determine my personal biases and how those affected decision making in the overall structure and inductive processes that occurred during my qualitative research. This also compares in a sense to reliability, as described by Wheeler and Holloway (2010). The goal of reliability is to ensure the instrument is consistent and can be replicated by providing a clear structure and logical formation to create the groundwork for the process. However, reliability needs to be tempered between trying to create a consistent structure without losing the creative process that can be inherent in qualitative research (Holloway & Wheeler, 2010). Interpretive description supports creativity in its allowance of various data collection strategies, such as adjusting semistructured interview questions to further explore themes that emerged in the original interviews as well as themes supported from the available literature (Thorne, 2008). To accomplish this, as previously mentioned, I kept a reflective journal that traced my inductive process throughout the research. I also tried to maintain the perspective of relevance to nursing practice, and I focused the research toward relevant practical goals in relation to the development of critical thinking and clinical judgment.

Another measure of reliability Thorne (2008) discussed is that of disciplinary relevance. To maintain rigour I strove to ensure that as I went through the process of nursing research my overall goal was to enhance nursing science and that the research I
did directly related to nursing practice and aimed to create practical goals that could be used in the process of nursing clinical education.

3.9 Ethical Considerations

In conducting this study I followed the ethical guidelines detailed in the *Tri-Council Policy Statement* (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2014). I received ethical approval from the UBC’s Behavioural Research Ethics Board as well as approval from the relevant behavioural research ethics boards from which the clinical instructors were recruited.

With human subjects, protection of both the subject and the information is paramount. To do this, I provided potential participants with information related to the study and to the voluntary nature of the study via email before conducting the interview, and I reviewed this information at the start of each interview. I also reviewed the informed consent process. Then I received informed consent from each subject, with the acknowledgment that all of the information gathered during the interview could be withdrawn from the study at the participant’s request.

I transcribed the interviews verbatim and removed all sensitive information from the data such as the names of participants, hospitals, students, units, and universities as well as any other identifiers (Polit & Beck, 2012). I applied participant codes (e.g., Participant 1, Participant 2, etc.) to organize and analyze the data. I have stored all the original data, taped interviews, identifying data, transcripts, and notes in a locked area with no public access and kept the interviews on a password-protected memory stick. I also stored coded and themed data on a password-protected memory stick I have kept and
will continue to keep the storage device and all written information in a secured area of
the primary researcher Dr. Baumbusch’s office until the appropriate amount of time has
passed, at which point all records and data will be destroyed. All data that I publish or
have used are free from identifying properties and maintain anonymity of the
participants, while maintaining the intent of the information.

3.10 Dissemination

I intend to publish the results of my research in a peer-reviewed nursing journal
with a focus on nursing education. If possible, I will also share my research results with
faculty involved with clinical instructors who have participated in my study. I also intend
to share my research results at relevant education and nursing conferences.

3.11 Chapter Summary

This chapter outlined the methodology I used in my research. I discussed the
research’s qualitative design with an interpretive description as its methodological
structure and the nursing discipline as my theoretical structure. I also outlined how I
obtained a small sample group of clinical instructors from two universities in the Lower
Mainland who have undergraduate nursing programs. I completed data collection using
semistructured interviews and a personal reflective journal. Data analysis occurred
through thematic analysis. I followed all ethical guidelines set by the UBC Behavioural
Research Ethics Board as well as the ethics boards of interview participants’ associated
universities. Dissemination of the information will focus on publication of a journal
article, sharing the information to relevant stakeholders, as well as presenting the study
findings at conferences that focus on nursing and education.
Chapter 4: Findings

4.1 Introduction

In this chapter I present findings from my study of nursing clinical instructors and how they facilitate the development of critical thinking and clinical judgment in clinical education experiences. I begin my discussion by providing a description of my sample of participants. I then discuss the themes generated from the data. I derived four main themes: (a) conceptualization of critical thinking and clinical judgment, (b) indicators of critical thinking and clinical judgment, (c) strategies to develop critical thinking and clinical judgment, and (d) facilitators and barriers to the development of critical thinking and clinical judgment. These themes are composed of subthemes, which further explore and express the initial themes (see Figure 1). In the next sections I use quotes from the participant interviews to further develop understanding of the themes and subthemes. To maintain confidentiality, I cite direct quotes using the participant codes Participant 1 through to Participant 8, and, to maintain participant anonymity, I have removed all identifying information from participant quotes, including names of hospitals and the schools of nursing.
4.2 Participants

The participants were clinical instructors who worked at schools of nursing in Vancouver, British Columbia. All of the participants were female and ranged in age from 26 to over 60 years. Their breadth of nursing experience ranged from 4 to over 40 years, while their experience as clinical instructors ranged from two clinical education experiences to more than they could remember and easily quantify, but they estimated their number of clinical nursing education experiences at greater than 100. Of the eight participants, five of the clinical instructors had done all of their teaching for one school, while three of them had taught at more than one institution.

In terms of educational experience, all of the participants had completed an undergraduate degree, with three of those were working towards their master’s degree and the other two having the intention of applying for a master’s program within the next year. Three participants had completed graduate-level education, which included both
master- and doctoral-level education. However, only one participant had specific education for being a clinical instructor, and another had completed graduate work specifically related to clinical education. The other participants had completed a variety of courses that addressed clinical nursing education, including clinical instructor orientation, but these courses did not provide a certification or recognition of completion in any form. All participants stated that they had prepared for teaching clinical education by reading material related to clinical teaching, working with millennial students, and reviewing information relevant to their clinical education site.

4.3 Critical Thinking

The first theme I derived was critical thinking. Participants used the term critical thinking but did not have a specific definition for it. In seven of the eight interviews, the participants described what they considered critical thinking to be. One interviewee came prepared with a definition and notes about her understanding of critical thinking. When asked about critical thinking, participants tended to use different terms such as “nursing process” (Participant 3), “clinical reasoning” (Participant 1), or “clinical impressions” (Participant 5), or statements such as “show me the evidence” (Participant 5). Participants noted a sense of nonspecificity to critical thinking. As one participant put it, “I think I am doing it I think, but I am never putting those terms to it” (Participant 3). Participants also reported that the term critical thinking itself may not have been the appropriate focus, as it is “a bit of a buzz word—romanticized” (Participant 5). As I took that all into consideration and further explored participants’ thoughts of critical thinking, two subthemes developed, the first being the conceptualization of critical thinking and then
what would happen without critical thinking. As such, I begin by discussing how clinical instructors have defined critical thinking in their practice.

4.3.1 Concept of critical thinking: A process.

The first subtheme that emerged was how the clinical instructors defined or conceptualized critical thinking. The clinical instructors who took part in this study believed that critical thinking is a process that increases with experience. As one participant noted, “Critical thinking and the development of a nurse doesn’t happen here. … It happens as a process, and I really think it is a bit of roller coaster” (Participant 5). When describing critical thinking all of the participants used the term “process,” which is an action-oriented verb. Using the term process for critical thinking associates the action of critical thinking with a series of steps or a path taken in order to achieve a specific goal. Participants described the first step of critical thinking as being initiated by inquiry, inquisitiveness, or a problem. Clinical instructors noted critical thinking is “initiated by a problem in front of you” (Participant 4), the “drive to dig deeper” (Participant 4), and by “asking why questions” (Participant 3) or starting with “knowledge gathering” (Participant 2).

Participants also described critical thinking as a melding of several types of knowledge. This involves information that is patient specific, which is accessed through a comprehensive patient assessment, including direct communication with patients, reviewing the patient history, and in some cases interacting with the patient’s family. Another part of the process involves understanding the context of the unit, the nurses, and the overall flow of patient care and how that could impact potential interventions. One
participant also focused on ethical modifiers and knowledge of self when critically thinking:

It has to be done so it is not like … like your biases. You have to know if you are dealing with a nurse [that] you are not putting your biases on people. And also when in the communication, which would be empathy and also with integrity, so that is what to me, you know, … is critical thinking. (Participant 6)

Participants explained the process of taking that information and integrating, analyzing, and synthesizing it to decide upon a course of action or a proactive plan and, as they plan action, also preparing for evaluating the outcomes.

So … that is my number one thing that I guess look at for my students in relation to my critical thinking…. I want them to tell me their nursing process and their nursing priorities, and from there I can assess, like, “How are you … applying what you have assessed into looking out for the future? Then are you able to reevaluate your priorities?” (Participant 8)

When creating the course of action, participants expected critical thinking to be flexible and adaptable to the current needs of the patient or patients and the overall context of the unit. One participant described this as follows:

Being able to expect complications, being able to be proactive on those type of complications, and being able to pull in multiple sources of data is always important, and that is part of what I think is critical thinking for these students. (Participant 7)
Critical thinking also needs to have a component of critical reflection: “So I would say that critical thinking is a process of reflecting on situations and understanding that the answers come from different ways of knowing” (Participant 4).

In summary, participants described critical thinking as a flexible, adaptable process that clinical instructors employ to gather integrate, analyze, and synthesize data, choose interventions, and then evaluate the outcomes. Not all of the participants listed the elements of critical thinking in that specific order, but all of them have used some or all of the steps. Understanding how clinical instructors conceptualize critical thinking leads into how they integrated critical thinking in their nursing clinical education.

### 4.3.2 What would happen without critical thinking?

The participants shared how they viewed critical thinking as coming into play during clinical nursing education and their teaching practice. When discussing critical thinking and examples, participants focused on what would happen if students did not use critical thinking. Were that the case, students would not be able to access all of the nursing knowledge and would be unable to manage full patient care.

They can have a simple patient, for example, and if there is not the drive to dig deeper on that patient, if critical thinking is not laid on top of the whole plan for the day, if that makes sense. They are otherwise performing skills, and they feel kind of good about that or feel kind of bored about that, but without critical thinking they aren’t getting any exposure to nursing knowledge and clinical judgment, I would say. (Participant 4)

Students who do not use critical thinking would be skills focused and would provide no evidence that they were able to see the bigger picture. Such students would also have
difficulty moving beyond the book or theoretical knowledge and integrating lessons learned into providing appropriate nursing care.

They live in their heads, and they’ve done so much in textbooks, and textbooks speak in generalities, and students tend to speak in generalities, and I want the generality to come away, and I want us to look at this person. (Participant 5)

Knowing that students need to move beyond book knowledge and use a higher level of thinking, participants also discussed the difficulties they experience in assessing critical thinking. Beyond knowing that it develops with experience, participants did not have a guide or specific markers to use as clear identifiers of critical thinking. I discuss how participants evaluated critical thinking in the following section. I also explore participants’ views of critical thinking, how it leads to clinical judgment, and how the two concepts interacted.

4.4 Clinical Judgment

A second theme that surfaced in the data was that of clinical judgment, and three subthemes evolved out of it. The first subtheme is how clinical instructors conceptualized clinical judgment, including the use of alternative concepts or names. The second subtheme explores the relationship between clinical judgment and critical thinking and the integration of these concepts into clinical nursing education. The third subtheme examines the concept of being the nurse.

4.4.1 Conceptualization of clinical judgment.

While participants described critical thinking as a process or an action-oriented term, the participants thought of clinical judgment as a noun. Participants viewed clinical judgment as the decision that arose from critical thinking.
So that is the actual decision—your interpretation … when you are making a decision. So, for example, for critical thinking is why, why, why, but clinical judgment, it is coming to that nursing diagnosis or just interpreting why you’re doing what you are doing. Kind of like, how did you come to that decision you are making? That [is] clinical judgment. (Participant 3)

Participants also considered clinical judgment to be dynamic, describing it as closely linked to the context of practice and its relation to current patient information and assessment. The clinical judgment, making the decision, was the student’s ability to move forward in his or her practice, choose a plan of care, and implement it: “So it is using your knowledge and experience and resources and colleagues to kind of weigh up what is going on to make a decision in the clinical like context kind of thing” (Participant 2).

With the implementation of a plan, students can also evaluate and reflect on their decisions, which participants noted is part of the critical thinking process.

[It] helps with clinical kind of judgment just thinking about, what was the situation you encountered? So thinking about the situation. What were the good and bad? You know, what was the kind of conclusion, and then you know what … recommendations, what would you do differently next time? So that sort of action piece at the end. (Participant 2)

Participants clearly understood the focus of clinical judgment to be the decision. Participants also mentioned that clinical judgment was not a term that was frequently used in clinical practice; instead, they alluded to other terms used as a means of understanding what they were looking for in the nursing students.
So you know what I don’t specifically say like looking at clinical judgment. It’s whatever experience they’ve had and how they are reflecting on it, and some students, yeah they … would say, “OK, [I] would do this differently,” or not, and then that is when my feedback would come in for clarification or things that you could do a little bit differently. Yeah, you could actually kind of see their clinical judgment in there too. How they are making decisions…. Because you never think about clinical judgment and critical thinking like that. (Participant 3)

The participants used terms such as “clinical impressions” (Participant 5), “nursing knowledge” (Participant 4), “clinical professional discussion” (Participant 6), and “nursing diagnosis” (Participant 3) as a means of conceptualizing clinical judgment in practice. Other participants stated they did not use the term at all and had not put it into practice: “I have never use the term clinical judgment, but I do use critical thinking. Yeah … so it makes me wonder now” (Participant 8). Participants described efforts to name and conceptualize clinical judgment to students as a way of getting students to understand and see not only their decision making but also the decision making of the RNs that they were working with. Participants provided different phrasing in an attempt to further clarify and conceptualize different ways of putting the pieces together, seeing the larger patterns, as well as to provide a reference point for developing teaching strategies and discussing evaluation.

4.4.2 Critical thinking: The process leading to clinical judgment decision.

The terms critical thinking and clinical judgment have both been extensively conceptualized in the nursing literature, but in discussion with participants I noted a distinct lack of a specific concept or definition used. As participants explored through
their own teaching practice, they created their own conceptualization of what critical thinking and clinical judgment meant to them. The focus that critical thinking was the process that led to clinical judgment was clear in participants’ discussions. Participants noted that both terms worked together and were two parts of a whole.

I really feel like you need critical thinking to have clinical judgment, because then you…. To make a clinical judgment you need to know … to be able to look out like to look into the future: What are we? What are the risks we are looking out for? (Participant 8)

The concepts of critical thinking and clinical judgment were not necessarily the sole focus for participants. Instead, they used the concept of thinking like the nurse, which I explore in the next subsection.

4.4.3 Thinking like the nurse.

This type of thinking was difficult to quantify, especially for those teaching these nursing skills at the practical level. With no specific conceptualization and definition for what critical thinking and clinical judgment were, the participants instead focused on whether the students were able to “think or be like the nurse.” This also translated into how the participants evaluated nursing students, so instead of saying they were able to critically think or make clinical judgments, they would focus on what competencies they needed to meet, and then work on trying to promote nursing students to “think like the nurse.”

