

**PREPAREDNESS FOR PRACTICE: BACCALAUREATE NURSING GRADUATES'
PERCEPTIONS OF REFLECTIVE CLINICAL PRACTICE IN RURAL NOVA
SCOTIA: A QUALITATIVE CASE STUDY**

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Abstract

This qualitative case study explores the experiences of recent baccalaureate nursing graduates in rural Nova Scotia to understand how reflective practice supports the development of clinical judgment and facilitates the integration of theory into practice. Grounded in adult learning theories—including experiential, transformative, and situated learning frameworks—the study investigates pedagogical approaches that support clinical learning and identifies barriers that hinder meaningful reflection. Through semi-structured interviews with four recent graduates, three key themes emerged: psychological safety, self-confidence, and informal workplace learning. Participants emphasized the importance of supportive mentorship, hands-on experience, and opportunities for informal reflection in developing clinical competence. While reflective practice was widely promoted throughout their education, findings revealed that students often struggled to engage in critical reflection, limiting their ability to translate reflective insights into clinical judgment. Importantly, the findings suggest that the theory–practice gap is less about difficulty applying theoretical knowledge and more about navigating the contextual, relational, and informal learning systems embedded within clinical environments. The study highlights the need for nursing curricula to incorporate structured, student-centered reflective strategies while fostering psychologically safe learning environments that promote critical inquiry and emotional resilience. Limitations include the small, context-specific sample and reliance on self-reported data, which limit generalizability. Nonetheless, this research contributes valuable insights into nursing pedagogy and offers practical recommendations for enhancing clinical education and preparing nursing graduates to navigate the complexities of professional practice.

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Chapter 1: Introduction

Nursing is a dynamic and evolving profession that responds continuously to the changing demands of healthcare systems worldwide. It encompasses both the art of compassionate care and the science of evidence-based practice, positioning nurses as critical contributors to patient safety and quality outcomes. Rooted in scientific principles, nursing integrates research, clinical expertise, and patient preferences to guide decision making and ensure optimal care delivery. This dual nature of nursing, humanistic and scientific, requires practitioners to balance empathy with analytical reasoning, demonstrating adaptability in diverse and often unpredictable clinical environments. To function effectively, nurses must possess a broad range of competencies that extend beyond technical skills. Critical thinking and clinical judgment are essential for interpreting complex patient data, prioritizing interventions, and anticipating potential complications. These cognitive abilities enable nurses to make informed decisions that directly influence patient health and well-being. However, developing these competencies is not straightforward. The preparation of entry level nurses involves more than acquiring theoretical knowledge; it demands the ability to synthesize classroom learning with real world application in high pressure clinical settings.

The process of transitioning from student to professional nurse is inherently complex. It requires the integration of foundational knowledge in anatomy, physiology, pharmacology, and psychosocial sciences with practical skills such as assessment, communication, and ethical decision making. This integration does not occur automatically; it must be intentionally cultivated through educational strategies that promote active engagement, reflection, and experiential learning. As healthcare environments grow increasingly complex, characterized by

technological innovation, interprofessional collaboration, and rising patient acuity, the need for graduates who can think critically, and act decisively has never been greater.

Consequently, nursing education faces the challenge of bridging the gap between theory and practice to ensure that new nurses enter the workforce prepared to deliver safe, competent, and compassionate care. This challenge is not merely pedagogical but systemic, as it reflects the increasing complexity of healthcare environments and the heightened expectations placed on graduates. The ability to integrate theoretical knowledge with clinical application is essential for patient safety and quality outcomes, yet achieving this integration requires deliberate and innovative educational strategies. As a novice Nurse Educator, my aspiration to become an effective teacher and equip graduates with the necessary tools for frontline healthcare practice served as the foundation for this research. Through my experiences in clinical education, I observed the difficulties students encounter when attempting to apply classroom learning in unpredictable and high-pressure clinical settings. These observations reinforced the importance of developing approaches that support learners in making meaningful connections between theory and practice. My professional commitment is rooted in the belief that nursing education must go beyond technical skill acquisition to foster critical thinking, reflective capacity, and clinical judgment.

The role of the registered nurse in Canada continues to evolve in response to demographic shifts, technological advancements, and the growing complexity of patient care. Nurses are expected to function as autonomous practitioners, collaborate within interprofessional teams, and assume leadership responsibilities in diverse healthcare contexts. These expanded expectations necessitate that new graduates possess advanced competencies upon entry to practice, including the ability to make sound clinical decisions, adapt to dynamic situations, and

engage in lifelong learning. Preparing graduates for these realities requires educational models that emphasize experiential learning, reflective practice, and the integration of evidence-based knowledge into real-world clinical scenarios. This study seeks to explore these dimensions and contribute to the development of strategies that strengthen the readiness of future nurses for the demands of contemporary practice.

Background to Study

The theory to practice gap is widely recognized as one of the most persistent challenges in baccalaureate nursing education (Rolfe, 1993; Saifan et al., 2015; Scully, 2011). Nursing literature consistently defines this gap as a disconnect between the theoretical knowledge taught in academic settings and the realities of clinical nursing practice (Akram et al., 2018; Greenway et al., 2019; Scully, 2011). Despite repeated curricular reforms aimed at addressing this issue, the gap persists and is commonly experienced by students as difficulty translating classroom learning into competent clinical performance (Dadgaran et al., 2012; Lisko & O'Dell, 2010; Rolfe, 1993). Recent analyses increasingly characterized the theory–practice gap as a multifactorial, system-level challenge influenced by variability in clinical learning environments, inconsistent preceptor support, and increasing patient acuity (Greenway et al., 2019). Learners often report the greatest difficulty in unpredictable or high-pressure situations, where theoretical frameworks are most difficult to apply (Mahmoud, 2014).

Reflective practice is widely regarded as a foundational component of adult learning and professional nursing development (Smith, 2021). Despite its prominence in nursing education, reflective practice lacks a consistently agreed-upon definition within the literature, contributing to variability in how it is taught and enacted (Mantzourani et al., 2019; Wilkinson, 1999). The use of reflective practice as a means of addressing the theory–practice gap is strongly informed

by the seminal work of Schön (Wilkinson, 1999). Schön (1983) conceptualized professional practice as involving two forms of knowing: formal, evidence-based knowledge that underpins theoretical understanding, and practical knowing that emerges in complex and uncertain situations through experience. He later emphasized that meaningful professional learning often occurs through active engagement in real-world practice, where practitioners must navigate ambiguity and contextual demands (Schön, 1987). This perspective underscores the importance of experiential learning as a necessary complement to theoretical instruction.

Within nursing education, the integration of theory and practice requires learners to develop context-sensitive judgment, situational awareness, and adaptive decision-making through experience (Hill, 2017; Lisko & O'Dell, 2010; Murray, 2018). Reflective practice supports this process by enabling learners to examine their experiences, recognize patterns in their decision-making, and adapt their actions in response to dynamic patient needs. In doing so, reflection contributes to the development of clinical judgment and professional confidence (Freshwater et al., 2005; Merriam & Baumgartner, 2020). Nurse educators play a central role in facilitating this integration by supporting learners in making sense of clinical experiences and transforming practice encounters into learning opportunities (Kear, 2013). Clinical judgment is an essential competency in nursing and is often described as the ability to “think like a nurse.” Benner et al. (2009) defined clinical judgment as “the ways in which nurses come to understand the problems, issues, or concerns of clients, and to attend to the salient information and to respond in concerned and involved ways” (p. 200). Nurses rely on clinical judgment across all areas of practice, from routine care to complex clinical decision-making (Caputi & MacMaster, 2022). Historically, novice nurses developed clinical judgment through extended exposure and mentorship in practice settings. However, contemporary healthcare environments are

characterized by increased patient acuity, compressed care timelines, and heightened expectations of new graduates (Eisenmann, 2021). As a result, entry-level nurses are increasingly expected to demonstrate sound clinical judgment upon entry to practice, underscoring the importance of intentional educational strategies that support experiential learning and reflective integration across classroom, simulation, and clinical settings (Cant & Cooper, 2010; Liu, 2024; Macdiarmid et al., 2024). These evolving expectations underscore the growing importance of intentional educational strategies that support experiential learning and reflective integration across classroom, simulation, and clinical settings.

Contemporary nursing literature increasingly conceptualizes the theory–practice gap as a complex and multifaceted phenomenon rather than a simple failure to apply theoretical knowledge. While difficulties integrating classroom-based learning into practice remain central, research suggested that the gap is also shaped by experiential, relational, and contextual forms of knowing that are often learned informally rather than explicitly taught. Nurses must navigate workplace norms, communication patterns, hierarchies, workflow expectations, and professional role socialization alongside clinical knowledge acquisition. These informal and often tacit elements of practice significantly influence how theory is enacted in clinical settings, yet they are rarely made visible to learners. Recent qualitative syntheses indicated that learners’ challenges frequently stem not from a lack of theoretical understanding, but from limited access to supportive mentorship, inconsistent clinical guidance, misalignment between educational ideals and workplace realities, and insufficient opportunities for meaningful participation within clinical teams (Singh et al., 2024). When these contextual and relational elements remain implicit or fragmented, students may experience dissonance between what is taught and what is practiced, reinforcing perceptions of a theory–practice gap (Tambunan, 2024). Understanding the

theory–practice gap in this way shifts attention from individual learner shortcomings toward the broader educational and clinical environments in which learning occurs.

Statement of Problem

The healthcare environment is constantly evolving, challenging novice nurses to employ sound clinical judgement for safe patient care (Connor et al., 2022). How to promote this skill in nursing education has puzzled nurse educators for decades. The use of reflective practice to generate knowledge has been documented to enhance the development of students' clinical judgement (Smith, 2021). But as a nurse educator, I question how to engage nursing students to foster meaningful reflection. From my brief experience in this role, I noticed nursing students struggle to make connections during their clinical experiences. Students faced numerous challenges with demonstrating applied critical thinking, a required competency at this level of their undergraduate studies. Nurse educators try to facilitate the connection of theory to practice, which is difficult when students are not demonstrating the ability to engage in meaningful reflection to support their learning. Specifically, students are struggling to link theoretical concepts to real-world patient care, apply critical thinking in clinical decision-making, and connect assessment findings to appropriate nursing actions. They often compartmentalize knowledge from different disciplines rather than integrating it, and their reflections tend to be descriptive rather than analytical, limiting their ability to synthesize experiences into deeper learning.

The challenges faced by healthcare practitioners amidst a pandemic have also highlighted the need for graduating students to feel both competent and prepared for practice (Edwards et al., 2004; Jackson et al., 2020). I can recall being a new graduate nurse feeling unprepared and overwhelmed for the professional role. Nurse educators are left with the enormous task to ensure

preparedness for practice of graduating students. Being prepared for practice is demonstrating effective clinical judgement. This led me to question my personal pedagogy: how can I best facilitate reflective practice in the clinical setting to promote the integration of theory to practice? To better understand the complexity of the issue, understanding nursing students' perspectives on their clinical learning needed to be further examined.

Research Purpose

The purpose of this study is to explore recent baccalaureate nursing graduates' experiences with reflective clinical practice by understanding their perspectives on the approaches that best supported their learning in clinical practice.

Research Question

What approaches best support clinical practice and what are the barriers that prevent translation of theory to practice application in a baccalaureate of nursing program in Nova Scotia?

Scope

This qualitative study was conducted with recent baccalaureate nursing graduates from a university in rural Nova Scotia. Data were collected through semi-structured interviews conducted virtually, allowing participants to reflect on their clinical learning experiences following graduation. The scope of the study was limited to graduates from one nursing program and focused on their perspectives of reflective practice, clinical learning, and factors influencing the translation of learning into practice. While the study was situated within the Nova Scotia context, rurality was not examined as an analytic variable and did not directly inform the analysis or interpretation of the findings. As such, geographic location is understood as contextual rather than a central focus of the research.

Positionality Statement

Positionality refers to the ways in which a researcher's social location, professional background, and lived experiences influence how knowledge is produced, interpreted, and represented throughout the research process (Merriam & Tisdell, 2016). Recognizing positionality acknowledges that researchers do not approach inquiry as neutral observers, but rather bring with them histories, assumptions, and perspectives that shape all stages of research, including data collection, analysis, and interpretation (Berger, 2015; Merriam & Tisdell, 2016). I identify as a mid-career, cisgender woman and white settler with colonial privilege, raised in a working-class family in rural Nova Scotia. I am a registered nurse and nurse educator working within a university-based nursing program. These social and professional identities inform how I understand nursing education, clinical practice, and the experiences shared by participants.

My professional nursing trajectory significantly shapes my perspective in this study. Upon graduation, I worked as a permanent resource nurse, rotating daily across multiple adult acute-care medical-surgical units without consistent unit placement or sustained mentorship. This role required rapid adaptation, independent decision-making, and continual adjustment to unfamiliar clinical environments, team dynamics, and expectations. While this experience strengthened my resilience and flexibility, it also contributed to a persistent sense of being underprepared, as opportunities for guided learning, reflection, and stable mentorship were limited. Following this period, I completed the critical care nursing program, which marked a transition into a more specialized and high-acuity practice context. This experience highlighted the contrast between generalist preparation and the depth of knowledge, skill, and support required for specialized nursing roles. Later, after six years of working in acute medical-surgical settings, I completed a perioperative nursing program. Transitioning into perioperative nursing

felt akin to becoming a new graduate nurse again, as the shift to a highly technical, fast-paced, and unfamiliar practice environment required substantial re-learning of skills, roles, and professional identity. This experience reinforced my understanding of how transitions in practice can re-activate feelings of uncertainty, vulnerability, and reliance on effective learning support.

These cumulative experiences sensitized me to the challenges nurses face when navigating new practice environments and attempting to translate knowledge into contextualized clinical action. They also shaped my interest in reflective practice, clinical learning, and the conditions that support or hinder theory-to-practice integration. As a result, I entered this research with heightened awareness of the emotional, cognitive, and professional demands placed on novice nurses and those transitioning into new roles. At the same time, I recognized that these experiences had the potential to influence how I interpreted participants' accounts. My own history of fragmented mentorship, repeated transitions, and feelings of unpreparedness could lead me to privilege certain aspects of participants' narratives or interpret challenges through the lens of my own professional experiences. My role as a nurse educator further shaped this perspective, as I routinely observe learners struggling to integrate knowledge into clinical decision-making and practice. These experiences could predispose me to interpret data in ways that emphasize educational structures or pedagogical explanations (Berger, 2015). By explicitly acknowledging my positionality and its influence, this study recognizes knowledge as contextually situated and co-constructed through interaction between researcher and participants (Lincoln & Guba, 1985). Rather than diminishing the credibility of the research, transparency about my professional and experiential positioning strengthens trustworthiness by allowing readers to understand how interpretations were shaped and how meaning was constructed throughout the study.

Overview

The following chapters outline the structure and progression of this study. Chapter 1 established the purpose, scope, and significance of the research, situating it within the broader context of nursing education. Chapter 2 provides a comprehensive review of adult learning theories including experiential learning, transformational learning, and sociocultural learning and critically examines their application in nursing curricula. This chapter also explores reflective practice as a pedagogical strategy and its essential role in fostering clinical judgment. Chapter 3 delineates the research methodology, presenting a detailed justification for adopting a qualitative case study design and outlining the procedures used to ensure rigor and credibility. Chapter 4 presents the findings derived from interviews with program graduates, offering nuanced insights into their lived experiences and the factors influencing their learning processes. Finally, Chapter 5 synthesizes these findings with the theoretical frameworks discussed in the literature review, interprets their implications for nursing education, and concludes by highlighting the study's contributions, limitations, and recommendations for future research.