So just knowing that we are always kind of doing the thinking like a nurse. They have started on that journey, and it’s ongoing, and it’s not something you are going to perfect and then move onto the next thing. (Participant 2)
Participants offered no specific conceptualization of what thinking like the nurse was, but they did expect students to take on the role of the nurse and, in essence, critically think and make clinical judgments.

Once I know that they have a lot of critical thinking and when the patients may start, you know, showing lots of signs of not doing well, that is where clinical judgment is ‘cause then I start questioning them: “What would you do? You are the RN now.” “No,” they say, “I am only a student.” I say, “No, you are the RN now. What are you going to do in this spot?” So that is how I get the clinical judgment going. (Participant 6)

Similar to critical thinking and clinical judgment, the idea of thinking like the nurse also requires experience and time: “They are so new. They don’t know; they don’t know how to be a nurse. So that thinking comes, but I don’t think we can always expect when we want to see it all the time, you know?” (Participant 4).

Participants indicated critical thinking and clinical judgment were not specifically defined and conceptualized; furthermore, they were not expected outcomes and, therefore, not part of the evaluation process. Participants did refer to the competencies as proficiencies students were supposed to achieve and demonstrate, but given that discussing specific competencies was not the focus of this study, I did not explore them further. Although the competencies are part of the evaluation process, when asked, the participants still believed that a core component ability to practice as a nurse is the ability to utilize different ways of knowing the patient, the history, the context, as well as the nurse’s own theoretical knowledge and experiential knowledge to guide the management of the patient. The participants considered critical thinking and clinical judgment as
important concepts to consider, with the conceptual focus for clinical nursing instructor centring on the broader concept of thinking like a nurse.

4.5 Indicators of Critical Thinking and Clinical Judgment

With critical thinking being the process and clinical judgment the decision, participants presented no specific separation between the two concepts when discussing methods of identifying how they viewed these in the clinical setting. Instead, the participants focused on indicators and evaluation that spoke to “thinking like a nurse” (Participant 1). That essence of being a nurse, although not fully conceptualized, remained an undercurrent throughout all dialogues.

When I asked for specific examples, participants offered minimal answers, and they were unable to provide specific ideas about how and why they knew the student was critically thinking and making clinical judgments: “No, there is no specific thing. It is a global thing because there are so many pieces to being a nurse” (Participant 1). The participants described various ways of knowing that were multidimensional and involved several small cues that identified whether a student was able to demonstrate critical thinking and clinical judgment.

I can just see it. You can just see it even with a lot in their assessment in their documentation. It will be a lot better than the first documentation they put in, ‘cause this time around they will have a lot more to document. (Participant 6)

Participants used the term indicators when discussing how they evaluated the student’s ability to critically think and make clinical judgments in the clinical setting. Several subthemes emerged in relation to indicators and evaluation of critical thinking and clinical judgment: (a) safe practice and patient safety, (b) the student’s ability to
effectively communicate, (c) confidence, and (d) taking ownership. To better explore the subthemes, I begin the discussion with an understanding of how the concepts of critical thinking and clinical judgment were actualized in the clinical setting.

4.5.1 Safe practice and patient safety.

As part of their indicators and evaluation, participants frequently mentioned the idea of the student nurse being safe: Can they be safe, and are they practising safely? Although the participants never identified specific behaviours or habits that would deem a student to be safe versus unsafe, they did suggest student habits that would be considered flags or issues that the clinical instructor may need to follow up on. One participant noted, “I start at that very basic safety level. If you can’t keep yourself and somebody else safe, then we have a problem” (Participant 5). Participants identified a variety of issues that would be considered a flag for unsafe practice that encompassed skills, communication, theoretical knowledge, and self-awareness.

When discussing skills, the participants were aware that students needed to be able to focus beyond the task and see the whole patient. However, their priority was that the student was able to safely perform the task, which then opened the door for a greater chance of being able to critically think through the skill the next time they completed it. One interviewee stated, “Just doing a simple assessment. Evaluating how they are documenting and making sure they are safe. And then critical thinking is like, ‘Okay, now I have time to tell me what is happening’” (Participant 8). Participants described initiating safety through watching students perform a skill for the first time, and if the students were able to perform the skill safely, then the clinical instructor would allow them to complete the task on their own the next time. If the student was not able to safely
complete the task, including remembering to talk to the patient and explain what they, as
the student, would be doing, the participant would go with the student a second or third
time until the clinical instructor believed the student could complete the task safely. Prior
to and after the skill, it was important for clinical instructors to ask questions to clarify
why the student was doing the skill, the plan during the skill, as well as potential
problems that could arise. If students were unable to answer those questions as well as do
the skill, then they would be considered unsafe, as they were not able to take the entire
context of the issue into consideration.

If [the student is not] looking [information] up, then I know that they did not
connect the action with what they should have making sure that patient is safe.

Because safety is the underlying … objective for all of us nurses—that the patient
is safe in all aspects, not just medication. (Participant 6)

Clinical instructors focused on ensuring that students took into consideration the patient’s
entire situation (i.e., the whole picture), not just one specific piece or idea. Participants
identified the importance of this around the skills of patient assessment, medication
administration, and patient mobilization. All of these basic nursing skills require students
to be able to use basic theoretical knowledge as well as start to apply it to practical
situations. As such, students who are unable to make basic decisions are considered
unsafe.

So it’s a matter of knowing that this person’s blood pressure is 110 over 60, which
is far below their trend, and so I don’t I think I should stand them up right now.

So they have … taken information; they analyzed in some way, and then been
able to make a judgment—more than somebody who says 110 over 60 is fine, let’s get them up to the bathroom. (Participant 5)

Another safety component that the participants discussed was the idea that students understood their own limitations. Participants noted that students are not expected to know everything, and they cannot know everything to manage patients, especially in this phase, as they are still learning to connect nursing theory to practice and managing actual patient care with all of the relevant issues associated with it. Participants noted that it is important for students to know that it is okay to ask for help.

Even like the basic personal care, like when they are changing the patient’s pants, let just say. Do they know what supplies to get? Do they know how to approach the patient? Again it has to do with the experience, and it has to do with the confidence that all kind of comes into play…. Some students, they try to do everything themselves, and the patient is totally dependent, can’t even move one side of their body, and they stop. So think about this, so you are doing this all by yourself, do you think this is safe for yourself and the patient?… You are making [them] think, kind of like, “Oh yeah, like, I could actually ask for help.” (Participant 3)

As previously noted, participants believed it was important for students to understand the limitations of what they could do on their own and when to ask for help. In discussing this, the dialogue often transitioned into when the patient care was more than students could safely manage: “Also there is insight, so you have a patient who wasn’t doing well. You sought help. We took a patient away—that is not a bad thing. Are they understanding the scope and safety?” (Participant 1).
Along with understanding the scope of their practice, safe practice included students’ abilities to reflect on their practice and really determine if they were making safe decisions. If they were not making safe decisions, students needed to be able to recognize that and, if possible, ask for help. “So, you know, what were you thinking?… I like it when they can actually say to me, ‘I don’t think I was thinking.’ Oh, okay, good” (Participant 5). Participants valued a student’s ability to communicate, and that was also a significant theme that emerged when reviewing the data.

4.5.2 Effective communication.

The ability to effectively communicate was considered an essential indicator of critical thinking, clinical judgment, and being a nurse. Participants separated student communication into three distinct parts that they evaluated and used as indicators. The three main areas of effective communication that emerged were the ability to communicate with the clinical instructor, written communication, and communication with others, which includes the patient, the patient’s family members, fellow students, and other members of the health care team.

To identify critical thinking and clinical judgment in nursing students, participants frequently mentioned asking questions and expecting students to “show them the evidence” (Participant 5). As indicators, participants identified a student’s ability to effectively communicate with the clinical instructor and to answer questions about all aspects of care that is to be given and has been given. While students’ ability to answer questions when asked was considered a basic level of critical thinking, as students’ abilities to critically think improved, participants noted that students would come to the
clinical instructor to discuss their patients, ask questions, clarify their thought processes, and come to a decision from there.

[I look at] how much cueing they need or prompting, which you know is okay at the beginning, but then you know you’re wanting them to kind of see them to be more … coming to you with their kind of thinking as well. (Participant 2)

Other clinical instructors echoed this as a method of identifying if the student was critically thinking and understanding.

You have to see how they are doing it with the patient. The less you have to talk to them the more you know that they are thinking it out themselves. But if you have to keep after them and after them, then you know they just don’t have it, and then you have to make sure that they don’t get complex patients. (Participant 6)

The participants noted that if students had the base knowledge and were starting to integrate it into their assessments as well as into skills, then students would actively seek out the instructor to communicate their findings and plan. If students are proactively recognizing patterns, identifying problems, and suggesting solutions, the participants indicated that this was a good indicator that they were demonstrating critical thinking. As students further improve, these discussions increase to not only a direct communication with the clinical instructor but they are also noted in students’ written documentation.

While verbal communication and the ability to answer questions when asked are critical in nursing, it is also important to communicate relevant information through documentation. Participants noted that with increased knowledge, experience, and ability to critically think students’ charting became more comprehensive. Students’ documentation would improve, which participants noted by the use of appropriate
nursing and medical terminology as well as students including all of the relevant assessment data and interventions provided. Participants stressed the importance of students being able to identify what information needed to be in the charting, what was relevant, and what was extraneous. In discussing a student who was not critically thinking and understanding, one participant stated,

I wonder whether there is a knowledge deficit because her charting is very primitive. She will throw in a big word into her charting but the rest of it is just enough, so there’s a few things that are happening that make me quite concerned.

(Participant 1)

As such, participants noted the use of charting to identify gaps. Clinical instructors could also see growth as students’ critical thinking improved.

You can just see it, even with a lot in their assessment in their documentation, it will be a lot better than the first documentation they put in. ‘Cause this time around they will have a lot more to document. (Participant 6)

Participants noted student documentation became more robust with the students acknowledging and sharing the increased amount of information that they were able to discern from their assessments as well as understanding the patterns that were appearing in patient care. Students were also able to reflect on the interventions that had been documented as they were solidified in their mind due to documentation.

The other element that participants found important was to see students’ thought processes documented. Although for some students reflective journals were not mandatory, self-evaluations were, and these documents provided valuable insights into students’ critical thinking. Participants were able to see students’ thought processes as
well as their reflections regarding what they had learned and what they would change the next time they approached a similar situation. It also provided the participants with insight into what students were experiencing, especially if the students noted something that they had missed, or something that they had taken to heart during a discussion with the clinical instructor.

I will give an example of a student who wrote a journal on this and said that it was interesting for him to hear an instructor telling him this that there’s lethal skills and that there’s safe skills, and I investigated this whole thing, and I even found that catheter care is a lethal skill. And so he wrote it all out—this student wrote it all out, and he said and he found out all the evidence to prove that, yes, if catheter care isn’t given to a patient as the principles are taught, it leads to sepsis, and sepsis leads to death. So once you get them going, then all of a sudden they do start thinking. (Participant 6)

Similarly, another participant noted,

I miss on those opportunities, but the majority of time they do reflect on that in their journals. I am like, “Ahh, I didn’t even think about that,” or on their postconferences, when the student presentations are done, when they are doing their sharing of something that has happened during their clinical [practice], “I wasn’t aware of that” comes up during those conferences also. (Participant 3)

As critical thinking increased students’ reasoning, their ability to reflect in these situations improved as well. Students also had a chance to reflect on their interactions with patients, patients’ family members, as well as the buddy RNs.
Participants considered the student’s ability to actively communicate to be an indicator of increased critical thinking. Students who can move past the skill and the basic knowledge portion and are able to start to see the larger picture are more comfortable talking to others. Participants saw this student behaviour manifest in a variety of ways that evolved from engaging with patient and their families to approaching the buddy RN directly with their assessment and a plan. Participants also noted that students with greater critical thinking skills engaged in teaching other students.

I see them also working together and teaching each other about the computer system or even any skills that they have performed. And that actually another thing I do is, if I have taught a student a skill and another student has the same opportunity, let’s just say I will have the other student kind of be with that student and talk [it] out so I can see if they actually understand it or not. (Participant 3)

Participants discussed students’ abilities to adjust how they explained a procedure or idea in order to ensure that they are being understood was a good indicator of understanding the skill, but they also stressed the importance of critically thinking on the spot.

[We need to] see how they interact and how they are. The one student is explaining it and seeing how the other student is getting it, and if they don’t get it, how they are trying to explain it in a different way, and then I will interrupt if I need to, but usually the majority of the time they are actually getting it.

(Participant 3)

Participants noted that when students had the chance to share their experiences with each other, it assisted with the development of critical thinking. The act of sharing gave
students a chance to see different angles of their care as well as to hear different perspectives.

### 4.5.3 Confidence in the student’s ability to critically think and make clinical judgments.

Participants noted that student nurses’ abilities to communicate grew with experience and increased critical thinking. Students who had a grasp of the theoretical knowledge, a thorough comprehensive assessment, and the ability to effectively analyze the situation to determine appropriate interventions or questions displayed confidence. Participants identified this confidence as an indicator of critical thinking and clinical judgment.

The clinical judgment, I guess like it sounds very overlapping, doesn’t it, when we are kind of breaking it down. But then for specific situations, so the thinking but then the actual, like say, execution of the judgment…. [For example, if] there were no further interventions for pain, so they actually had to talk to their nurse and call the physician … to get another order. So, you know, having the confidence to and advocacy to go that step further. (Participant 2)

Participants closely associate the concepts of confidence and effective communication. Students who have a strong understanding of the current patient situation are also more willing to speak up and discuss their thoughts and their potential plans and interventions. Other indicators that fall within confidence were assertiveness as well as the ability to debate their positions and defend their ideas using effective rationale.

Yeah and they are not, you know, they are assertive enough to go to the RN, whereas the students that aren’t that assertive that are still kind of shaky on their
knowledge base and they are still kind of shaky with trying to get their organization together, they will still come to me. (Participant 6)

Similarly, another participant stated,

You know, do they debate with me? So I will tell them it is not my way or the highway. I expect you to debate, and if you don’t, and if I say something and you disagree, I expect you to disagree … but to provide me with the rationale.

(Participant 1)

On the other hand if students did not have strong critical thinking and clinical judgment then they lacked confidence.

I think that there are some people who stay at a very foundational level, and it is such a struggle to deal with this dynamic environment that all they can do is keep that person and themselves safe. And they can’t get much farther than that. So they can get to the point where they can check trends. They can know what they should do. They know when to get help, but to really take it beyond, to come with some confidence, some grace, and figure out what is happening, I think there are some who don’t get to that level. (Participant 5)

In summary, confidence or lack thereof was a strong indicator of students’ critical thinking. However, participants noted this had to be distinguished between increased confidence in relation to a growing ability to think like the nurse instead of a false confidence that could be hiding other issues.

When discussing confidence, participants distinguished it from the false confidence that students might display at times. They determined that students displayed a false confidence when they might be overwhelmed with information.
This was a student I wasn’t sure whether they were overconfident or scared to death, you know, but they were presenting as overconfident, so I said, “What about in this case? Why don’t you try two patients in that room tomorrow, and maybe you know look at the team, and you know maybe later in the week we can think about a third or help with the rest.” (Participant 1)

Participants noted that overconfidence in students became an indicator to focus on those specific students, delve into why they expressed the overconfidence, and understand the mechanism behind this behaviour in order to help students to progress.

It is actually the person who has already got a profession in healthcare who is having trouble moving up their thinking like a nurse using clinical judgment when they are just doing what they are good at doing, so it is unexpected, but then I would [say] the students are a barrier when they are having a hard time believing that they are new again, whenever they have been an expert in something and they come back into being a nurse, and they are a big barrier to their own learning that way. (Participant 4)

Understanding confidence, whether it was warranted or not, is a good indicator of the individual nursing student’s critical thinking and clinical judgment. Nursing students’ critical thinking and confidence increases as they start to take on the role of the RN.

4.5.4 Taking ownership of their patient care and learning needs.

The goal of clinical nursing education is for nursing students to become comfortable integrating their theoretical knowledge along with the experiential knowledge to critically think and come to a decision about patient care. As an indicator of critical thinking and clinical judgment taking ownership emerged as a subtheme. This
again was separated into two different aspects: The first being students’ ownership over patient care and the second being their ownership of their own learning needs and mistakes.

Clinical nursing education creates a space for experiential learning in which students have a chance to integrate their theoretical knowledge with the lived experience of working with patients and the complexity that underlies that. What emerged as an indicator of increased critical thinking was that students would start to take ownership of part or the whole of patient care. The students recognized that there were interventions that needed to be taken with their specific patient, and, when necessary, they communicated this to the buddy RN.

But then if they put their assessment over that then they can feel completely safe. Then when they don’t hesitate, “No. No, we shouldn’t give a blood pressure medication because I know the parameters and it is not within the parameters,” and at least then they get guiding from me from that moment on, and at least they have made that decision, but they are not the primary nurse, and so then we work together as a team, and we go through that process together because it is so new for them. But if their first instinct is to give medication because it is scheduled, even if their assessment isn’t jiving, then I would be concerned the flip side.

(Participant 5)

Participants explained that, although students did not make decisions on their own, they recognized that decisions needed to be made, and those who did not recognize that decisions were needed were not critically thinking.
The participants also noted students taking ownership of their own learning as an indicator of critical thinking and clinical judgment. These students came prepared, had done their homework, and had reflected on previous decisions that they had made. These students took the onus upon themselves to make decisions and to stand by their decisions, right or wrong. In some cases, this was determined by students admitting that they did not know the answer, double-checking medications when asked, or filling out the Patient Safety and Learning System form. Participants considered nursing students opting to show that they were responsible for their own learning to be an indicator of increased critical thinking, which participants acknowledged was a process that grew with experience, be it good or bad.

The confidence, the independence, the fast-paced, right? I think with clinical judgment, it really honestly has to do with like personal, intellectual, and it depends on the person too, right, how intellectual growth and also like being in that moment or whatever clinical setting they’re at. They are just growing, right? I think it is more to do with maturity in their nursing profession or school as they are going through each term. (Participant 3)

Participants stated that if students did not acknowledge their own learning needs, there was a sense of coasting and not working.

I have said that they have sort of been showing up, and I just sort of said that you are just sort of coasting through this whole thing. There is obviously more the patient had to teach them, but they weren’t interested in and you’re just coasting through this whole program.
Participants noted that, in acknowledging that they may have done something wrong, students must then take ownership of it. Participants noted those who do not take ownership of their mistakes or issues are considered to be deficient in critical thinking and also unsafe.

I had already had one conversation which concerned me…. She had a med error or a near miss and so I said, “Have you ever had a med error?” So I looked back. Looked and then [she said], “No. Well, yeah, but it wasn’t really a med error because it was my instructor’s fault. (Participant 1)

Another participant stated,

The one conference, which she planned on her own, but I did give her quite a bit a credit. She got the CRNBC [College of Registered Nurses of British Columbia] standards and she presented the whole thing in conference for all the other students…. And then admitted that she did this and that she realized that the patient’s life was at jeopardy when she did it. (Participant 6)

Participants explained that if the student did make a mistake, then if they owned their mistakes, it was a clear indicator of critical thinking and clinical judgment. Ownership of mistakes indicated that students reflected on their mistakes and how they would change their practice in the future. Understanding the indicators of critical thinking and clinical judgment also helped participants to focus on the different strategies that they used to facilitate development of critical thinking and clinical judgment.
4.6 Teaching Strategies to Facilitate the Development of Critical Thinking and Clinical Judgment

Understanding how critical thinking and clinical judgment are conceptualized as well as evaluated provides a basis for understanding how to teach these critical nursing skills. As participants explored the different strategies, it was also clear that they identified specific learning outcomes associated with each of the strategies. Although I noted an overarching theme of learning intentions, as I explore each of the strategies I will identify some of the learning intentions associated with the strategies. Given that each strategy usually has an aim of meeting several learning intentions, there will also be multiple overlapping learning intentions.

In the literature, teaching strategies for development of critical thinking and clinical judgment focused on single strategies. These single strategies focused on how to assist with nursing student development in a silo form, but not in the collective. As the interviews progressed, it became clear to me that clinical instructors used a variety of teaching strategies and that participants identified using a multitude of approaches instead of only focusing on one. They identified intended outcomes and then chose the appropriate strategies to meet them.

I don’t have an actual tool that I use but I would just write down notes for each student when I am writing down their patient and the skills and the kind of patient condition they have, all those kind of things, and then from their learning plan or what I have seen the week before or what I haven’t seen that will be then like five or six things that I kind of really want to kind of get out of working with that student each week. (Participant 2)
The strategies that participants chose depended on what they needed to see from students. Another intention when choosing a teaching strategy would be to understand students’ thought processes, either through verbal or written communications. This was important to the development of critical thinking and clinical judgment. Seeing or hearing what students were thinking allowed the participants to determine if they were on the right path with their thinking. Participants also stressed the importance of recognizing issues with students’ assessments, theoretical knowledge, or difficulty in pulling all the pieces together. Understanding what students were thinking provided space to guide them if needed. Participants could also provide feedback to students who were on the appropriate path, which would assist in developing confidence. If students were not using the appropriate knowledge, assessment, or had difficulty in linking ideas, participants were able to guide and provide feedback in the specific areas in which students needed assistance. Participants chose strategies that would be able to meet students’ needs and the clinical instructor’s needs in terms of evaluating student performance and identifying if there were issues.

Furthermore, many of the teaching strategies participants used had been created, modified, or researched by the participants themselves during their clinical teaching experiences. It was also clear that although clinical instructors often applied the same names to their strategies, the application may have differed. Adaptability and flexibility were key components to the strategies utilized; each strategy was tailored not only to the group of students but also to the individual students and intended learning outcome.

Other than specific paper-based tools or clinical expectations, the school of nursing did not provide set strategies that had to be used. As one interviewee noted, “I
just think of my own ways. There is not really things like supplied to me. To be like, ‘Oh, do this’” (Participant 8). Participants put forward a variety of strategies. In this section I outline the different strategies and explore how the strategies were actualized in the clinical setting. I also identify the associated learning outcomes that the participants described in relation to the strategies. The clinical teaching strategies that participants identified included (a) questioning, (b) paper-based tools, (c) concept maps, (d) skills development, (e) peer mentoring, (f) nursing care plans, (g) postconferences, and (h) constructive feedback. Despite the fact that participants used the strategies in unique ways, the overarching intended outcomes and methods were linked. Although each participant did not mention every strategy, the strategy of questioning was used across the board.

4.6.1 Questioning.

A main goal of the teaching strategies is to clearly determine nursing students’ understanding of what and why they are doing specific actions and interventions and how they are putting all the pieces together. Participants mainly achieved this through questioning. The strategy of questioning was highly incorporated into the daily routine of participants and also embedded within the concept of critical thinking. Participants first identified that to support students’ critical thinking it was important to ask open-ended questions. Doing this provided space for students to answer and to think through situations on their own, to link ideas, and to come to an appropriate answer. Students who were unable to come to the appropriate answer yet could verbalize their thought processes provided participants with the opportunity to see how students were using the given information and guide them to finding the right information to derive the desired
response. One participant noted, “You are always asking questions. And I think it is really important to ask open-ended questions ‘cause that makes them think, right?” (Participant 5). Participants noted that their favourite type of questions to ask were why questions. The best way to understand a nursing student’s thoughts was to ask why questions: “So critical thinking to me is asking why questions. Why are you doing that? Or even like how, what but mostly like why. Like you are analyzing and you are reflecting” (Participant 5). Also, when asking students questions, it was important for participants to identify the intended outcome, and they would change the outcome to cater to the various lessons being learned, be it understanding students’ thoughts, building confidence, or creating a space to provide feedback. Participants also asked what, where, and who questions, but usually in an open-ended fashion to allow students to express their understanding of the question and the information that was needed to answer it.

While clinical instructors preferred to ask open-ended questions, when participants believed that students needed more direct prompting, they tended to switch to a more direct method of questioning. Direct questioning would focus on determining if students were using appropriate knowledge for clinical decision making.

So how do you even know that about their vitamin K. Like why did you think and what she was talking about? And I said, “So what is in the IV?” “K.” “What is K?” … “What is K on the periodic table?” “Potassium.” “So what is in the IV bag? So what is vitamin K?” Like, it was literally like that, trying to make sure that I wasn’t making assumptions. And so it was clear that I was puzzled and it was clear that she royally did not know. (Participant 1)
Questioning could also be used in a variety of settings, such as one on one, in groups, as well as to encourage students to ask each other questions.

4.6.2 Paper-based tools.

The participants discussed the use of organizational paper-based tools that support students’ development of critical thinking and clinical judgment. Some of the tools they referred to were developed by the participant’s school of nursing as a mechanism to help students with organization and development of nursing care plans. While the tools were designed to be used throughout the programs, some of the participants found them helpful while others had difficulty implementing the tool into their teaching strategies.

So the organizational tool is actually from the School of Nursing…. It is implemented in the first term, and then some adjustments are made, and then all of the course, which is the term that I teach, the course that I teach in, … we have those organizational tools that is basically like the Kardex [nursing information tool] kind of has a timeline also on the side kind of. (Participant 3)

Participants described that the tool developed by the school of nursing ensured that all of the relevant information was on one sheet. The organizational tool was used in conjunction with questioning, so students could potentially easily access the information to support their critical-thinking processes as they attempted to answer questions. The organizational tool could also help students to organize their patient care, providing a space to write down interventions or assessments as well as the times at which they need to happen. This tool also provided a template for the type of information that the school of nursing expected. While the organization tools did help to develop a pattern of
expected knowledge, participants found tools created by the school of nursing could not easily be adapted to all clinical settings and situations.

They have developed a clinical practice organization tool, but it is really meant for one patient, and its one side has data collection, but it is very novice, and then the flip side has got a nursing care plan … incorporated into it, so they develop their problem around the … framework and its not. It is great for a paper, but in the moment when you are dealing with sick patients … you need to be a little bit quicker. (Participant 1)

Although both schools of nursing provided consistent organizational tools that could be used across the spectrum of participants’ courses, many participants also created their own learning and organizational tools. Some participants adapted tools from their previous educational experience, while others created tools specifically designed to support the specific information necessary for the clinical setting. One participant stated, “I have had to create my own resources. I have a friend who teaches at [another school of nursing.] and she has helped me with some of their resources type thing” (Participant 7). These tools helped students to focus on the organization that supported documenting comprehensive assessments, identifying priority issues, developing nursing diagnosis, and creating care planning. Other paper-based and written tools that participants discussed were resource binders, clinical area specific blogs, or PDF or Microsoft Word email attachments that provided resources and information about relevant nursing diagnoses, medications, and procedures that were common to the clinical area. The clinical instructors usually created these tools to specifically support student theoretical knowledge related to the clinical area, thereby facilitating critical thinking and clinical
judgment. The clinical instructors would outline their expectations for student performance in the clinical setting and then provide an overview of the clinical setting, specific unit resources, and outlined clinical assignments.

At the beginning of the placement I kind of, when we are going through patients, I will tell them this is what I think critical thinking is, and this is how I am going to get you to push you forward on that, and then they are like, “Oh wow, you know we have heard about it, but we didn’t really they hear it in the classroom.” They kind of sort of get it, but then they don’t really realize that they are sort of doing it. (Participant 2)

When outlining their expectations, participants would identify their understanding of “how to think like a nurse” and how they would support, develop, and evaluate critical thinking and clinical judgment. Creating the expectations, particularly in writing, gave students standards to work from as well as a clear guide for what the clinical instructors were looking for. Meeting those expectations helped to bolster students’ confidence in their own critical thinking and clinical judgment.

I have a blog that only the students can access, so it is a private blog. It is run through this server at the [school], but it can’t be found on Google, so you could not find it. You would have to be invited into it. And that blog contains the expectations, all of the information about the units, some history about the hospital, … [and] any assignments. Everything is there, and they get that before they come…. They are invited onto the blog before they come. And I tell them, “Read the blog before you get to me.” I would suggest strongly. (Participant 5)
Ensuring that students understand the clinical instructors’ expectations as well as those of the school of nursing was an important intended outcome when using a variety of clinical teaching strategies. The paper-based organizational tools could provide an avenue for students to express their thinking as well as assist in the overall development of critical thinking and clinical judgment.

4.6.3 Concept maps.

Concept mapping is a broad umbrella term used to emphasize a range of strategies that focus on allowing students to put their thoughts on paper. The concept map could work in any form that is either prescribed from the participants or more of a free form that the students created themselves. In some cases, participants would have students create concept maps individually and hand them in or discuss them one on one. In other cases they would have the students create them as a group in a postconference setting.

Students will present their patients, and that is a great environment to do some concept mapping, right? Presenting and just kind of linking things together and a chance for the students to talk about what their initial approach was, how they changed it, why they changed it, and any other kind of things that might come up.

(Participant 3)

Participants indicated there was no prescribed approach to how the students created and filled in concepts maps. The goal of the concept map was that students had the ability to put their thoughts out there and to make possible connections from one concept to another.

I use a mind map and so … the patient’s diagnosis is in the middle, and then in different pockets around the page there would be the other areas that they would
assess for vital signs, objective data, subjective things, history and other
comorbidities, and they need to connect the lines to each other to see how things
are relating to each other, and it helps them to pull things back together to pull out
the meanings. (Participant 4)

The concept map was a strategy that also encouraged students to review theory and
standards as well as to create a more holistic view of the patient. Concept maps can also
assist students in determining priority patient issues and to plan for interventions and
potential evaluations. The ability to link information and to prioritize and plan out
decisions supports development of critical thinking and clinical judgment. Understanding
what could and should be done for a patient provided space for students to determine a
plan for interventions, which could also include skills used during patient care.