Chapter 2: Literature Review

Commanding knowledge of previous research offers a point of reference for discussing the contribution the current research will make to advancing knowledge (Merriam & Tisdell, 2016). With regards to examining the theory to practice gap in nursing to facilitate clinical learning, examining adult learning theories provides the foundation of understanding how nursing students learn. Reflective practice is essential, as a foundation of adult learning and assists in the understanding of how knowledge is generated during clinical learning. Nursing education is unique. To develop understanding of how knowledge is transformed to foster clinical judgement, nursing theories provide insight into the theory to practice phenomenon. Brookfield (1995) stated that “theory lets us name our practice” (p. 186). Theories allow us to name aspects of an experience that elude or puzzle our daily lives (Brookfield, 1995). As nurse educators, having the knowledge of how learning occurs in the clinical environment strengthens our teaching practices by providing a rationale informing our actions (Brookfield, 1995). Our role as educator is crucial and directly linked to development of the student nurse’s reflective skills (Gonzalez et al., 2021). As a result of this literature review, it became clear that experiential, transformative, and socio-cultural learning theories assist to provide understanding of the importance of experience in practice, considering factors that impact the adult learner, such as in informal learning in the workplace, and most importantly in the development of reflective practice, a key element in the development of clinical judgement.

Part I: Adult Learning

Adult learning is defined by Jarvis (1992a) as “the essence of everyday living and of conscious experience; it is the process of transforming that experience into knowledge, skills, attitudes, values, and beliefs” (p. 11). No single definition of how adults learn exists, nor is there

a single theory to explain adult learning (Merriam & Baumgartner, 2020). The literature on adult learning is extensive, initially gaining popularity in the early 20th century when it became a topic of interest by behavioural and cognitive scientists focused on processes affected by the aging adult brain (Merriam, 2018). These early studies informed the various theoretical approaches to learning in adulthood making adult education its own applied discipline (Brookfield, 2010; Elias & Merriam, 2005; Merriam, 2018; Sandlin, 2005). Elias and Merriam (2005) stated, “theories of the philosophers are attempts to understand the world and everything in it in an active and constructive manner” (p. 11). Therefore, exploring these learning theories enhances decisions and ultimately produces more desirable learning experiences to enhance our practices as educators (Knowles et al., 2014).

From the early beginnings of research on how adults learn, the role of experience has been identified as important, beginning with Knowles’ theory of andragogy (Groen & Kawalilak, 2014). Other theorists have compounded this foundational fact to deepen the exploration of experience through the development of experiential learning and transformational learning (Groen & Kawalilak, 2014; Merriam, 2018). Workplace learning is connected to experiential learning and although not considered a major adult education theory it is relevant for clinical practice education and preparing nursing students for professional practice in the workplace (Groen & Kawalilak, 2014).

Andragogy

Andragogy, the best known and earliest framework for understanding how adults learn, was introduced by Knowles in 1968 and further developed in the 1970s and 1980s (Groen & Kawalilak, 2014; Merriam & Baumgartner, 2020). Referred to as a “model of assumptions,” Merriam and Baumgartner (2020) described Knowles’ andragogy as based on several

assumptions about the adult learner, essentially suggesting that adults learn differently from children, and these differences should be reflected in pedagogical practices. Knowles' model is grounded in the humanistic perspective defining adult learning as a process that is used by adults for their self-development (Merriam & Baumgartner, 2020). Humanism is derived from the assumption that thinking and learning are not motivated through the process of acquiring knowledge but sparked by personal growth as an individual human being (Page-Cutrara & Bradley, 2020). Essentially, andragogy is the explanation of adult's motivation and disposition to learning (Palis & Quiros, 2014). Knowles described six assumptions that form the foundation for understanding how adults learn (Merriam & Baumgartner, 2020; Palis & Quiros, 2014). The first assumption is the need to know, which emphasizes that adults want to understand why they must learn something before they are willing to engage in learning (Page Cutrara & Bradley, 2020; Palis & Quiros, 2014). The second assumption is the learner's self-concept. As individuals mature, they see themselves as responsible for their own learning, and thus require opportunities for self-direction, including the ability to plan, manage, and evaluate their learning experiences (Palis & Quiros, 2014). The third assumption is the importance of experience. Adults bring accumulated life and work experiences to learning situations, and these experiences significantly influence how they interpret, integrate, and apply new knowledge (Palis & Quiros, 2014). The fourth assumption is readiness to learn, which suggests that adults are most prepared to learn when the content is relevant to real situations or developmental tasks they are currently facing in their personal or professional lives (Page Cutrara & Bradley, 2020; Palis & Quiros, 2014). The fifth assumption is the learner's orientation to learning. Unlike children, whose learning often centers on subject matter, adults prefer learning that is organized around real-life problems and tasks. They are more motivated when learning is practical, contextual, and directly applicable to

challenges they must manage (Page Cutrara & Bradley, 2020; Palis & Quiros, 2014). The sixth assumption, added in Knowles' later work, is motivation to learn, which highlights that although adults may respond to external motivators, they are primarily driven by internal factors such as personal satisfaction, self-improvement, curiosity, professional growth, and the desire to fulfill meaningful goals (Merriam & Baumgartner, 2020; Palis & Quiros, 2014). Collectively, these six assumptions strengthened the intuitive appeal of andragogy and broadened its use across practice settings. However, critics continued to argue that although Knowles' model presents a compelling framework for adult education, it functions more as a set of teaching principles than a fully validated learning theory (Merriam & Baumgartner, 2020).

Practitioners were drawn to Knowles' theory because it provided a framework for instruction that focused more on the process and values of learning and less on the curricular content (Page-Cutrara & Bradley, 2020). It was widely adopted in nursing education at the baccalaureate level, as the humanistic undertones aligned with the caring perspective inherent in nursing (Page-Cutrara & Bradley, 2020). In practice, the approach suggested that the learning environment should cause the adult learner to feel "accepted, respected, and supported" and provide a "mutuality between teachers and students as joint inquirers" (Merriam & Baumgartner, 2020, p. 119). Thus, the educator played a facilitator role, supporting learners to make connections with theory using their own lived experiences.

Andragogy in Nursing Education

In clinical nursing practice, nurse educators are responsible for preparing students for the workforce. Andragogy is a key learning theory to guide learning as it emphasises learning through practical methods. In clinical practice it provides students an opportunity to be submerged and engaged in the learning activity, providing a meaningful learning experience

(Lewis & Bryan, 2021). Application of this theory in practice is student centred and individualized as each student is unique in their lived experiences. Transparency is key for successful learning, as it guides the learning purpose, and satisfies the learner's need to know. Nurse educators must collaborate with students to understand the individual learning needs and identify appropriate learning strategies together (Lewis & Bryan, 2021). Students must be capable of self-direction, as each experience is unique, and unable to be tailored to the masses. A learner's motivation is central, as clinical competencies are a requirement of professional practice, and the student is eager to develop nursing skills and experience to ensure quality and safe patient care.

Experiential Learning

Experiential learning theory defined learning as “the process whereby knowledge is created through the transformation of experience” (Kolb, 1984, p. 41). Kolb (1984)'s experiential learning theory is a cyclic learning process that divides reflective learning into two separate activities: perceiving and processing, also including a stage of abstract conceptualization (Page-Cutrara & Bradley, 2020; Palis & Quiros, 2014). This holistic model is grounded in the works of Dewey, Lewin, and Piaget (Merriam & Baumgartner, 2020). A foundational framework in many industries aside from nursing, the model was developed predominately for adult education and has been extensively used to explain reflective learning in professional education settings (Groen & Kawalilak, 2014; Page-Cutrara & Bradley, 2020).