4.6.4 Clinical Nursing Skills development.

The teaching of clinical skills, which was initially done in skill labs at the school
of nursing and solidified in the clinical setting, took on unique qualities as described by
the participants. Initially when discussing skills development, participants noted the link
to critical thinking and clinical judgment was not clear. As participants discussed this
topic further, they used skills development as a method of moving students past the
physical skill or rote work to the concept of thinking about the patient holistically
(i.e., seeing the whole picture). Students were expected to look beyond the skill to see the
patient, take into consideration multiple issues such as implications of the skill, potential
complications, and how to evaluate the effectiveness. Students were also encouraged to
communicate with the patient and explain the skill. In doing the students had to critically
do think through not only the skill but also how to effectively describe why they were doing
the skill as well as the step-by-step processes. In most cases, clinical instructors would ask students to watch once, perform the skill with supervision, and then eventually perform the skill unsupervised, depending on their efficiency and safety in performing the skill. As students’ critical thinking increased, they would also start to consider the contextual unit factors that would affect the performance of the skill.

So at [the School of Nursing] they can’t do any skills until they have done them in the lab first, so they do practice demo kind of thing there with supervision on mannequins, so when they come to the unit … I don’t reteach the skill. They do it, the skill. Now there might be something that is a little more complicated … where, you know, I might say, “Do you want me to show you? Do you want to see it first?” Certainly for dressings, so right now we are on a surgical unit, so we have the luxury of two or three days…. I will say, “You watch your nurse do it, and the next day you are going to do it with me,” and if the technique is fine then they will be independent on the third day. (Participant 1)

Another method of skill development was to use a concentrated time of skill development, so doing the same skill repeatedly, which would solidify the physical skill and provide space for the student to think beyond the physical part to the critically thinking component in an expedited fashion. One instructor termed it “IV [intravenous] marathons” (Participant 6).

It is pattern recognition, like you are saying, ‘cause then they get it. But if you just get them to do an IV med once this week, then all of a sudden you go next week there is no more IV meds, then they lose it. This way they all get it, and then they are on their own by the after the second day actually, because they have already
hung up ten IV meds. And I usually get them or I work with them in the first three or four, and then they do it all and I just stand and make sure; then I check afterwards. Then towards the end I usually say, “Okay, now you go hang it up. Do your thing, do your checks, and I will come and see if you did it right.”

(Participant 6)

Another version of skill development also moves into the next theme of student learning. As one student becomes comfortable with a specific skill, participants might use the first student to assist another. Participants reported this process supported student growth through a variety of methods, encouraging further exploration of their theoretical knowledge as well as creativity in the methods of explaining or assisting with a skill. It also provides space for critical reflection about nursing students’ own practice, especially in relation to the standards and to how another student might performing the same skill.

I watch one student do great with it, and then I will say, “Okay, I am going to watch this student,” but if I am really busy with let’s say a student that is kind of behind, I get that student to go back and [do] the same mentoring. We will give students, you know, like the responsibility of checking up on the other students while they are doing that staple removal. That is just one of the skills. (Participant 6)

Encouraging students to teach each other was also a good way to increase comprehension of a skill, as the students acting as mentors had to figure out different ways of explaining a skill or concept and support their peers’ development. In addition, asking students to provide feedback on others’ work encouraged communication and critical reflection on students’ own skills in comparison to the peer they were mentoring.
4.6.5 Peer mentoring.

As in the previous section, the premise associated with this strategy reflected the idea of nursing students working together to improve their knowledge and critically think through different situations. Peer mentoring could be associated with different skills or tasks as well as bridging information from theory to practice. Participants noted that when students had to collaborate, both students showed improved engagement, critical thinking, and clinical judgment.

Like emptying colostomy bags…. I don’t need to watch all of them emptying colostomy bags. If I can see one student doing it properly and neatly and tidying everything up, then not spilling the contents everywhere, and then okay now that student has the colostomy bag that will need to be emptied in another two more hours, so you are going to help her with it. So then they just get at it, and they start talking to each other, and then they go look at the chart, and then they tell the RN that they are going to be doing it. (Participant 6)

This act of working together encourages teamwork between students. Peer mentoring is initiated by an inquiry or problem, in which students need to gather information and work at transforming and integrating knowledge into their patient care. This requires creativity, an understanding of the standards, and the ability to utilize theoretical knowledge to be able to adapt their explanations as they work through the problem to ensure that the other student has understood. In this way, peer mentoring solidifies students’ knowledge, as they need to have a strong grasp of the information to be able explain or adequately discuss the issue at hand with another student.
I see how they interact and how they are. The one student is explaining it and seeing how the other student is getting it, and if they don’t get it, how they are trying to explain it in a different way, and then I will interrupt if I need to, but usually the majority of the time they are actually getting it. (Participant 3)

This also goes back to the idea of entrusting students with teaching, explaining, or supervising a skill, which creates a sense of confidence in the student that is teaching abilities and knowledge. Being considered the expert acknowledges that the mentor students have done well with a particular skill, so in essence it is a form of positive feedback. This teamwork also creates a sense of partnership, reinforcing that students do not have to work alone and that the idea of teaching and learning from each other is an important concept to use moving forward into their future nursing careers.

4.6.6 Nursing care plans.

A standard part of clinical education is the creation of nursing care plans. All of the participants described use of nursing care plans, whether it was formal ones that were submitted to the school of nursing or informal ones that were created on the fly either using the organizational tool or just in discussion. Participants indicated that part of the nursing care plan, or as it was also called at times the nursing process, was creating a nursing diagnosis. One participant used nursing process as a method of getting students to understand that they were critically thinking.

Then I sit down and ask them, “OK, can you tell me about the patient? Now tell me your nursing process and what is your nursing diagnosis. So just tell me one, and what are your priorities from that, for this nursing diagnosis.” From there we work towards making a nursing diagnosis and then really setting out the priorities
to meet that. And then, over time, some students develop two nursing diagnoses and are able to look at a bigger picture. And now we have this patient and now you are able to think of two things that they are looking out for. Yeah that is kind of how I … put critical thinking to clinical. (Participant 8)

Nursing care plans were also considered to be a method of supporting critical reflection, as students could go through their previous care plans and compare and contrast what information they were now incorporating as well as how their decision making might have changed from previous clinical days.

Then I will just say … that “I remember from last time that you … you didn’t mention this, but this time you did, which is good.” Then you know probably by Week 10 they are more into lab values too, into their care plan, and thinking of more different drugs instead of just Lasix. (Participant 6)

The nursing care plan expects students to work through steps to come to a nursing diagnosis, with appropriate interventions, and then it also creates a place for students to plan as to how they would like to evaluate the outcomes of their interventions. While all of the participants mentioned the nursing care plan or process, they did not go into great detail about it as a strategy. This may be because of an assumption by the participants that everyone should know about how to create nursing diagnosis and nursing care plans.

In the overall discussion, participants focused on other teaching strategies that would support critical thinking and clinical judgment that were not as expected as the nursing care plan. These were also assigned activities for some of the participants’ students, instead of a teaching strategy that might have been used in the clinical setting.
4.6.7 Postconferences.

A common teaching strategy was the postconference. Postconferences were usually considered to be a time when the students met as a group, before, during, or at the end of the clinical shift. The events that happened in postconference could vary significantly, but it was generally dependent on what happened during the clinical shift. The postconference was used as a method of debriefing students and creating a space for critical self-reflection and constructive feedback. Students as well as the clinical instructors could provide this feedback.

Depending on the incident of the day say … it was something that [laugh] … was something that the whole group needs to learn from and the student is OK with it, and since sometimes they’ll share it. And then, you know, share what they did, … so it is good for the others to kind of hear that perspective, and then I get them to kind of think like well, “How else could we handle that, or how could we approach it?” … So they are getting to learn … nursing is not black and white, which we are always telling them, and there are lots of ways … of telling them, and there are lots of ways … [to] approach a situation or have an action plan, so … I think that is useful for the group to kind of hear other responses and take that away. (Participant 2)

The postconference also provided space for activities. As previously mentioned, participants did group concept maps, so students had the chance to bounce ideas off of each other as well as to compare their understanding of a concept or patient situation. This enabled students to reflect on their own understanding and then have to explain why
they chose to use that particular line of thought or also be open to seeing a different point of view if another student disagreed with their ideas.

Students will present their patients, and that is a great environment to do some concept mapping, right? Presenting and just kind of linking things together, and a chance for the students to talk about what their initial approach was, how they changed it, why they changed it, and any other kind of things that might come up.

(Participant 3)

The postconference teaching approach included a variety of other learning processes but was also a strategy on its own that could create space for students to learn from each other through a variety of tasks or activities.

But if we … do get rooms, and we get rooms with boards, … a lot of times, I will have questions for them to do. Otherwise, I assign students to be doing something that they have already done, but they have to explain it to everyone else.

(Participant 6)

Overall, participants used the postconference time to support students’ critical thinking and clinical judgment in a variety of ways. At each postconference, participants would identify students’ needs from their discussions and observations during the clinical shift and create specific learning strategies to use during that time to create a space for critical self-reflection, constructive feedback, and further development of teamwork.

4.6.8 Constructive feedback.

Participants identified that constructive feedback was an essential strategy when facilitating the development of critical thinking and clinical judgment. Whether this strategy was used within a different teaching approach or whether it was a standalone
process, all of the participants identified constructive feedback as important, not only in the frequency of delivery but also in how it was delivered.

One thing that I consistently do with every group of students, I give them written feedback every week. So the feedback consists of like a sandwich, so it is like what you did, what you need to work on, and this is how you can do it.

(Participant 6)

While weekly written feedback was essential to provide to students, for some participants, the day-to-day feedback was also important, as students are anxious about their ability to critically think and to make appropriate judgments. Students who receive positive feedback develop a sense of security and start to build confidence. As noted previously, participants considered confidence to be an indicator of critical thinking.

Oh it’s enormous! You have to give them feedback every day. Students said to me, what did they do…. Oh, this is the one I was … worried about. He did a dressing. It was great. It was perfect, you know, just a straightforward incisional dressing, set up his tray, did everything great. I said, “Good. Great!” and then I walked out of the room…. This is one of my bad things, and … then he came up to me a little bit later, not much later, and he said, “So can you give me some feedback on that dressing?” And I [said] …[little laugh], “No, … well it was, was great,” and he said, “It was?” And I said, “You set up your sterile field. You had a challenging environment. The patient had six billion things. You figured out … where you needed to be. Your technique was great, so I don’t know what else I can tell you,” and I think he thought something was, you know, [missing].

(Participant 1)
Feedback in the day-to-day moment was important to students. It was also important for clinical instructors to provide feedback on written assignments, whether it was concept maps, case studies, or reflective journals.

You kind of just critique it critique it, I suppose. Perhaps [that] isn’t the right word, but you are giving feedback about the incident or yeah or about, say they did really good, like used good judgment in this situation, or maybe next time have you thought of this, or drawing something in to support kind of what I [was] saying, so yeah making it useful for them to kind of think about it and integrate later. (Participant 2)

Feedback also assisted students in critical self-reflection as it provided outside insight into their thinking and decision making. The critical self-reflection enables students, when they are in a similar situation again, to reflect on what they did, recall the feedback, and then integrate that into their decision making in the new experience. Feedback was a key factor in the development of critical thinking, whether it was a summative feedback or the formative feedback that happens daily in the clinical setting.

4.6.9 Summary of strategies for developing critical thinking and clinical judgment.

To facilitate the development of critical thinking and clinical judgment participants identified that they used multiple strategies daily. The participants also identified that they chose teaching strategies to meet specific learning intentions or to see something from a student that they might not have witnessed yet. The intended outcomes, as described by participants, supported the development of critical thinking and clinical judgment in multiple ways such as exploring students’ thinking processes, supporting
students in recognizing patterns, developing students’ confidence in their own abilities to think critically and form clinical judgments, encouraging students to develop partnerships, identifying expectations related to critical thinking and clinical judgment, creating space to provide students with constructive feedback, and selecting strategies that best meet student-specific needs. The clinical teaching strategies supported meeting those needs. Participants identified several different teaching strategies that they would use in practice. All participants identified questioning as a key strategy to employ with students. They also identified strategies, such as tools that were generally paper-based, were used to support learning, whether they were created by the school of nursing or the participants themselves. All participants used some form of tool in their clinical teaching. Participants also used teaching strategies such as concept maps, peer mentoring, skill development, and nursing care plans to support the development of critical thinking and clinical judgment. Postconferences provided space for debriefing and encouraging student teamwork. Feedback was a part of every teaching approach as well as a strategy in and of itself.

Participants had to be flexible and adaptable in their use of teaching strategies, the approaches needed to be able to meet each specific teaching and learning need to be flexible and able to adjust to the needs of the student as well as the intended outcome or outcomes that the clinical instructors might have been focusing on at the moment. Participants also needed to adjust and adapt to the context of the clinical learning environment, which could be a fluid environment affected by multiple factors. Other contextual factors that could impact students’ development included looking at the roles
that the school of nursing, the clinical instructors, and the students all play in the
development critical thinking and clinical judgment.

4.7 Contextual Supports and Barriers for Development of Critical Thinking and
Clinical Judgment

While there were a variety of factors that could affect the development of critical
thinking and clinical judgment, such as the contextual factors of the unit and the school of
nursing, four main subthemes emerged from the data: (a) the buddy RNs, (b) the school
of nursing and the program in general, (c) the clinical instructor role, and (d) the nursing
student’s role in learning. I discuss each of these contextual factors and their impact on
critical thinking and clinical judgment in the subsections that follow.

4.7.1 The buddy RNs.

On the unit, the primary supports and barriers to critical thinking and clinical
judgment were considered to be the staff, especially the buddy RNs who were working
with the students. The buddy RNs could act as a support or a barrier when developing
students’ critical thinking and clinical judgment. If the buddy RN was supportive of
nursing students and was heavily involved in teaching and learning process, then student
development improved. Buddy RNs were a great resource for the clinical instructor in
that they could supervise students with assessments, skills, ask questions, assist students
in recognizing patterns, provide insight into their thought processes, and offer feedback to
both students and the clinical instructors.

I have been here for 3 years now, so I have a got good rapport with the nurses
here now. So they do actually go in with the student if I am downstairs with the
other students. They will go in with the students and give me feedback on how the
students have done or what their thoughts are, and they are great. They are great teachers up here. (Participant 3)

The buddy RN could also ensure that students had the chance to see and experience more, as they would bring students with them to do skills or to talk through procedures that the student might not be able to currently do. In addition, if buddy RNs are able to talk through what they are doing, explain their thinking as to why they are making certain decisions in relation to patient care, then they are showing some of the underlying patterns that participants considered to be part of development of nursing students’ critical thinking and clinical judgment.

On the other hand, buddy RNs could also act as a barrier. This occurred primarily for two reasons: first, some RNs chose not to interact with the students, and second, this occurred when RNs’ workload was too high. The first barrier is that, in opposition to the idea of bringing students along, some buddy RNs choose not interact with students and instead leave students to manage patient care with no support and guidance:

What makes life easier is if the nurses don’t abdicate, so if the nurses abdicate that’s hard because … I can’t challenge the students in the same way. Sometimes I can’t give them the sicker patients. That means I will have to be really, really there. (Participant 1)

While not all participants experienced this, all of them acknowledged that RNs who chose to not interact with students would impact students’ ability to develop critical thinking and clinical judgment. Some participants also discussed the RN’s workload. If the workload was too high or the acuity of the patient changed significantly, the buddy RN might not be able to accommodate a learner at that time.
When there has been situation where nurses seem to be in a tizzy and they seemed like they are panicked and they have …really do have patients that are too critical and too many for one nurse to carry herself or himself, then you can see that the students just cannot follow a train of thought, as the nurses just almost just try to make ends meet. (Participant 4)

While those times could be considered a great learning experience, they only work if the clinical instructor is able to stay with students to support their learning through asking and answering questions and assisting students to see the overall patient situation. Without support, the student may not be able to understand the complexity of the situation as well as the effect that it may have on the RN. In addition, the buddy RN may not feel supported, which could affect that nurse’s future interactions with students.

4.7.2 The school of nursing.

The participants noted that the school of nursing could be both a support and a barrier. It was interesting to note that participants had both positive and negative comments about the school of nursing and that participants from the same schools of nursing had very different views and expectations as to how the school of nursing contextually supported or hindered development of critical thinking and clinical judgment. During the interviews, I noted an overall focus on teaching and learning in general and the contextual impact that the school of nursing had in both a positive and negative manner. In exploring the data further, it was clear that when looking specifically at how the school of nursing impacts the development of critical thinking and clinical judgment, the focus became the curriculum and how it could impact both the participants and the students while in clinical placements. When further looking into data and how
curriculum has a contextual impact, the areas that emerged were those of curricular content and also the flow and timing of the curricular pieces in conjunction with clinical placement.

4.7.2.1 Curriculum content.

The goal of any school of nursing is to support students in learning the theoretical, philosophical, professional, and experiential role of the RN. In saying that, critical thinking and clinical judgment are not guaranteed components in any nursing program. One of the factors that affected participants’ ability to facilitate development of critical thinking and clinical judgment was that there was a lack of focus on those two concepts in their course outlines. More than one participant mentioned that critical thinking and clinical judgment were not a specific part of the clinical expectations. “I think it would be really good to have, maybe… it’s not really something they expect us to evaluate on students” (Participant 8).

This was important to note, as those clinical expectations were the basis of participants’ evaluation criteria for nursing students. With no specific focus on critical thinking and clinical judgment, there was no clear definition for critical thinking and clinical judgment from the school of nursing. With a lack of a specific definition, there was also a lack of support in identifying specific teaching strategies that would support student development. As one interviewee noted, the lack of clarity impacts participants’ ability to ensure students’ development of critical thinking and clinical judgment.

Oh sorry, it is part of the competencies, but it is not something that, you know, when we when I started, when I started as a clinical instructor or like in orientation like. I feel like it should be emphasized. This is the place when you are
in practice, where a student has the knowledge they learned they are applying the knowledge to practice, now here are ways that you can facilitate critical thinking. I found that that was not something that was talked about. It was more like, here is a tool you can use to talk about the competencies, but it wasn’t like it would be really helpful to have something more like … like if we have six weeks of clinical, each week these are things you can do to slowly build critical thinking into your students’ learning. (Participant 8)

This perceived lack of focus in the curriculum to critical thinking and clinical judgment led participants to also suggest that, in order to support their development and further growth as clinical instructors, it was important to provide education in relation to the school of nursing’s specific understanding and focus on critical thinking and clinical judgment, instead of leaving it open to the instructors’ individual preferences. They also suggested that well-defined expectations for clinical practice would be helpful in supporting students’ development. It was also important that the curriculum flowed and the theory was supported by relevant clinical practice within a reasonable time frame.

4.7.2.2 Flow of curriculum.

The curriculum flow arose frequently in the interview data as both a positive and a negative. Some participants believed that the flow of the curriculum supported student growth through building on subject matter in a stepwise fashion, while others believed the curriculum did not match the student experience and that students had large gaps between their clinical experience and theoretical classes. Participants also noted that in some courses there was a significant time lag between when skills and theory were taught and when they would be able to apply their knowledge.
The clinical placements are so diverse, so you couldn’t teach. So half the class is in surgery and the other half the class is in medicine…. The courses don’t always match where you are at in clinical, so you just have to make sure that you know…. I will say to them, “You know, your chest tube stuff in lab isn’t going to come until you are halfway through your surgical placement, but we are going to be seeing chest tubes, so I expect you to go and look at the syllabus and go and do those prereadings … because otherwise you will be lost.” (Participant 1)

When students were not able to demonstrate specific skills it also limited their interactions with patients and also their ability to apply new knowledge and standards, which could hinder their development of critical thinking.

It was not good to have a certain school not prepare their students with all their skills before they come to their first medical clinical rotation. Because what that means is that the students can only do vital signs, can only do bed baths, for the like the first two weeks. (Participant 4)

Vital signs and basic skills are important to creating a theoretical and experiential base, and the beginning of clinical placements afforded participants the ability to view students’ basic understanding of the overall patient. This enabled participants to determine students’ baseline, which then offered the basis from which students could grow and develop their critical thinking and clinical judgment. Some of the participants believed this limited interaction with patients made it hard for students to progress in their critical thinking and clinical judgment, as they were not attempting to integrate new skills and knowledge into their clinical experience, thereby limiting their ability to develop further.
4.7.3 The clinical instructor role.

I found it interesting that, as clinical instructors, participants identified that they could also be both a support and barrier to students’ development of critical thinking and clinical judgment. Although participants presented many ideas related to how clinical instructors could affect the students, the theme focused mainly on clinical instructors’ experience. Generally, participants agreed greater experience leads to increased proficiency. Increased proficiency enabled participants the ability, similar to students, to move away from focusing on only evaluating students’ skills to instead focusing on their abilities to critically think and form clinical judgments like the nurse.

As a CI [clinical instructor], you could not go about it and integrate it, so your own barrier and your own lack of knowledge, lack of experience, just the complexities of the clinical and the dynamics of clinical, again just because you get thrown into being very task focused. (Participant 2)

As clinical instructors’ abilities to teach improved, they realized what they needed to do to facilitate students’ development and also reflected on their teaching styles: “It’s always learning dynamic ways of how to elicit that learning from a student and almost kind of teaching on the fly right when you are in clinical” (Participant 2). While teaching on the fly, it was important for clinical instructors to keep track of nursing students’ progress, and, as they sometimes have between eight to 10 students, it became important to reflect and then create goals.

I am always, myself, reflecting on how I can do that better, which is why you know I kind of jot down kind of things that I want to get out of each student each day, or even each interaction of things I have not seen before, or trying to promote
that so that really forces me to be more articulate and kind goal centred, which makes me feel more like, yeah, I have actually accomplished something today.  

(Participant 2)

This approach enabled participants to mentor students in critical thinking and clinical judgment by showing that they, as clinical instructors, also needed to critically reflect and to expand their own knowledge daily. They also must have a keen sense of inquiry about what each individual nursing student needs on a more global scale to ensure that they students developing critical thinking and clinical judgment instead of just performing skills. As their experience increased, clinical instructors became more comfortable identifying and evaluating indicators of critical thinking and clinical judgment in students. However, one participant believed that the ability to ensure students are thinking and being safe was a nursing skill, not specific to the clinical instructor skillset:

I feel pretty comfortable making my own decisions. Yeah, like if … you are not sure if somebody is unsafe….. I don’t know, to me, that speaks more to your ability than to the students’, because as a nurse you know what is unsafe. If the student is being unsafe, the student is being unsafe. Just tell them that: “This behaviour is being unsafe. It has to stop.”  

(Participant 5)

As an instructor, this participant felt comfortable with identifying students’ abilities to critically think and make clinical judgments.

Another subtheme that emerged was the relationship between the clinical instructor and the student. The participants believed the students were vulnerable in the student-learning role and that part of the clinical instructor’s role was to maintain open
communication. Participants focused on the idea that, as clinical instructors, they were there to mentor and guide, not only to evaluate.

Oh they have got more anxiety when I am there, which I hear from students. …

“You know, I am there to help you, to mentor. I just want to guide you. But don’t try to take me as like just an evaluator, right?” Because that is [the] whole thing … you are just there to evaluate. And I am like, “No, actually [I’m] here to help guide you through this,” and just kind of give you some pointers afterwards, or while we are doing … [clinical practice to] stop them from doing something they shouldn’t be doing. (Participant 3)

Participants also explained that they try to help students manage their anxiety levels within the clinical setting, once again going beyond the concept of evaluating students’ skills to working to facilitate students’ development of confidence in their own thinking and judgment.

It is the same with students, because they are just another vulnerable group. And they just need to be taken care of the same way. So when clinical educators go to work, you are nursing, you are nursing those patients that the students are looking after, but you are nursing those students too. Because you have to nurture them along, also to try and allay student fears and anxiety. (Participant 5)

While the relationship between the clinical instructor and the role of the critical instructor was pivotal, the student role was also an important contextual factor in the development of critical thinking and clinical judgment.
4.7.4 The nursing student’s role in learning.

The subtheme of the nursing students’ intentions in the clinical setting and as a learner arose in the data as both a facilitator and barrier to the development of critical thinking and clinical judgment. While students could be actively engaged in the learning process, participants primarily focused on how students’ approach to learning and the interactions with the clinical instructor could be a barrier or a support to their development of critical thinking and clinical judgment.

It is just only the student themselves, so if the student is not receptive to learning, or hearing my perspective, or is dismissive—and they can be dismissive because they are nervous or they can be dismissive because they don’t value what you have to say, so you have to figure out which is it…. Some of the students can be very condescending to clinical instructors. (Participant 1)

Students could have multiple issues that could impact their ability to engage in the learning process and participate in clinical education. In some cases, the student’s home life or other issues external to school could impact learning. While participants noted the clinical instructor needed to be aware of those issues, they also expressed a belief that it was important for students to learn different coping mechanisms that would help them to deal with the stress of learning and also eventually becoming an RN who practices safely.

Participants identified that nursing students who were responsible for their own learning had increased development of critical thinking and clinical judgment and when students’ were not taking responsibility for their own learning they would be a barrier to the development of critical thinking and clinical judgment. Participants identified specific barriers to learning such as students not challenging themselves in clinical placements.
and not taking as much from the learning experience as they potentially could.
Participants also described that they felt a sense of entitlement at times from nursing
students in that it was expected that all of the information would be provided to them,
instead of the expectation of them identifying where and how to find the appropriate
knowledge or skills. Participants believed it was important that students learned where to
find the relevant information and to become advocates for their own knowledge and
learning with the intention of creating life-long learners of nursing students.

    You have more to learn … and more to give, and I don’t know how you are going
to fulfill your career if you are not going to grow or be open to stuff. And they
literally laughed. They said, “Nobody has ever called me on that before, and of
course I am, why would I work harder?” (Participant 1)

Participants felt that they also needed to remind students that every opportunity is a
learning opportunity; it just depends on the lens the student viewed it from. Participants
considered the ability to take up knowledge from a variety of situations, patients, and
encounters to be important to the overall clinical experience.

    The other thing I do not allow, my students do not get to sit at the nursing station.
If I see you sitting at the nursing station, I will find you something to do and that
is the last thing you want. So there are 33 patients on this unit; do not tell me that
somebody doesn’t need a glass of water, to be turned, or to go to the bathroom or
just someone to talk to. So, if you think your work is done, then you find someone
else who needs you. Because every time you approach a patient, every time you
do something with a patient, you are learning. Learning how to approach and how
to be with [a patient] and that is important learning. (Participant 5)
In opposition to the previous statement, students could learn to identify their own needs and with support rapidly increase their ability to critically think and lead to clinical judgments:

And now they are you here, and you skimmed through the program and gotten to this level, and now they realize, “Hey, … I should know this stuff and I don’t know.” So quickly, because now they are mature enough, they quickly go and start doing homework. (Participant 6)

This last-minute homework can and did work for some students, but in other cases participants considered these students to be weak learners who would not progress beyond the point of maintaining patient safety.

The other thing … is that not everyone is a shining star. And some of these individuals will find a niche where they go to work every day, they do an absolutely stunning basic job, but they … they keep themselves safe. (Participant 5)

When working with a student who was not a strong learner, participants would find a way to support them so that they were safe and were capable of keeping the patient safe and making appropriate clinical judgments. This was also done in collaboration with the student, through constant formative feedback, and the implementation of learning plans, which the clinical instructor needed to develop with the student.

One other area in which students could either be a support to their own learning or a barrier was in the ability to receive feedback. Taking feedback and being able to implement change is an important goal and strategy in the development of critical thinking. As such, when students were unable to hear the feedback, it could impact their
relationship with the clinical instructor. In some cases clinical instructors described feeling bullied by the nursing students, especially if the student was not happy with the feedback. Participants also stated that even though there could be that negative interactions, if the clinical instructor was able to clearly identify the issue, that would minimize negative interactions between the instructor and student.

I find that most time issues develop when there is a power struggle. So a student feels they are being treated unfairly. Or I have had students try and manipulate or bully me, and I just tell them to stop it: “Just don’t even. I am so much older than you, so just don’t even try. So you know I am not going to put up with this behaviour, so just stop.” And they do. I think sometimes you just have to call them on it … “However you are behaving and however you are acting towards me doesn’t change the fact that this is what you did. And it doesn’t change the fact that you had no reason for doing that. It doesn’t change the fact that you made that decision. It doesn’t change the fact that you did something you should not have done, so we have to deal with this action. And … I would suggest that you start talking to me in a much more polite manner.” (Participant 5)

While several factors could influence students’ critical thinking and clinical judgment, participants found the relationship between the clinical instructor and the student to be a key factor. On both sides of the relationship, it required that both parties understood their roles and responsibilities in terms of the learning process, including the clinical instructor’s genuine wish to support students in their development and students’ desire to be equal partners in the process and to identify their own learning needs.
4.8 Chapter Summary

The findings in this study created an interesting space for discussion in relation to how clinical instructors facilitate the development of critical thinking and clinical judgment. In exploring the interview data, several relevant themes emerged. First, participants noted there were no clear definitions for critical thinking and clinical judgment. Participants created their own conceptualizations of critical thinking and clinical judgment as well as how they identified these abilities in students, and in this case they did not see them as separate concepts; instead, they saw it as part of continuum. Participants determined that critical thinking was the active process that led to the contextually based decision that is clinical judgment. As participants discussed how they conceptualized critical thinking and identified it in students, they identified several overarching themes that included a focus on not only patient care but also on their role and involvement in the unit as well as their own personal care. When exploring the concepts of critical thinking and clinical judgment, participants used identifiers such as safe practice and patient safety, effective communication, confidence in student nurses’ own critical thinking and clinical judgment, and taking ownership.