Kolb (1984) described a cycle of learning based on the learner acquiring knowledge through direct experiences (Page-Cutrara & Bradley, 2020). Kolb (1984) argued that learning occurred when the learner directly experienced the realities of the theory, concept, or fact being studied (p. 40). The cyclical model included four main parts: concrete experience, reflective

observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2017). For effective learning to occur, the entire cycle needed to be complete (Kolb, 1984; McCarthy, 2010). Concrete experience referred to an event in which the learner actively engaged in an activity (Akella, 2010). This experience provided the basis for observation and reflection (Kolb & Kolb, 2017). Reflective observation occurred as learners gained insights from their experiences by reflecting and critically examining those experiences from multiple perspectives (Akella, 2010). These reflections were integrated into abstract concepts, allowing the learner to relate the reflection to a theory or subjective concept from which action could be drawn (Akella, 2010; Kolb & Kolb, 2017). Active experimentation represented the final stage, in which the learner tested the theory to make predictions about reality (Akella, 2010). The learning cycle provided feedback that informed new actions and allowed evaluation of the consequences of those actions (Akella, 2010). Kolb's experiential learning theory considered learning as a continuous process in which knowledge was created by transforming experience into existing cognitive frameworks (Lisko & O'Dell, 2010). Knowledge and meaning were contextualized in actual experiences (Strange & Gibson, 2017), reinforcing the idea that learning was dynamic and iterative. This perspective emphasized that experiential learning was not merely about performing tasks but about engaging in a reflective process that deepened understanding, fostered adaptability, and supported lifelong learning in professional practice.

Experiential Learning in Nursing Education

Experiential learning theory emphasized the importance of learning through active engagement and reflection. This type of learning was considered more engaging because learners were active rather than passive, which resulted in a more meaningful learning experience by providing opportunities to participate in action-oriented activities likely to induce significant

change (McCarthy, 2010; Murray, 2018). Strange and Gibson (2017) explained that this approach to learning went beyond passive absorption of information, encouraging individuals to interact with real-world situations in ways that challenged their assumptions and fostered personal and professional growth. In nursing education, experiential learning is particularly impactful because it allows students to apply theoretical knowledge in clinical settings, reflect on their experiences, and adapt their practices accordingly. McCarthy (2010) claimed it promoted greater interest in the subject matter, increased retention of course materials, developed the desire to be continuous learners, and improved clinical practice. Experiential learning activities also promoted self-directed learning (Murray, 2018). Self-directed learners were found to possess skills that enhanced critical thinking by providing opportunities to develop intuition and logical reasoning (Kreber, 1998). Critical thinking, as discussed previously, continued to be an essential skill in nursing because nurses faced complex healthcare challenges. Understanding experiential learning theory and its role in linking theory to clinical practice to enhance critical thinking was essential for strengthening nurse educator pedagogy by promoting active learning (McCarthy, 2010). Overall, experiential learning represents a powerful pedagogical approach that extended beyond technical skill acquisition. It fosters adaptability, confidence, and lifelong learning habits, equipping nursing students with the ability to respond effectively to evolving healthcare environments and to deliver safe, evidence-based care. Hill (2017) further emphasized that experiential learning created a safe space for students to practice and refine their skills, reinforcing its role as a cornerstone of nursing education and a critical strategy for preparing competent, reflective practitioners.

Transformative Learning

Drawing on the humanistic perspective and the study of adult learning, transformative learning theory, developed by Mezirow in the late 1970s, was considered a major milestone in foundational adult learning theories and remains one of the most influential frameworks in adult education (Choy, 2009; Hao, 2020; Merriam & Baumgartner, 2020). Unlike andragogy, which focused on learner characteristics, transformative learning emphasizes the cognitive process of meaning-making (Illeris, 2009). Over time, the theory evolved into a complex explanation of how learners construe, validate, and reformulate the meaning of their experiences (Page-Cuttrara & Bradley, 2020). For transformative learning to occur, emotional maturity, self-awareness, and empathy are essential, traits typically absent in children, making this theory primarily applicable to adults (Illeris, 2009; Kear, 2013). Adults demonstrate learning in two ways: instrumental, through cause-and-effect reasoning, and communicative, through the interpretation of emotions and feelings (Kear, 2013; Page-Cuttrara & Bradley, 2020). Mezirow's approach to transformative learning includes three major phases: disorienting dilemma, critical reflection, and changed behavior (Kear, 2013; Merriam & Baumgartner, 2020). Mezirow proposed that perspective transformation begins with what he termed a disorienting dilemma (Illeris, 2009; Morris & Faulk, 2012). Frames of reference, defined as sets of assumptions that shape understanding, include values, paradigms, preferences, dispositions, and sense of self (Bernard, 2019; Mezirow, 2003). These frames develop through lived experiences and are influenced by culture, language, and social context. Transformative learning occurs when adults critically examine frames of reference that have guided their meaning-making but are no longer adequate (Illeris, 2009; Merriam & Baumgartner, 2020). Inconsistencies within these frames often trigger a disorienting dilemma, prompting reflection on the experience and leading to the second phase: critical

reflection (Brookfield, 2010; Hao, 2020; Merriam & Baumgartner, 2020). Mezirow described critical reflection as questioning deeply held assumptions about “how an individual makes meaning of his or her world,” emphasizing the process of constructing and deconstructing meaning from experience (Taylor, 2017, p. 79). Reflection alone is insufficient; a shift in meaning perspective must occur, marking the third phase of transformative learning (Kear, 2013). In this phase, learners developed new strategies for addressing dilemmas, adopt more inclusive and accommodating perspectives, and ultimately change their behavior (Illeris, 2009; Kear, 2013; Merriam & Baumgartner, 2020). This final stage represents more than behavioral adjustment; it signifies a profound transformation in worldview. Such changes often extend beyond the immediate learning context, influencing professional practice, interpersonal relationships, and lifelong learning habits. By fostering adaptability and critical thinking, transformative learning equips adults to navigate complex social and professional environments, making it a cornerstone of contemporary adult education theory.

Transformative Learning in Nursing Education

Transformative learning is considered a natural fit for nursing education because it aligns with humanistic roots that emphasize empathy and care—qualities essential to nursing practice (McAllister, 2011). This approach is particularly valuable for its ability to awaken students to issues of social injustice and health inequities while promoting critical thinking to challenge previously held assumptions, beliefs, and perspectives. Such reflection encourages students to contribute to systemic change (McAllister, 2011). In doing so, transformative learning supports the development of a professional identity, which is a critical component of nursing education

(Benner et al., 2010). A strong professional identity enhances the credibility of the nursing profession, facilitates therapeutic relationships, and promotes optimal client care (Pullen, 2021). As discussed earlier, transformative learning involves critical reflection, providing a foundation for examining the content of experience. This interpretive process enables nursing students to gain a deeper understanding of personal perspectives and critically evaluate previously held assumptions (Yorks & Sharoff, 2001). By questioning their own beliefs, learners engage in a richer educational experience that fosters critical thinking, an essential skill in nursing practice. Critical thinking is defined as the active analysis and synthesis of information that informs clinical decision-making (Papathanasiou et al., 2014). Furthermore, transformative learning encourages flexibility, a necessary mindset in today's healthcare environment. The healthcare system is complex and continually evolving, requiring nurses to adapt to changes in practice (Rojo et al., 2022). Through modeling critical reflection, transformative learning equips nurses to embrace change and maintain adaptability by reframing perspectives (Rojo et al., 2022). Ultimately, the integration of transformative learning into nursing education does more than enhance academic outcomes; it shapes the nurse's ability to respond to diverse patient needs and dynamic healthcare challenges. By fostering empathy, critical thinking, and adaptability, this approach prepares nurses to become advocates for equity and leaders in improving health systems. In this way, transformative learning serves as a powerful tool for cultivating both professional competence and a commitment to lifelong learning.

Workplace Learning

As Kolb's experiential learning theory maintained that people learn from experience, scholars' perceptions of how people learn appears to differ depending on their theoretical orientation (Merriam & Baumgartner, 2020). Fenwick (2003) proposed experiential learning

follows situative theory in which “learning is rooted in the situation in which the person participates, not in the head of that person as intellectual concepts produced by reflection” (p. 25). From this viewpoint, workplace learning is constituted by participation in work practices, not merely by decontextualized instruction. Fenwick (2008) characterized workplace learning as “expanding human possibilities for flexible and creative actions in the context of work,” emphasizing that it extends beyond narrow notions of vocational training (p. 19). Practically, workplace learning encompasses knowledge acquired through formal and informal means embedded in the work setting; in baccalaureate nursing, the clinical setting functions as the workplace where students learn in and through the everyday activities of care (Cacciattolo, 2015). Wenger’s socio-cultural perspective situated learning in lived experience and emphasized participation within communities of practice (Wenger, 2009). Originating in Lave and Wenger’s work on situated learning, this perspective highlights learning as increasing participation in socially organized activity rather than the mere internalization of abstract content (Farnsworth et al., 2016; Lave & Wenger, 1991). Communities of practice are informal learning arrangements in which people who share a concern or passion improve through regular interaction, cultivating belonging and shared repertoires (Akhigbe, 2019; Cacciattolo, 2015; Li et al., 2009). Building on this participation-centered understanding, recent scholarship reframes reflective practice in professional lifelong learning through the lens of learning metaphors, highlighting how practitioners make sense of experience within real work contexts. This re-thinking emphasizes that reflection is not only an individual cognitive act but also a practice shaped by context, roles, and social participation, an orientation that aligns with situative and workplace learning perspectives (Goh, 2018). In clinical education, such a lens helps explain why the same placement can yield different developmental gains: reflection and learning hinge on the

affordances of the setting (e.g., access to consequential activities, opportunities for feedback and debrief), and on how learners participate (initiative, questioning, meaning-making) within communities of practice (Farnsworth et al., 2016; Li et al., 2009; Merriam & Baumgartner, 2020). Wenger's related framework clarifies how such participation develops. He identified four interrelated components of learning: meaning (learning as experience), practice (learning as doing), community (learning as belonging), and identity (learning as becoming) (Smith, 2006; Wenger, 1998). Together, these components underscore that workplace learning is a dynamic, socially situated process through which learners negotiate shared practices, refine judgment, and progressively shape professional identities. For clinical education, this implies that curriculum and placement design should intentionally leverage participation and reflection, by widening access to consequential activities, structuring guidance and debriefing, and supporting reflective meaning-making so that students can convert situated experience into durable professional capability (Fenwick, 2008; Merriam & Baumgartner, 2020). Building on this foundation, the following section considers how workplace learning operates within clinical education to connect classroom knowledge with learning through participation.

Workplace Learning in Clinical Education

Workplace learning theory provides a link between theoretical perceptions of learning and the learner's experience by emphasizing the integration of knowledge through social interaction and practice. The concept of communities of practice supports learning through observation, collaboration, and shared problem-solving, creating an environment where learners actively engage with experienced practitioners. The interaction between the learner and the more knowledgeable nurse, whether a nurse educator or staff nurse, promotes clinical learning by offering guidance, modeling professional behaviors, and encouraging critical thinking. These

exchanges challenge learners to reflect on prior knowledge and connect theoretical concepts with real-world practice, fostering deeper understanding and skill development (Ravik & Bjørk, 2022). Clinical learning occurs both formally, through structured post-clinical debriefing, and informally, as learners share experiences with peers and engage in reflective dialogue (Akhigbe, 2019). Such collaborative learning environments not only enhance technical competence but also cultivate professional identity and confidence. Overall, understanding workplace learning enables nurse educators to design strategies that bridge the gap between nursing scholarship and practice, ensuring that students develop the cognitive, practical, and interpersonal skills necessary for safe and effective patient care (A et al., 2008). This approach highlights the importance of creating supportive learning communities that value experience, dialogue, and reflection as integral components of professional growth.

Role of Adult Education Theories

With regards to examining the theory to practice gap in nursing to facilitate clinical learning to enhance nurse educator pedagogies, examining adult learning theories provides the foundation of understanding how nursing students learn. Brookfield (1995) stated that “theory lets us name our practice” (p. 186). Theories allow us to name aspects of an experience that elude or puzzle our daily lives (Brookfield, 1995). As nurse educators, having the knowledge of how learning occurs in the clinical environment strengthens our teaching practices by providing a rationale informing our actions (Brookfield, 1995). Our role as educator is crucial and directly linked to development of the student nurse’s reflective skills (Gonzalez et al., 2021). Experiential and transformative learning theories assist to provide understanding of the importance of experience in practice, considering factors that impact the adult learner, such as in informal learning in the workplace, and most importantly in the development of reflective practice.

Part II: Defining Reflective Practice

Reflective practice is widely regarded as a cornerstone of adult learning. Although it is recognized as an essential component of experiential and transformative learning theories, scholars have not agreed on a single definition of the term (Mantzourani et al., 2019). Dewey (1933) is often credited with introducing the concept of reflective thinking, describing it as an active and deliberate process of examining beliefs or knowledge in relation to supporting evidence and potential outcomes. This process represents a purposeful act of learning aimed at deriving meaning from experience, which ultimately fosters growth. Building on this foundation, Schön expanded the concept by framing reflective practice as both a learning strategy and a method for managing complex, uncertain, and conflicting situations encountered in professional contexts (Kinsella et al., 2012). Over time, the construct of reflective practice has evolved, influencing multiple disciplines through its emphasis on continuous improvement and professional development (Clouder, 2000; Jarvis, 1992b; Mantzourani et al., 2019). Schön (1983) described two levels of professional practice in which reflection occurs: the high, hard ground of scientific knowledge, which represents the theoretical foundation that informs practice, and the swampy lowlands of uncertain situations, where practitioners rely on experiential and intuitive understanding. He emphasized that while preparation through study and training is valuable, meaningful learning often takes place when individuals are actively engaged in practice. This perspective underscores the importance of practical knowledge as the cornerstone of reflective practice and as a key element in addressing the theory to practice gap in nursing education (Freshwater et al., 2005; Merriam & Baumgartner, 2020).

Reflective practice in nursing education has been emphasized for decades (Smith, 2021). For this review, three forms of reflection will be explored: reflection-on-action, reflection-in-

action, and critical reflection. Understanding these distinctions is essential because they offer diverse strategies for professional growth (Oluwatoyin, 2015). Beyond theoretical relevance, reflective practice has significant implications for pedagogy. Nurse educators play a pivotal role in guiding students to integrate classroom knowledge with clinical experiences through structured reflection. This process not only enhances critical thinking and decision-making but also fosters adaptability and resilience—qualities essential for navigating the complexities of modern healthcare. By embedding reflective strategies into curricula, educators can cultivate practitioners who are prepared for lifelong learning and capable of delivering safe, patient-centered care. Ultimately, reflective practice serves as a bridge between theory and practice, ensuring that nursing graduates enter the workforce with both the technical competence and the reflective capacity needed to meet evolving patient and system demands.

Reflection-On-Action

Reflection-on-action is one of two key concepts developed by Schön and involves thinking through a situation after it has happened (Merriam & Baumgartner, 2020). Schön believed reflective practice should be central to professional education (Bulman & Schultz, 2013). His viewpoint is the foundation of clinical practice, as he saw learning by *doing* the core of educational programs, with learners investing in practice to learn from it (Bulman & Schultz, 2013). Officially defined by Schön (1987) as “thinking back on what we have done to discover how our knowing in action may have contributed to an unexpected outcome; we may do so after the fact, in tranquillity, or we may pause in the midst of action” (p. 26). This type of reflection is the most common form of reflective practice and involves more than just considering an experience that occurred in the past (Jarvis, 1992b; Oluwatoyin, 2015). Jarvis (1992b) argued for reflective practice to occur practical knowledge must be derived from the experience. It is more

than just thoughtful practice, it is the process of turning the experience into a learning situation (Jarvis, 1992b). This iterative process fosters growth, enhances clinical judgment, and ultimately improves patient care by ensuring that lessons learned are integrated into ongoing professional development.

Reflection-In-Action

In contrast to reflection-on-action, Schön (1983) described reflection-in-action as “thinking on your feet,” suggesting learning takes place in the moment (p. 54). This type of reflection is considered the hallmark of the experienced professional (Oluwatoyin, 2015). In Schön’s view, this process of reflection is an active one of exploration and discovery triggered by a surprise or unexpected event (Merriam & Baumgartner, 2020; Oluwatoyin, 2015).

Practitioners are required to pivot from their expected theoretical based outcome when faced with a situation that is not predictable and reflect amid the action (Kinsella et al., 2012). Schön equated this with critical reflective practice, resulting in continual growth and professional learning into an experienced practitioner (Burrows, 1995; Clouder, 2000). Ultimately, reflection-in-action empowers professionals to adapt in real time, make informed decisions under pressure, and transform challenges into opportunities for deeper understanding and skill development.