This understanding of participants’ conceptualization of critical thinking and clinical judgment allowed for further insight into the clinical teaching strategies. While I first believed that the focus would be on the teaching practices themselves, as I further explored the participants’ views of the approaches, within and around each strategy the participants identified the learning intentions that were associated with their choice of method. The participants identified what they hoped to achieve when they were teaching along with the specific strategies employed. Their intentions also linked to their
conceptualizations and indicators of critical thinking and clinical judgment. The goals or the intentions associated with strategies included assisting students to explore their thoughts, recognize patterns, develop confidence in their ability to critically think, encourage teamwork, and create space for constructive feedback. The intentions that were more specifically geared towards the participants themselves were that they wanted to create specific expectations for the students so that they knew what they had to achieve or work towards. Participants also noted strategies would be adaptive and receptive to the individual learning needs of nursing students and that they provided appropriate, relevant, and timely feedback to students. To accomplish this, the participants identified multiple strategies that they used to facilitate students’ development of critical thinking and clinical judgment. These strategies included questioning, paper-based tools, concept maps, skills development, peer mentoring, nursing care plans, postconferences, and constructive feedback. The combination of the learning intentions with the strategies allowed for a better understanding of the complexity and thought that participants utilized when selecting strategies to support students’ development of critical thinking and clinical judgment.

To support this development, participants also identified contextual factors that could have significant impact. In identifying the contextual issues, the data identified four specific areas that affected the development of critical thinking and clinical judgment: the buddy RNs, the school of nursing and the program in general, the clinical instructor role, and the nursing student’s role in learning. The contextual factors of the unit RNs and the school of nursing were both elements that could be both a support and a hindrance to student learning. Participants noted that the buddy RNs could identify ideal learning
opportunities as well as provide appropriate feedback to students. On the other hand, if the buddy RNs were not engaged in the learning process, it became more difficult for students to participate in learning experiences. The School of Nursing’s curriculum, including its timelines and flow of courses, could significantly impact student learning. If the curriculum did not have a clear definition of critical thinking and clinical judgment, then it too could hinder student development. However, if the school of nursing provided a clear definition, both the participants and students could have clear goals and expectations to support students’ development of critical thinking and clinical judgment. The clinical instructor and the nursing student were also identified as important contextual factors to consider when looking at the overall concept of how critical thinking and clinical judgment is developed in the clinical environment. Clinical instructors were considered crucial to student learning, as students require significant support as well as skills to ensure they explore concepts and see the whole patient picture. Clinical instructors who are less experienced or focused on skills can not meet student needs for development of critical thinking and clinical judgment. The participants also identified that students themselves and their willingness to learn, support others, and receive feedback both positively and negatively impact their development of critical thinking and clinical judgment.
Chapter 5: Discussion

5.1 Overview

In this chapter I present a summary of my findings and a discussion of my research in the context of the available literature. I also discuss the implications and recommendations for clinical education, clinical instructors, and curriculum development.

I conducted a qualitative study to gain a better understanding of how clinical instructors foster critical thinking and clinical judgment in undergraduate nursing students while in the clinical setting. Interpretive description was the methodology that guided my study. The sample consisted of eight clinical instructors who have taught instructor-led clinical placements in an acute care medical/surgical setting within a year of the set interview. I collected data using semistructured interviews and participant demographic information. I audio-recorded the 45- to 90-minute interviews and then transcribed them verbatim. I also utilized a reflective journal to track my progress, express my views, and to acknowledge any biases that I noticed during both the data gathering and coding processes. I used constant comparative analysis initially to identify new insights or concepts, which I then explored further in subsequent interviews.

Thematic analysis resulted in five broad themes: (a) critical thinking, (b) clinical judgment, (c) indicators of critical thinking and clinical judgment, (d) strategies for developing critical thinking and clinical judgment, and (e) contextual supports and barriers for development of critical thinking and clinical judgment. I explored each theme and further developed subthemes.
Through this research, critical thinking was conceptualized to be a process with a series of steps that leads to the clinical judgment or the decision. Participants identified this as thinking like a nurse, as participants noted that they did not frequently use the terms critical thinking and clinical judgment in clinical setting. This study found that critical thinking and clinical judgment improved with experience and when students took on the role of the RN. Overall, the participants found the concepts hard to define as well as to evaluate, but they did identify some of the indicators that they used to assess students’ critical thinking and clinical judgment.

Participants identified a variety of indicators that they used to determine if students were critically thinking and able to make appropriate clinical judgments. The initial indicator was if students were able to maintain safety, both for patients and for themselves. The second indicator was the ability to effectively communicate. Students who were able to approach the clinical instructors, the buddy RNs, and other students with their thoughts and their planned interventions demonstrated that they were able to effectively critically think. Sharing thoughts and being able to support decisions were important indicators for participants. According to participants, students who did not communicate and were quiet all the time were most likely not critically thinking, as they were unable to identify their thinking processes. The third indicator was that of confidence. Students who had confidence in their ability to manage patient care and in their thinking and decision-making abilities were more likely critically thinking. Students who displayed no confidence in their thinking and decision-making abilities usually lacked the underlying theory necessary to make decisions or the ability to integrate all of the data to understand the overall patient situation. The fourth indicator was that of taking
ownership. If students were able to take ownership of their thinking, their decisions, and the patient care, then they were critically thinking and able to make clinical judgments. Participants considered students who did not take ownership of their decisions and instead deflected and blamed others for problems that they experienced in the clinical setting to be demonstrating a lack of critical thinking and clinical judgment.

To support critical thinking and clinical judgment, the participants identified teaching strategies that they would utilize. Participants also reported applying multiple teaching strategies daily, and they would modify the strategies depending on the group’s and individual students’ needs. With that in mind, the participants identified seven strategies that they used in the clinical setting. The first and most common was that of questioning; all participants identified that this was an essential strategy to support students in developing critical thinking and clinical judgment. Other strategies included paper-based tools, concept maps, skills development, peer mentoring, nursing care plans, postconferences, and constructive feedback. Overall, strategies were used to support students’ critical thinking and clinical judgment by exploring their thinking processes, developing confidence, creating a space for constructive feedback, and acknowledging that the participants need to be adaptable and flexible to the learning needs of nursing students.

Contextual factors could support or be a barrier to facilitating students’ development of critical thinking and clinical judgment. The participants identified four main factors. The first was the buddy RN and their interactions with the students. The second was the school of nursing, which was divided into the nursing curriculum and the flow of the curriculum. The third contextual factor was that of the clinical instructor,
including the instructor’s experience and communication skills. The fourth factor was that of the nursing students themselves, including their participation in the clinical learning experience and their relationships with their clinical instructors.

5.2 Discussion of Findings

In this section, I discuss the five themes from my findings the context of the research questions that I identified in Chapter 1. I also examined my findings in relation to the existing literature.

5.2.1 Definition and interpretation of critical thinking and clinical judgment.

Participants in this study defined and interpreted critical thinking and clinical judgment as two parts of whole, in which critical thinking was the process and clinical judgment was the decision or action. The literature offered a variety of definitions of critical thinking and clinical judgment (Benner et al., 2010; Facione, 1990; Scheffer & Rubenfeld, 2000; Tanner, 2006; Twibell et al., 2005; Victor-Chmil, 2013). Authors who examined critical thinking studied it as a separate concept with no mention of clinical judgment (Chan, 2013; Facione, 1990; Scheffer & Rubenfeld, 2000; Twibell et al., 2005). Victor-Chmil (2013) identified critical thinking and clinical judgment as two separate concepts. The conceptualization of critical thinking and clinical judgment in my findings resembled Tanner’s (2006) model of clinical judgment. Tanner (2006) considered critical thinking and clinical judgment to be the same and clinical reasoning to be a separate concept in which clinical reasoning was the process leading to clinical judgment. When looking at Tanner’s (2006) definition for both, my findings did not identify the complexity that the author associated with clinical judgment. In my findings, the definitions of critical thinking and clinical judgment did not identify the complexity that
is associated with those two terms, as found in the current literature (Chan, 2013; Scheffer & Rubenfeld, 2000; Tanner, 2006; Victor-Chmil, 2013).

Participants identified different components of critical thinking and clinical judgment, such as starting with inquiry, accessing knowledge and information, analyzing, integrating, and synthesizing the information with the intention of making a plan of action, and then evaluating the outcomes. These skills or steps were noted in Scheffer and Rubenfeld’s (2000) definition of critical thinking, Chan’s (2013) critical thinking review, and Tanner’s (2006) model of clinical judgment. In my findings, participants noted ethical considerations are a component of critical thinking and clinical judgment. Victor-Chmil’s (2013) definition of clinical judgment identified it as having an affective component but with no specific allusions to ethics. Overall, none of the definitions of critical thinking and clinical judgment found within the literature identified ethical considerations (Chan, 2013; Scheffer & Rubenfeld, 2000; Tanner, 2006). The findings indicated that it was important to identify ethical biases as part of critical thinking and clinical judgment.

It is important to note that, with all of the available definitions and research in the literature, not one of my findings identified a specific definition or conceptualization from the published works reviewed or from participants’ schools of nursing that the clinical instructors used. Instead, participants offered their own understandings of critical thinking and clinical judgment. If clinical instructors are creating their own definitions and understanding of clinical judgment, then they are also fostering and evaluating both to their own definition and standards. With using their own definitions, there could be confusion for nursing students, as clinical instructors’ definitions of critical thinking and
clinical judgment could differ, which means what is taught to students may vary. The other question to consider is whether the clinical instructors definition of critical thinking is as comprehensive as what the SON expects, considering clinical instructors frequently create definitions from their current and past experiences. Has the expectations for critical thinking and clinical judgment moved beyond what clinical instructors are expecting from the nursing students? Or with clinical instructors usually being current in their bedside nursing practice is their definition and understanding of critical thinking and clinical judgment a pragmatical approach that ensures nursing students are safe practitioners that can effectively critically think and make clinical judgments.

In reviewing published works on critical thinking and clinical judgment, I found much of the literature referred to what they should be and what are the different habits of mind, skills, steps, or components that are associated with critical thinking and clinical judgment (Scheffer & Rubenfeld, 2000; Tanner, 2006; Victor-Chmil, 2013). In my findings, participants focused on the opposite—on what would happen if critical thinking and clinical judgment were not present. What would students’ characteristics be, and what impact would that have on the clinical practice of students? The closest comparison in the literature would be research revolving around failure to rescue, or the inability to prevent and/or effectively manage life-altering patient complications (Clarke & Aiken, 2003; Liao, Sun, Yu, & Li, 2016). However, the concept of failure to rescue is also affected by numerous other contextual factors such as staffing, unit culture, patient acuity, educational preparation, as well as the individual nurse’s ability to critically think and make clinical (Clarke & Aiken, 2003; Liao et al., 2016). Understanding the negative implications or impact a lack of critical thinking and clinical judgment would also assist
in further developing indicators of critical thinking and clinical judgment, which can be used to identify and evaluate those in the clinical environment.

5.2.2 Evaluation of critical thinking and clinical judgment.

Beyond understanding the concepts of critical thinking and clinical judgment, it is also important to have an understanding of the indicators that are used to identify critical thinking and clinical judgment in the clinical setting. These indicators assisted the participants in evaluating their nursing students’ critical thinking and clinical judgment. In my findings, participants indicated that they did not receive specific criteria from their schools of nursing on how to evaluate critical thinking and clinical judgment. Instead, to provide guidance when evaluating students, they would evaluate if students were “thinking like a nurse” in the clinical setting and they would use the clinical expectations provided from their schools of nursing. The participants believed that in the clinical expectations there were minimal to no outcomes that related to critical thinking and clinical judgment specifically. Gaberson et al. (2015), in their guide to clinical teaching, suggested that to develop students’ critical thinking and clinical judgment, it was important for instructors to have a clear definition of these concepts and to set clinical expectations that were specifically geared to both. With this in mind, a clear focus on critical thinking and clinical judgment needs to be present within clinical expectations.

In a recent Delphi study, Paul (2014) noted that evaluation of critical thinking needed to be through a variety of methods. Methods of evaluation and the identifiers of critical thinking were not specifically identified in Paul’s research. Similarly, in my study, participants did not report using specific evaluation techniques but instead looked at the generalized indicators that they would use to identify if a student was critically
thinking and using clinical judgment. The indicators they identified included safe patient care, effective communication, students’ confidence in their critical thinking and clinical judgment, and taking ownership of their patient care.

When comparing my findings to what is currently available in the literature in relation to evaluation and teaching strategies the comparison is limited. The literature related to strategies generally looked at how to evaluate one particular strategy instead of the student as a whole. Although much of the literature did not identify clinically based evaluation strategies for critical thinking and clinical judgment, one that did was Gerdeman et al.’s (2013) study on evaluating concept maps. Key indicators in their rubric included students assuming responsibility for their actions, but Gerdeman et al. did not speak to patient safety, effective communication, or confidence. No other article provided clear evaluation indicators that could be utilized in these findings.

I also examined overall clinical evaluation of nursing students and what indicators would be used to evaluate if a student was successful or unsuccessful in the clinical setting. DeBrew and Lewallen (2014) studied clinical instructors and what indicators they would use to pass or fail a student. I noted significant overlap between my findings and DeBrew and Lewallen’s results. The students’ factors that could affect pass or fail included ineffective communication, patient safety, and safe practice. Although DeBrew and Lewallen’s research was not specific to critical thinking and clinical judgment, I found relevant connections between passing and failing a student, as students that were unable to critically think or make clinical judgments would not be successful as an independent RN.
DeBrew and Lewallen’s (2014) article focused also on the idea that the primary concern about students that could impact the clinical instructors’ choice to pass or fail a student was that of communication. My findings agreed with the results from that study, as they discussed written and verbal communication between the student, the instructor, and other students. In Gerdeman et al.’s (2013) research, written communication was evaluated as concept maps that were not clear or easily read received poor or marginal grades instead of good or excellent. My study extended DeBrew and Lewallen’s and Gerdeman et al.’s research, as my findings indicate there also needs to be a progression of communication, whether oral or written, and students must move beyond communicating when asked and instead move to communicating autonomously, approaching the clinical instructor or buddy RN with their assessment findings and abnormal cues. This finding of effective communication should be explored further as there are multiple factors that could impact it, including students’ confidence.