Critical Reflection

Mezirow emphasized that critical reflection was a defining characteristic of adult learning (Morris & Faulk, 2012). His transformative learning theory asserted that individuals could experience significant and substantial changes through higher-level reflective thinking, during which meaning frameworks were transformed (Kember et al., 2000). Mezirow (1991) introduced the term *premise reflection* to describe essential critical reflection, “as it involves becoming aware of why we perceive, think, feel, or act as we do” (p. 108). This process involved identifying and

understanding the influence of beliefs, assumptions, and prior knowledge on future actions (Page-Cuttrara & Bradley, 2020). Unlike inward-directed reflective practice, which focused on examining personal experiences, critical reflection moved outward toward others and pursued multiple lines of inquiry, some of which still related to the self or practice (Swanwick et al., 2014). This outward orientation fostered dialogue, challenged entrenched assumptions, and promoted transformative learning that enabled practitioners to adapt and grow within complex professional environments.

Part III: Reflective Practice in Nursing Education

Nursing education is distinctive because learning occurs both formally through classroom instruction and informally through clinical experiences. Reflection is widely recognized as a critical component of professional development, enabling students to analyze and make sense of their experiences. Nurse educators play an essential role in facilitating this process by creating opportunities for reflection and guiding students in connecting theoretical concepts to practical situations (Kear, 2013). It is important to clarify that educators do not transform experience into learning; rather, they support students as active agents in constructing meaning from their experiences. Learning is ultimately the responsibility of the student.

Reflective practice is one of the primary strategies used to bridge the theory to practice gap. Numerous models of reflective practice exist. Beyond foundational contributions by Schön and Mezirow, nursing has developed several frameworks, including Tanner's (2006) model, which provides a structured approach to enhancing clinical judgment and promoting safe, effective care (Clouder, 2000; Mantzourani et al., 2019; Oluwatoyin, 2015). While reflection can lead to significant insights and even personal growth, it is essential to distinguish reflective learning from transformative learning. Transformative learning is not synonymous with acquiring new skills or knowledge; rather, it involves a profound shift in worldview or

underlying assumptions. For example, mastering a technical skill such as administering injections does not necessarily alter deeply held beliefs about race, gender, or age. A nurse may learn to perform clinical tasks competently without challenging prejudices or biases. In contrast, transformative learning occurs when reflection prompts critical examination of these assumptions, leading to a paradigm shift in how one understands self, others, and the world. This distinction matters because not all learning in nursing education is transformative. Most learning, such as developing clinical skills or applying theoretical knowledge, enhances competence without fundamentally changing a student's worldview. However, transformative learning is vital for nurses because healthcare is deeply relational and value driven. Nurses routinely encounter diverse populations, ethical dilemmas, and complex social determinants of health. Without transformative learning, biases and unexamined assumptions can persist, potentially compromising patient-centered care and equity. For instance, a nursing student caring for a patient experiencing homelessness may initially assume that homelessness results from personal failure. Through guided reflection and discussion, the student critically examines these beliefs in light of social determinants of health, systemic inequities, and the patient's lived experience. This process may lead to a shift from judgment to empathy, influencing not only how the student interacts with this patient but also shaping future advocacy for vulnerable populations. Such a transformation demonstrates how reflective practice can catalyze a deeper reorientation of values and perspectives, which is essential for ethical and inclusive nursing care.

Reflective practice can create conditions that support transformative learning by encouraging critical thinking, questioning assumptions, and fostering openness to change. Therefore, the role of reflective practice in nursing education should be understood not as a guarantee of transformation, but as a means of bridging the theory to practice gap and cultivating

the reflective habits necessary for sound clinical judgment and, when possible, deeper personal and professional growth.

Reflective Practice in Professional Regulation

Beyond its role as an educational strategy, reflective practice is also embedded within professional and regulatory expectations for nurses. In Nova Scotia, the Nova Scotia College of Nursing (NSCN) identifies continuous learning and reflective practice as core professional responsibilities for licensed practical nurses, registered nurses, and nurse practitioners. All nurses licensed in the province are required to participate annually in reflective learning activities through the Continuing Competence Program (CCP), which is a condition of both initial licensure and ongoing registration (Nova Scotia College of Nursing, 2025).

The CCP requires nurses to engage in a structured reflective process that includes self-assessment, development of a professional growth plan, participation in learning activities, and reflective evaluation of practice outcomes (NSCN, 2025). Through this framework, reflection is positioned as a mechanism for integrating theoretical knowledge, clinical experience, and professional standards within ongoing practice. The program functions as a regulatory quality-assurance mechanism designed to protect the public by ensuring that nurses maintain and enhance their competence throughout their professional careers.

Situating reflective practice as both an educational and regulatory expectation underscores its relevance within undergraduate nursing education. Preparing students to engage meaningfully in reflection during their clinical learning experiences not only supports the development of clinical judgment and professional identity, but also prepares graduates for the reflective responsibilities they will be required to sustain throughout their careers. This alignment between educational practice and regulatory standards highlights the importance of

fostering reflective capacity early in nursing education and reinforces reflection as a foundational professional competency rather than an optional educational activity.

Definition of Terms

To fully appreciate the role of reflective practice in nursing education, it is essential to first clarify the foundational concepts that underpin clinical decision-making. Terms such as *critical thinking*, *clinical reasoning*, and *clinical judgement* are often used interchangeably, yet each carries distinct meaning and significance within the context of nursing practice. These concepts form the cognitive and reflective framework through which nurses interpret complex clinical situations and make informed decisions. As nurse educators strive to bridge the gap between theory and practice, understanding these terms becomes crucial for fostering meaningful reflection and supporting the development of competent, safe, and responsive practitioners. The following section will define and differentiate these key terms, highlighting their relevance to reflective practice and their implications for clinical teaching.

Critical Thinking

Underlying adult learning theories is the concept of critical thinking. Problem solving is a term often used interchangeably with critical thinking, clinical reasoning, and clinical judgment as their processes tend to overlap (Page-Cuttrara & Bradley, 2020). Problem solving is a process of identifying an issue, obtaining information, and devising a solution (Potter & Romyn, 2014). Critical thinking is an applied practice by nurses to problem-solve when faced with clinical decisions (Papathanasiou et al., 2014). It is described as a mental process of active and skillful perception, analysis, synthesis, and evaluation of collected information through observation, experience, and communication that leads to a clinical decision or a new understanding (Papathanasiou et al., 2014). In nursing, however, critical thinking assumes a distinct meaning

because it is context-specific, patient-centered, and action-oriented. Unlike general critical thinking, which often involves abstract reasoning, nursing critical thinking integrates clinical reasoning and reflection to interpret patient data, prioritize care, and anticipate complications under time-sensitive conditions. It requires not only cognitive skills, such as interpretation, analysis, inference, evaluation, explanation, and self-regulation, but also habits of mind, including questioning assumptions, recognizing biases, and maintaining openness to alternative solutions (Potter & Romyn, 2014). Successful critical thinking in nursing is holistic, considering biological, psychological, social, and cultural factors, and is outcome-driven to ensure safe, individualized care. Essentially, critical thinking in nursing is the act of critical reflection, a deeper and more meaningful form of reflection that enables nurses to evaluate experiences, make informed decisions, and implement interventions. This process underpins clinical decision-making and includes clinical reasoning to reach sound judgments (Page-Cutrara & Bradley, 2020; Potter & Romyn, 2014). Ultimately, the ability to think critically empowers nurses to deliver evidence-based, ethical, and patient-centered care that adapts to the complexities of modern healthcare.

Clinical Reasoning

Cappelletti et al. (2014) defined clinical reasoning as the cognitive process of making sense of an unfolding clinical situation considering various perspectives of the client, family, and context. Context is multilevel, ranging from physiological factors to the social world of the client and family (Benner et al., 2010). Like problem solving, clinical reasoning includes observation, collection, analysis, and evaluation; however, it differs in that it requires ongoing self-monitoring and reflective thinking to adapt to dynamic and uncertain situations (Page-Cutrara & Bradley, 2020). Page-Cutrara and Bradley (2020) emphasized that clinical reasoning involves generating

hypotheses to interpret evolving clinical scenarios rather than relying solely on linear problem-solving steps.

Benner's (2001) novice-to-expert theory further illustrates that clinical reasoning develops through a combination of formal education and experiential learning. As nurses progress from novice to expert, they move beyond rule-based thinking toward intuitive pattern recognition, enabling faster and more accurate decision-making. Eisenmann (2021) supports this by noting that clinical reasoning evolves through repeated exposure to clinical situations, where nurses learn to recognize patterns and anticipate outcomes. Reflection on these experiences is essential, as it transforms tacit knowledge into explicit understanding, thereby enhancing clinical practice and judgment. An example of clinical reasoning in practice can be seen when a nurse caring for a postoperative patient notices sudden shortness of breath. The nurse begins by observing respiratory rate, oxygen saturation, and overall appearance, then hypothesizes potential causes such as pulmonary embolism, pneumonia, or atelectasis. Additional data, such as lung sounds, pain location, and mobility history are collected and evaluated against expected patterns. Through reflective thinking and self-monitoring, the nurse assesses whether the findings support the initial hypothesis or suggest an alternative explanation. Based on this reasoning process, the nurse prioritizes interventions such as administering oxygen, notifying the physician, and preparing for diagnostic imaging. This example demonstrates how clinical reasoning integrates observation, hypothesis generation, and reflection to guide timely, evidence-based decisions that directly impact patient safety and outcomes.

Connecting this to adult learning theories, Schön (1983) introduced the concept of Technical Rationality, which frames professional practice as the “instrumental and rigorous process of problem solving, by applying scientific theories and techniques” (p. 21). This

perspective positions clinical reasoning as an application of theoretical knowledge to practical problems, reinforcing the importance of evidence-based practice (Benner et al., 2009). The Technical Rationality model laid the foundation for the development of clinical judgment in nursing, highlighting the interplay between theory, experience, and reflection. Ultimately, clinical reasoning is not a static skill but a dynamic, evolving process that integrates scientific knowledge, experiential learning, and reflective practice. It enables nurses to navigate complexity, prioritize patient needs, and deliver safe, individualized care in an ever-changing healthcare environment.

Clinical Judgement

For clinical judgment, critical thinking and clinical reasoning skills must be developed, as it is a logical process nurses move through to make clinical decisions (Eisenmann, 2021). Clinical judgment is defined as “the ways in which nurses come to understand the problems, issues, or concerns of clients, and to attend to the salient information and to respond in concerned and involved ways” (Benner et al., 2009, p. 200). It is tremendously complex, requiring the ability to recognize key aspects of an undefined clinical situation, interpret them accurately, and respond appropriately and rapidly (Tanner, 2006). Clinical judgment is recognized as a core competency required of nursing students upon graduation (Eisenmann, 2021). However, determining how best to cultivate this skill within nursing education has challenged educators for decades. Reflective practice, which facilitates knowledge generation, has been shown to support the development of clinical judgment among students (Smith, 2021). Despite this, engaging learners in meaningful reflection remains a persistent concern for nurse educators. The dynamic nature of the healthcare environment further underscores the need for sound clinical judgment, particularly among novice nurses who must navigate complex patient care scenarios (Connor et

al., 2022). Yet, the capacity to reflect-in-action and engage in critical reflective practice often emerges tacitly through clinical experience, an asset that novice nurses possess only minimally and student nurses lack entirely (Clouder, 2000). For example, during a labor and delivery scenario, an experienced nurse may notice subtle changes in fetal heart rate patterns on the monitor and recognize early signs of fetal distress. Acting on this judgment, the nurse initiates intrauterine resuscitation measures and promptly alerts the obstetric team, preventing potential harm. In contrast, a novice nurse might focus solely on maternal vital signs and miss these critical cues, delaying intervention. This illustrates how clinical judgment in nursing practice requires both technical knowledge and the ability to interpret nuanced, time-sensitive information. Ultimately, clinical judgment represents the culmination of critical thinking, clinical reasoning, and reflective practice, enabling nurses to make safe, ethical, and patient-centered decisions in unpredictable and high-stakes environments.

Nursing Model of Reflection

The Tanner's Evidenced Based Model of Clinical Judgement in Nursing has been influential in changing nursing education (Page-Cutrara & Bradley, 2020). The model was developed through an extensive literature review, consisting of a cyclic four-stage cognitive process of noticing, interpreting, responding, and reflecting (Page-Cutrara & Bradley, 2020; Tanner, 2006). The final stage of reflection incorporates Schön's reflection-in-action, which refers to the nurse's ability to read the clinical situation and respond, and reflection-on-action, which includes reflection on the clinical outcome, and subsequent learning that occurs (Page-Cutrara & Bradley, 2020; Tanner, 2006). The design of the model was based on actions of experienced nurses, which emphasizes the role of the nurses' background, the situational context, and the client relationship (Smith, 2021). These are key factors considered when critically

thinking and applying clinical reasoning, which in turn fosters clinical judgement skills. Nurse educators employ this model in clinical practice through post conference discussions with nursing students, attempting to promote reflective practice. Smith (2021) evaluated nursing students and faculty's perspectives on guided reflective writing for clinical judgement development and found that incorporating Tanner's model into structured reflective journals enhances students' ability to connect theoretical knowledge with clinical application, develop judgment skills, and build confidence in decision-making. By embedding this model into reflective exercises, nurse educators lay the groundwork for cultivating advanced clinical reasoning, fostering lifelong learning habits, and preparing future nurses to navigate complex healthcare environments with competence and confidence.

Bridging Theory to Practice Through Reflection

Bridging the gap between theory and practice remains a persistent challenge in nursing education, as inadequate integration often results in poor clinical outcomes such as medication errors, ineffective nursing care, and compromised clinical judgment (Mahmoud, 2014). This issue has been widely documented in the literature as a major concern in preparing nursing students for professional practice (Ajani & Moez, 2011; Dadgaran et al., 2012). Scholars emphasize the critical role of clinical nurse educators in addressing this gap and facilitating the application of theoretical knowledge in real-world clinical settings (Akram et al., 2018; Mahmoud, 2014; Saifan et al., 2015). However, despite recognition of this responsibility, the literature offers limited guidance on specific pedagogical strategies that effectively support nurse educators in achieving meaningful integration during clinical experiences. Mahmoud (2014) argues that the difficulty in transitioning from theory to practice may stem from the failure of educators to provide learning opportunities that are relevant and meaningful to students. While

Smith (2021) proposes incorporating Tanner's model of clinical judgment into structured reflective journals as a strategy to promote integration, my experience suggests that this approach often falls short in fostering deep, critical reflection among undergraduate nursing students. This limitation highlights the need for pedagogical approaches grounded in transformative learning theory, which emphasizes critical reflection as a catalyst for perspective transformation and deeper understanding (Mezirow, 1997). Transformative learning occurs when learners critically examine their assumptions, engage in dialogue, and reconstruct their frames of reference, ultimately leading to more autonomous and informed clinical decision-making. However, an important consideration, largely underexplored in the nursing education literature is that the outcomes of reflective processes may vary significantly depending on the practitioner's worldview. Reflective interpretation is inherently shaped by personal beliefs, cultural background, and unconscious biases, meaning that what constitutes an "appropriate" or desirable clinical outcome may differ considerably among practitioners (Mahon & O'Neill, 2020). Research suggests that reflection is a subjective, meaning-making process influenced by how individuals interpret and evaluate experiences, further reinforcing the potential for diverse understandings of clinical situations (Ruth-Sahd, 2003). Such variation underscores the need for educators to critically attend not only to the reflective activity itself but also to the underlying frames of reference that shape how learners make sense of their experiences. Insight into how practitioners utilize reflection to inform clinical judgment is essential, as this understanding can guide the development of evidence-based strategies that promote transformative learning but also to illuminate the ways in which societal values, dominant norms, and individual worldviews influence learners' interpretations of clinical practice (Burrows, 1995; Clouder, 2000; Connor et al., 2022). To advance this goal, it is necessary to first explore nursing students' perspectives on

their clinical learning experiences, as these insights can inform the design of educational approaches that foster meaningful reflection, challenge existing assumptions, and support the development of critically reflective practitioners capable of navigating diverse and sometimes conflicting understandings of care. By grounding these pedagogical strategies in students' lived experiences, educators can better align theoretical concepts with the realities of clinical practice, thereby strengthening the connection between what is taught in the classroom and what is enacted at the bedside, ultimately helping to close the persistent theory to practice gap.