An indicator that was not mentioned in the evaluation literature was that of nursing students’ confidence in critically thinking and clinical judgment. Confidence was a habit of mind in Scheffer and Rubenfeld’s (2000) definition of critical thinking, but it was not discussed further in their work. Confidence in my findings moved beyond the concept of student anxiety, which was mentioned in DeBrew and Lewallen’s (2014) study. Instead, it looked at students having confidence in their knowledge levels as well as their ability to gather the appropriate knowledge and start to link information together to see the whole patient picture. This is an area that should be studied further, as confidence as a term in a definition does not detail how it is evaluated in the clinical setting.
Evaluation of critical thinking and clinical judgment in my findings involved concepts such as safe practice and maintaining patient safety, effective communication, confidence in students’ critical thinking and clinical judgment, and ownership in patient care. While I found an abundance of literature examining the concepts of critical thinking and clinical judgment, little has been written on the subject of how to evaluate these practices in the clinical setting. While there are evaluation rubrics for specific strategies such as concepts maps and simulation, those rubrics do not look at the overall clinical judgment in the clinical setting. Creating clear evaluation guidelines in relation to critical thinking and clinical judgment could support clinical instructors in not only facilitating development of these abilities but also in choosing appropriate teaching strategies.

5.2.3 Teaching strategies used to foster critical thinking and clinical judgment.

To facilitate the development of critical thinking and clinical judgment the participants in my findings identified eight different strategies, which included questioning, paper-based tools, concept maps, skills development, peer mentoring, nursing care plans, postconferences, and constructive feedback. In this section I examine teaching strategies from my findings and how they were implemented in the clinical setting in comparison to the available literature. I also address literature that spoke to the use of multiple teaching strategies to support students’ learning of critical thinking and clinical judgment instead of the focus on singular strategies.

When exploring the literature related to clinical teaching strategies, the only study that looked at more than one strategy was Khan et al.’s (2012) study. They examined strategies of demonstration, reflection, problem-based learning, and concept maps, and
they explored how each of those strategies individually affected and compared in terms of knowledge, skills, and attitudes (Khan et al., 2012). I found no literature that looked at the effectiveness of the strategies being used together.

The most commonly used clinical teaching strategy in my findings was that of questioning, which encompassed a wide area including open-ended, why, and close-ended questions, depending on the situation. Participants identified that they used a variety of questions, particularly why questions as they tested students’ critical thinking. When reviewing the literature, studies of questioning in the clinical setting have mostly revolved around the type of questioning that happens in postconference (Hsu, 2007; Sellappah, Hussey, Blackmore, & McMurray, 1998). In both studies, the authors identified that clinical instructors asked primarily low-level questions, such as recall or basic knowledge questions, instead of high-level questions that would stimulate critical thinking (Hsu, 2007; Sellappah et al., 1998). In a literature review of critical thinking, Chan (2013) identified that Socratic questioning was a key strategy in developing critical thinking and clinical judgment. In my findings, I did not clarify or identify the specific types of questions asked, nor did I observe the participants in practice. To understand this further, it is important to explore and examine clinical instructors’ questioning in the moment. We need to further explore what types of questions clinical instructors are asking students prior to, as they are making and after they have decided upon a clinical judgments. Only when we do this can we assess the level of questioning as well as its impact on critical thinking and clinical judgment.

Concept maps are another strategy that supports the development of critical thinking and clinical judgment. In my findings the concepts maps were completed in a
number of ways, including as written assignment that was handed in, as an exercise to support learning, or as group work with postconferences. In the literature, concept maps were researched as written assignments, and students’ first concept maps were compared to their last concept maps to evaluate the development of critical thinking (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khan et al., 2012; Staun et al., 2010). In both the research and in my findings, concept maps supported development of critical thinking through assisting students to see the big picture, linking data, pointing out areas in which further information was needed, as well as providing space to ask further questions, extending their thinking, and then offering feedback (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Khan et al., 2012; Staun et al., 2010). In my findings, however, participants discussed how they would use concept maps as group work in postconferences, which was not discussed in the literature reviewed. Using concept maps in this manner allowed space for critical self-reflection, peer mentoring, and support as well as a chance for open feedback between students in the group and the clinical instructors. Concept maps as group work in the clinical setting needs to be studied further as a strategy to support the development of critical thinking and clinical judgment.

Nursing care plans was another strategy identified in my findings and studied in the available literature (Angel et al., 2000; Marchiango et al., 2011). Nursing care plans were created individually as assignments that were either handed in during the clinical shifts as in the research (Angel et al., 2000; Marchiango et al., 2011) or, as noted in my findings, discussed during the clinical shift to support students’ development of critical thinking and clinical judgment. In my findings, the nursing care plans were created
during the clinical shift and students were expected to determine nursing diagnoses and to plan interventions, integrate current knowledge and assessment data, implement interventions, and then evaluate their effectiveness (Gaberson et al., 2015). These steps provide space for clinical instructors to question students, support students’ knowledge development and integration of data, and provide space for feedback, which supports the development of critical thinking and clinical judgment (Angel et al., 2000; Gaberson et al., 2015; Marchiango et al., 2011). In my experience, nursing care plans are a common part of nursing clinical education and are used to support critical thinking and clinical judgment. My findings of the use of nursing care plans lined up with their use noted in the available literature (Angel et al., 2000; Gaberson et al., 2015). Nursing care plans are a valuable strategy to support the development of critical thinking and clinical judgment. It will be important to assess their effectiveness when created as group work and also as part of the multiple teaching strategies that are used to support the development of critical thinking and clinical judgment. In my findings, participants indicated they used postconferences as a strategy to support the development of critical thinking and clinical judgment. In my findings participants identified postconference as a time when the whole clinical group could meet to debrief about the clinical day and share knowledge through discussion or group work such as concept maps or nursing care plans. This view of postconference was different than what was studied in the literature. Hsu (2007) and Sellappah et al. (1998) viewed the postconference as a time for clinical instructors to ask questions that stimulated critical thinking and clinical judgment. Gaberson et al. (2015) had a broader view of postconferences similar to that of my findings, in which a variety of strategies were used in the space and time created from the conference to support
critical reflection, ethical discussions, effective communication, and the development of critical thinking and clinical judgment. Since postconferences can house other strategies, further research is necessary to view its impact on the students as well as to provide an overview of the variety of strategies that can be employed within postconferences. It would also be of interest to understand how clinical instructors choose to use postconferences.

Providing constructive feedback was an essential clinical teaching strategy that supported the development of critical thinking and clinical judgment (Gaberson et al., 2015; Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005; Staun et al., 2010). Providing students with feedback helped develop a better understanding of their areas of strength and weakness in critical thinking and in making effective clinical judgments. Feedback can also help to develop students’ confidence in their ability to critically think and make clinical judgments. If the feedback is done ‘correctly’ it can enhance communication between the clinical instructor and the student, thereby impacting students’ communication skills and support the development of effective communication, which is essential to critical thinking and clinical judgment (Gaberson et al., 2015; Hicks-Moore & Pastirik, 2006). The information presented in Gaberson et al.’s (2015) clinical teaching book was similar to my findings, both of which determined that in-the-moment, comprehensive feedback is needed along with regular written feedback to enable students to have space for critical self-reflection, which supports the development of critical thinking and clinical judgment. In both the literature reviewed and in my findings, clinical instructors enjoyed the enhanced communication with students that constructive feedback afforded (Hicks-Moore & Pastirik, 2006; Staun et al., 2010).
Constructive feedback could provide the opportunity for clinical instructors to explore students’ thoughts to gain a better understanding of their thinking processes (Marchiango et al., 2011; Mun, 2010; Shieh, 2005; Staun et al., 2010), which facilitates clinical instructors in developing students’ critical thinking and clinical judgment. Feedback is an essential tool in clinical teaching and has been explored as to its effects on nursing students in clinical experiences (Glover, 2000; Quance, 2016). What about feedback that is given in inappropriate ways? How might this effect students’ development? In the available literature, the focus was on how the students felt that feedback supported their development of critical thinking and clinical judgment through assisting them to see the big picture, enhancing their communication with the clinical instructors, decreasing student anxiety, and promoting autonomy and students taking responsibility for their own learning (Gerdeman et al., 2013; Hicks-Moore & Pastirik, 2006; Hsu, 2007; Kautz et al., 2005; Marchiango et al., 2011; Mun, 2010; Staun et al., 2010). In my findings, the focus of feedback was on participants’ needs and how they believed it supported critical thinking and clinical judgment, which was a different focus from what I found in the literature reviewed. I believe constructive feedback is valuable in supporting the development of critical thinking and clinical judgment, and I suggest this subject be explored further from both clinical instructors’ and students’ perspectives.

The participants identified eight different clinical teaching strategies that they would use in the clinical setting to support the development of critical thinking and clinical judgment. In my findings, participants identified organizational paper-based tools, skill development, and peer mentoring as clinical teaching strategies, but these approaches have not been researched in the clinical setting. The participants also
identified that they used multiple strategies daily, and, in conjunction, clinical teaching strategies were adjusted to meet student-specific needs. Whereas in the literature, teaching strategies were studied as independent factors that affect critical thinking and clinical judgment without having taken into consideration the impact that other clinical teaching strategies may have on the development of critical thinking and clinical judgment (Angel et al., 2000; Glover, 2000; Hicks-Moore & Pastirik, 2006; Hsu, 2007; Kautz et al., 2012; Marchiango et al., 2011; Naber et al., 2014; Quance, 2016; Sellappah et al., 1998; Staun et al., 2010). This seems to be in contradiction to actual practice in which multiple strategies are used to meet students’ learning needs and to support development of critical thinking and clinical judgment. Gaberson et al.’s (2015) book related to clinical teaching strategies identified, in order to support the development of undergraduate nurses, multiple learning domains needed to be targeted, so it is important to examine clinical teaching strategies as a whole as well as their interactions, instead of looking only at specific ones. In their book, Benner et al. (2010) suggested teaching methods need to ensure that the whole patient’s experience is taken into consideration and advised teaching methods look beyond just the medical pathology into the psychosocial aspects of illness. This means that a variety of clinical teaching strategies are needed to help students to see the whole patient experience.

There are multiple teaching strategies that support the development of critical thinking and clinical judgment. In my findings, the participants identified eight different strategies, five of which—questioning, concept maps, nursing care plans, postconferences, and constructive feedback—were examined in the research literature (Angel et al., 2000; Hicks-Moore & Pastirik, 2006; Hsu, 2007). Tools, skills
development, and peer mentoring have not been actively studied in the research literature. While it is important to understand the effects of how each strategy supports the development of critical thinking and clinical judgment, it is also important to look at the use of multiple strategies and how the choice of strategy could impact nursing students’ critical thinking and clinical judgment. Further research needs to be done to view how clinical instructors choose strategies, as well as how they customize them to students needs in order to facilitate the student in developing critical thinking and clinical judgment, particularly in the contextualized setting of the clinical learning environment.

5.2.4 Facilitators and barriers to fostering critical thinking and clinical judgment.

Many contextual factors could affect students’ development of critical thinking and clinical judgment. In this section I examine the various contextual factors, both positive and negative, that affect the teaching and learning process. I also compare my findings to the available research and literature.

5.2.4.1 Buddy RNs.

Clinical educational is highly dependent on the context of the unit, the patients, as well as the buddy RNs that the nursing students learn and work with on the units. Buddy RNs are generally ward nurses with no teaching experience who are charged with maintaining a safe level of patient care. Taking this into consideration, buddy RNs can be both a facilitator and a barrier to students’ development of critical thinking and clinical judgment. This was noted in my findings but also echoed in research conducted by Staun et al. (2010), with students noting that certain RNs would allow them to be more independent while others would not. The role of the buddy RN can be confusing, as there
are usually no specific guidelines as to what students can or cannot do as well as what they are expected to do. Many hospital units also have multiple clinical student groups from different schools of nursing, all of whom have varying levels of experience, so it can be confusing to know which group is on the unit at any given time as well as what level they are expected to be functioning at. This can be mitigated by effective communication from both the nursing student and the clinical instructor to ensure that all parties are working toward the same goals. This open communication also helps support the RN to communicate with the clinical instructor and/or student if there are issues with the workload and patient acuity.

Other hindrances to the effectiveness of buddy RNs are the patient acuity and the workload on the unit. With the increasing acuity of patients in hospitals, the changing levels of staffing, current nursing shortages, as well as the potential for a lack of experienced RNs on units, buddy RNs are overwhelmed with their day-to-day responsibilities without taking on the challenge of mentoring a nursing student (Benner et al., 2010; Boychuk Duchscher & Cowin, 2006; Simpson, Lyndon, & Ruhl, 2016). Decreased mentoring time is an ever-deteriorating cycle, as there continues to be a nursing shortage; as a result, nurses face a burgeoning workload along with additional students being placed in clinical settings with the hopes of increasing the total number of nurses available. The current health care system is also in a time of flux, with shifting unit and health care politics in which the staff composition on acute care units has gone from strictly RNs to a mix of RNs and licensed practical nurses. Despite this negative cycle, there are RNs who are supportive of nursing students.
Buddy RNs who are on the ward also recognize that student RNs are their future coworkers, so encouraging their development in critical thinking and clinical judgment supports their ability to work with RNs in the future. In my findings, the participants noted some nurses were very supportive and would not only bring students into new situations but also provide direct feedback to the nursing student about their practice as well as speak to the clinical instructor. Staun et al. (2010) noted that students who were paired with supportive buddy RNs expressed that they had less anxiety and experienced increased autonomy at the bedside. Buddy RNs also receive additional support from within the hospital system, which translates to increased teaching strength when they participate in programs to educate and mentor student nurses. The increased support from the hospital system improves Buddy RNs’ ability to support and facilitate students’ development of critical thinking. The educational support for development of critical thinking and clinical judgment is also very important.

5.2.4.2 The school of nursing.

Through its curriculum, the school of nursing plays a pivotal role in the development of nursing students’ critical thinking and clinical judgment. In my findings, participants identified the curriculum and the flow of the courses as having an impact on the development of clinical judgment and critical thinking. This part of the discussion will look at how those concepts are discussed further in the available literature.

The curriculum is the underpinning of any educational program, as it outlines the intended learning outcomes and some of the processes necessary to reach those. When considering the concepts of critical thinking and clinical judgment, development of such abilities need to be explicitly defined and described as part of the curriculum. The
participants identified that having a clear description and evaluation parameters of what the school of nursing considered to be critical thinking and clinical judgment was important to assist them in developing nursing students’ critical thinking and clinical judgment. This was also echoed in Gaberson et al.’s (2015) comprehensive book related to clinical teaching. The authors suggested that the curriculum must include a clear definition of the chosen terminology, whether it is critical thinking, clinical judgment, clinical reasoning, or some other term (Gaberson et al., 2015). In addition, instructors require specific criteria as to how their specific term should be assessed and evaluated in the clinical setting. Cappelletti et al. (2014), in their systematic review of clinical judgment, identified that teaching strategies with a focus on development of clinical judgment was important to support students’ growth of clinical judgment. The curriculum and clinical expectations need to have a focus on critical thinking and clinical judgment in order to support student development. The curriculum and strategies also need to be aligned so that the theory matches students’ clinical placements.

The flow of the curriculum was a focus for the participants. When discussing this subject, participants noted that at times there was a lack of connection between the theory courses and the clinical. The lack of connection between theory and clinical courses meant that students did not have the basic theoretical knowledge to manage specific aspects of patient care. Benner et al. (2010) noted that schools of nursing that integrated classroom and clinical education demonstrated an increase in students’ development of clinical reasoning and clinical judgment, whereas those that lacked this connection left students feeling fragmented with no specific focus for development of critical thinking and clinical judgment. Benner et al. suggested schools of nursing create a program in
which clinical practice and classroom learning are closely integrated so that students are able to put their theory into practice immediately. Benner et al. also suggested increasing the amount of time in the simulation lab to support students’ transition into the clinical environment and increase students’ pattern recognition, skill development, and overall critical thinking and clinical judgment. It was also important that the clinical instructors were aware of the curriculum and what students had already done and were expected to do.

5.2.4.3 Clinical instructors.

An essential part of clinical education and students’ development of critical thinking and clinical judgment are the clinical instructors. In my findings, the participants identified that the clinical instructor could be either a barrier or facilitator in the development of nursing students’ critical thinking and clinical judgment. One consideration was that of experience level of the clinical instructor, in which Benner’s (2000) novice to expert theory came into play. Clinical instructors with less experience focused on skill development and meeting clinical expectations, whereas clinical instructors with more experience were able to use multiple strategies to facilitate nursing students’ development of critical thinking and clinical judgment (Jetha, Boschma, & Clauson, 2016; Owens, 2017; Paterson, 1994; Suplee, Gardner, & Jerome-D’Emilia, 2014). Increased experience also allowed instructors to ask for feedback from students and to critically reflect on the strategies they employed and their effectiveness with students (Paterson, 1994). Hsu (2007) noted that clinical instructors who had experience in the same environment as where they were teaching also had increased ability to ask
questions that initiated nursing students’ critical reflection and increased integration of knowledge to facilitate development of critical thinking.

In my findings, instructors who lacked relevant clinical experience needed to focus on finding education and teaching strategies to support student development of critical thinking and clinical judgment. These clinical instructors identified that they would use organizational tools, other teaching strategies, and evaluation standards or practices provided by the school of nursing or other clinical instructors. When looking at this orientation to the school of nursing, clinical teaching and senior faculty mentors were critical to assisting clinical instructors in supporting nursing students’ development of critical thinking and clinical judgment. This was echoed in the literature, as clinical instructors both want and need orientation and faculty mentors to better support their students (Jetha et al., 2016; Suplee et al., 2014). Clinical instructors also rely on the clinical competencies as a guide to support nursing students as well as to determine how to evaluate them; however, in situations in which the competencies do not have a specific focus to critical thinking and clinical judgment, clinical instructors may not focus on developing them (Benner et al., 2010; Gaberson et al., 2015). Similarly, both my study findings and the literature revealed evaluation rubrics that were too long or complex were not well taken up and utilized by the clinical instructors and students (Angel et al., 2000; Hicks-Moore & Pastirik, 2006). If they did not use the strategies, clinical instructors may revert to teaching approaches and conceptualizations of critical thinking and clinical judgment that they may have experienced when they were nursing students themselves or conceptualizations that they created as they have continued to practice both as a bedside RN and as a clinical instructor.
Clinical instructors looked for clear guidance as to what their schools of nursing considered to be critical thinking and clinical judgment. They also wanted a toolbox of teaching and evaluation strategies to support nursing students’ development of critical thinking and clinical judgment (Gaberson et al., 2015; Jetha et al., 2016). In my findings and in the literature, clinical instructors wanted faculty mentors’ support in discussing strategies to meet specific students’ needs. Clinical instructors also wanted support from faculty mentors to clarify clinical expectations and establish methods to evaluate students on those competencies. The participants noted that they did use the clinical competencies as guidelines, but not all of the terms were clearly defined in the competencies. However, having this understanding was important to facilitate the development of nursing students’ critical thinking and clinical judgment. In the literature, in cases in which the school of nursing provided clinical instructors with a specific definition of critical thinking, instructors found this information helped to support them in both understanding why the strategy was being used as well as how to clearly evaluate students’ critical thinking abilities (Angel et al., 2000; Hicks-Moore & Pastirik, 2006; Kautz et al., 2005). Other strategies that supported clinical instructors’ growth was through their own readings and discussions with other clinical instructors, conferences, and courses specifically related to teaching (Owens, 2017; Suplee et al., 2014). Clinical instructors also benefited from readings or lessons that focused on students and the relationship between the student and the instructor.

5.2.4.4 The nursing student.

The nursing students’ participation and engagement in clinical education and the clinical teaching strategies used to facilitate students’ critical thinking and clinical
judgment is a significant contextual factor. All of participants commented on nursing students’ participation and engagement and whether or not this element acted as a barrier or support to students’ own development of critical thinking and clinical judgment. The findings focused on the instructor’s perspective of nursing students’ capacity and willingness to learn, their preparedness, as well as their ability to receive feedback and to integrate it into their critical thinking and clinical judgment. When comparing my study findings to the available literature, I noted limited discussion and studies related to the clinical instructor’s view on students’ impact on their own learning in the clinical environment; instead, the literature primarily focused on the relationship between the clinical instructor and the student. Gillespie (2002) discussed “the fit” (p. 572) and how students’ beliefs and expectations about themselves and their clinical instructors impact the relationship and thereby student learning. Students were also influenced by their previous learning experiences, whether they had been challenging or not in the student’s opinion (Gillespie, 2002; O’Mara, McDonald, Gillespie, Brown, & Miles, 2014). Paterson and Groening (1996) examined the clinical instructors’ perspectives and how through countertransference they may expect too much of nursing students. Understanding this could provide a different lens on the clinical instructor’s perspective that nursing students could impact their own development of critical thinking and clinical judgment. Considering that Paterson’s research is from 1996, I think it is essential to investigate current clinical instructors’ perceptions of nursing students. It is also important to understand the impact of new generations of clinical instructors and learners beyond the millennial learner and how that could impact clinical education.
5.3 Limitations of the Study

The use of interpretive description as my methodology and my method of coding and understanding the data incurred certain limits. Interpretive description expects two things. The first is that the researcher comes into the area of study with an understanding of what is already known. This understanding may have influenced my interpretation of the data, especially in light of the available literature and my personal experiences with clinical teaching. The second is that I used constant comparative analysis when coding the data, which could allow for biases when analyzing and interpreting the data. In addition, during the coding process, it is possible that I came to the conclusions too quickly, put too much interpretive bias into my analytic groupings, or looked through overly specific lenses to derive answers.

The use of constant comparative analysis starts when the first interview is finished. As the information from each interview is reviewed, that information could affect the next interview and potentially change the interview questions, which could alter the information received from participants. In asking them things that I thought I had understood, I may have introduced ideas to the participants that perhaps then swayed their perspectives.

For my study I used semistructured interviews, which introduced two main areas of concern. First, I had to trust the veracity of the participants in talking about their experiences as clinical instructors. As individuals and teachers the aim is to provide the best learning experience possible for students, so the potential is there that clinical instructors could have been describing what they would like to be able to do, versus what they were currently doing in practice. Second, as an interviewer, I have had previous
experience with clinical teaching; as the participants were made aware of my previous experience, it may have changed their interview responses. There was also the experience of participants expecting that, as a clinical instructor I would provide feedback on their performance, so may have been looking for advice, rather than answering questions about their experiences.

While the participants appeared to be heterogeneous with respect to age and experience, my study did not include any male participants. Furthermore, my inclusion criteria specified that participants teach in an acute adult medical or surgical unit, so I may have missed other perspectives by not talking to clinical instructors from other areas such as pediatrics and community health. My research used two of the schools of nursing in the region out of multiple available schools with different entry requirements, lengths of program, and program focuses. Not including other schools of nursing may have limited the depth and breadth of my findings.

5.4 Recommendations for How to Facilitate the Development of Critical Thinking and Clinical Judgment of Nursing Students

The focus of my study has been to understand how clinical instructors facilitate the development of critical thinking and clinical judgment. When comparing the findings to the available literature, I identified several recommendations for further research that arose from this study. I also noted implications to nursing clinical education and clinical instructor preparation.

To best support students’ development of critical thinking and clinical judgment, it is important to include specific definitions and conceptualizations for both concepts within the nursing curriculum. Those definitions and conceptualizations need to be
embedded in the curriculum and the terms should flow between the classroom and clinical settings so that both clinical instructors and students understand the importance of critical thinking and clinical judgment in nursing. While I chose to use the terms critical thinking and clinical judgment, these may not be the best terms to use. Benner et al. (2010) suggested that clinical reasoning was a more appropriate concept when applied in relation to nursing. However, the clear consensus from my research, whatever the chosen term or terms, was the importance for the school of nursing to clearly define the terms and create supporting documentation in the curriculum and in the clinical expectations.

Creating a common understanding of critical thinking and clinical judgment can support clinical instructors in understanding how to evaluate these nursing skills. As I found limited research pertaining to clinical indicators of critical thinking and clinical judgment, further research related to evaluation of these concepts in the clinical setting is warranted. It is important, once critical thinking and clinical judgment have been defined, that the school of nursing also identify key indicators of critical thinking and clinical judgment that can be used to evaluate nursing students’ critical thinking and clinical judgment in the clinical setting.

In a recent Delphi study, Paul (2014) suggested the need for multiple approaches and methods of evaluating critical thinking. Paul also suggested that clinical instructors should have specific education in relation to critical thinking and clinical judgment evaluation. Such education could be built into clinical instructor orientation and ongoing development and would be beneficial in supporting instructors to facilitate the development of critical thinking and clinical judgment.
A variety of clinical teaching strategies can be used to facilitate the development of critical thinking and clinical judgment. More research is needed to understand how these strategies impact the nursing students’ development of critical thinking and clinical judgment. In addition, further research is needed in relation to the teaching strategies, especially individual teaching strategy learning intentions and the overall effects of using multiple teaching strategies. To gain a better understanding of the overall strategy and the impact to the nursing student, the instructor, and other potential participants, it would be beneficial to conduct an observational study. An observational study would potentially start to encompass the nuances and adjustments to strategies and teaching styles that are used daily to support specific nursing students’ learning needs.

As identified earlier in this report, multiple clinical teaching strategies can be used to support nursing students’ critical thinking and clinical judgment. Clinical instructors would benefit from increased information and resources related to these teaching strategies. This information could be provided in orientations, ongoing education sessions, peer-to-peer discussions, or through faculty mentoring. In my findings, clinical instructors believed that they could be a substantial barrier or support to the development of critical thinking and clinical judgment, so supporting clinical instructors’ development would increase their ability to facilitate students’ development of critical thinking and clinical judgment.

As nursing students play a role in their own development of critical thinking and clinical judgment, I believe further research into the nursing student’s role in the clinical education setting is warranted. This research should move beyond students’ perceptions of the clinical instructor and how the clinical instructor impacted students’ learning and
instead should focus on the student factors themselves and what internal or external elements could affect students’ development of critical thinking and clinical judgment.

5.5 Chapter Summary and Conclusion

In this chapter I have examined my findings in relationship to the literature. I presented implications for current nursing education practice in curricula, clinical teaching strategies, and evaluation. I suggested curriculum development in relation to critical thinking and clinical judgment specifically in the clinical settings, which revolved around identifying appropriate indicators and evaluation strategies. I also recommended clinical instructor development in relation to clinical teaching strategies and evaluation approaches for critical thinking and clinical judgment. Finally, I advised further research be conducted in relation to clinical teaching strategies, critical thinking and clinical judgment evaluation, and the student’s role in clinical education.
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Appendix A: Interview Guide

Semistructured Interview Prompts

How Clinical Instructors facilitate Critical Thinking and Clinical Judgment during clinical nursing education.

Researcher:

A. Thank the participants for taking part
   1. Introduce yourself and provide some background.

B. Objective of the study
   1. Why the research is being conducted.
   2. Discuss the research goals.

C. Explanations
   1. Expected length of interview.
   2. Confidentiality: The information obtained while interviewing is confidential. Participant names and any other identifying information (hospitals, wards etc.) will be removed from the data during the transcription process. When the information is published no identifying factors will be published with the data.
   3. Participants can terminate the interview at any time; and if they so choose can ask to have their demographic and interview data removed from the overall analysis.
   4. There is no right or wrong story, participants should feel free to openly discuss their experiences and opinions.
   5. Any questions or comments?

Potential Interview Questions

1. Critical thinking (in nursing), what does that mean to you? Can you provide examples or ideas? (Q1)
2. Clinical judgment, what does that mean to you? Can you provide an example or idea? (Q1)
3. When you are teaching as a clinical nursing instructor how do you see critical thinking and clinical judgment coming into play? (Research Q1)
4. Do you have specific teaching strategies (techniques) that you use to promote students development of critical thinking and/or clinical judgment? Do you have any specific examples that you can think of? (Research Q2)
5. When evaluating students, what methods do you use to assess their critical thinking and clinical judgment? (Research Q3)
6. Can you provide examples as what you would use as identifiers of critical thinking and clinical judgment? (Research Q3)
7. What type of contextual factors (the unit, the nurses, the SON) facilitate you develop students’ critical thinking and/or clinical judgment? (Research Q4)

8. What types of contextual factors act as barriers to you helping students develop critical thinking and/or clinical judgment? Can you provide examples of the barriers and how they teaching? (Research Q4)

9. What, if any education (courses, classes, workshops) have you taken in relation to clinical teaching or teaching in general? (Research Q5)

10. What contextual factors (resources, education, unit factors, SON) would help you to develop students’ critical thinking and clinical judgment during clinical education? (Q5)

11. Is there anything else you want to discuss that we have not already covered or you would like to cover further?

Conclusion:

1. Thank you for participating in this research study.
2. Fill in the demographic information sheet.
3. Provide personal contact information.
Appendix B: Participant Demographic Form

How Clinical Instructors facilitate Critical Thinking and Clinical Judgment during Nursing Clinical Education

This information will not be linked to individual participant’s responses but will only be used for the purposes of describing the sample. Provision of this information is voluntary.

Participant Identification Number (as assigned during the interview e.g., P1, P2)_______

1. Age_______
2. Gender: ___________
3. Highest Level of Education related to Nursing
   a. Diploma ______
   b. Undergraduate Degree ______
   c. Post Graduate Specialty Certification ______
   d. Masters____
   e. PhD ______
   f. Other ______
4. Length of Nursing Experience (years): _________
5. Number of nursing clinical education experiences (clinical placements): ______
6. Have you had any added education specifically related to nursing clinical education: Yes____ No____
   Please describe:
7. Have your clinical education teaching experiences been with the same school of nursing or have you instructed for more than one school of nursing: yes ____
   no________

If yes, what other SONs have you taught with?