Summary

Nurse educators face the ongoing challenge of finding innovative strategies to facilitate the development of clinical judgment in undergraduate nursing students, a task compounded by the additional pressures placed on healthcare systems during the pandemic. The need for baccalaureate nursing graduates to enter practice as competent and prepared professionals has been strongly emphasized in the literature (Jackson et al., 2020). The increasingly complex role of the nurse requires higher levels of critical thinking and clinical judgment skills upon graduation than in previous decades (Lisko & O'Dell, 2010). To achieve this level of competence, the persistent theory to practice gap in nursing education must be addressed. The lack of clear, evidence-based strategies in the literature for closing this gap prompted me to critically examine my own pedagogical approach and question how best to facilitate clinical learning that supports students' professional development into skilled practitioners. Existing research highlights the value of reflective practice and experiential learning during clinical placements as potential strategies for bridging this divide. However, to fully understand the complexity of this issue and identify effective pedagogical interventions, it is essential to explore nursing students' perspectives on their clinical learning experiences. Gaining insight into these

perspectives will inform approaches that foster meaningful reflection, promote transformative learning, and ultimately prepare graduates for safe, evidence-based, and patient-centered care.

Chapter 3: Research Methodology

This chapter outlines the methodological approach used to address the purpose of the study and respond to the research question. It begins by describing the interpretive social constructivist framework that informed the study, followed by an explanation of the qualitative methodological approach and the rationale for using a case study design. The chapter then defines the case and its boundaries, providing clarity regarding the scope of the inquiry. Together, these sections illustrate how the study was designed to explore recent baccalaureate nursing graduates' perspectives on clinical learning and reflective practice within a specific educational and practice context in rural Nova Scotia.

Interpretive Social Constructivist Framework

An interpretive social constructivist worldview guided this study, reflecting the view that individuals seek to understand the world in which they live and work through experience, interaction, and interpretation (Creswell, 2007). This worldview aligns with the study's focus on graduates' perspectives and emphasizes the importance of understanding experience as it is interpreted by individuals within particular social and practice contexts. Rather than assuming a single objective reality, interpretivism recognizes that meaning is shaped through interaction and that multiple interpretations of experience may coexist (Crotty, 1998; Schwandt, 2015). The study is grounded in a constructivist ontology, which assumes that reality is not singular, objective, or independent of human perception, but rather multiple and socially constructed (Crotty, 1998; Schwandt, 2015). From this perspective, reality is understood through individuals' lived experiences, relationships, and interpretations of their social worlds. As such, it is not possible to fully separate who we are from how we understand reality; social locations, histories, values, and lived experiences inevitably shape how meaning is constructed and interpreted.

Within this worldview, knowledge and reality are understood as relational and co-constructed, emerging through engagement with others and situated within historical, social, and cultural contexts (Lincoln & Guba, 1985). Meaning develops through interaction and interpretation rather than being imposed as an objective truth, and this process is influenced by the contexts in which individuals live, learn, and practice (Creswell, 2007). This understanding acknowledges that both participants and researchers bring their own perspectives to the research process, shaping what is noticed, emphasized, and interpreted throughout the study. Rather than viewing this influence as a limitation, constructivism recognizes it as an inherent and unavoidable feature of qualitative meaning-making.

As a nurse educator and researcher, this framework was particularly appropriate because it aligns with a professional commitment to understanding how nursing graduates make sense of their clinical learning experiences within complex practice environments. Constructivist inquiry values subjective meanings and multiple realities, with a research goal of privileging participants' perspectives rather than imposing predetermined interpretations (Crotty, 1998; Schwandt, 2015). Recognizing the inseparability of self and understanding also necessitates reflexivity as an essential methodological practice, supporting transparency regarding how interpretations are shaped through interaction, context, and lived experience as the research unfolds.

Case Study Design and Description of the Case

A qualitative case study approach was selected to support an in-depth and contextually grounded exploration of recent baccalaureate nursing graduates' clinical learning experiences and engagement with reflective practice. Case study research is particularly well suited to examining complex phenomena situated within real-life contexts, especially when the boundaries

between the phenomenon of interest and its environment are not easily separated (Yin, 2003). Clinical learning in nursing is inherently embedded within educational structures, clinical practice settings, and relational conditions, making it unsuitable for investigation outside of its natural context. The case study approach enabled a holistic examination of these interrelated influences and supported understanding graduates' perspectives within the social and organizational realities of clinical practice (Merriam & Tisdell, 2016). In this study, the case was defined as the clinical learning experiences of recent baccalaureate nursing graduates as they transitioned from student to registered nurse practice following completion of a single undergraduate nursing program in rural Nova Scotia. The boundaries of the case were established by participant role as newly graduated registered nurses, time as defined period following program completion, and place as one university-based nursing program and its associated clinical learning contexts. These boundaries provided clarity regarding the scope of the inquiry while allowing for focused exploration of graduates' experiences within the environments that shaped their learning. While rurality was not examined as a distinct analytic variable, the rural and regional practice environment formed part of the context in which clinical learning occurred and influenced the clinical settings through which participants rotated. Rural practice environments often involve diverse scopes of practice, limited resources, and close-knit professional relationships, all of which can shape learning experiences and opportunities. Acknowledging rural Nova Scotia as the practice context situates graduates' experiences appropriately while maintaining the study's emphasis on participants' perspectives rather than comparative rural–urban analysis. By examining this bounded case in depth, the case study approach supported exploration of patterns across individual narratives while retaining the complexity of graduates' experiences. This methodological choice aligned closely with the

study's purpose of understanding graduates' perspectives on clinical learning and reflective practice and generated insight intended to inform nursing education and clinical teaching practices in comparable educational and practice contexts.

Recruitment

The research question sought to examine what approaches best support clinical practice and the barriers that prevent the translation of theory to practice application. Purposeful sampling was the recommended method when a researcher wants to discover, understand, and gain insight (Merriam & Tisdell, 2016). Recruitment was facilitated by the Director of Nursing and the Office of Institutional Analysis at the university to gain access to nursing students for the past two years. The study's recruitment email (Appendix A) was sent out by the Office of Institutional Analysis to all nursing graduates from 2021-2023, offering a potential sample of 250 students. After a two-week period with no response from potential participants, I proceeded to a second recruitment strategy involving snowball sampling. This type of sampling involved "locating a few key participants who easily meet the criteria you have established for participation in the study" (Merriam & Tisdell, 2016, p. 98). As I contacted a few participants, I asked them to suggest other former students. I contacted potential participants through e-mail. Exclusion criteria included graduates with previous clinical experiences such as Licensed Practical Nurses. I also excluded previous students of mine to ensure the participants felt safe to express their opinions and avoid any conflict of interest. The first four graduates who responded by email to my request and met the criteria were selected to participate in this study. Although the resulting sample was small, this approach is strongly supported within qualitative research methodology. Recent scholarship emphasizes that small, information-rich samples are often not only acceptable but necessary in qualitative inquiry aimed at depth rather than breadth (Amhed,

2025). Ahmed (2025) highlighted that saturation in qualitative studies can be achieved with a small number of participants when the goal is deep exploration of a focused phenomenon, and that small samples allow intensive, meaningful engagement with participants' lived experiences. This evidence supports the appropriateness of the sample size in this study, given its aim of uncovering nuanced barriers to theory to practice transfer.

An Invitation to Participate (Appendix B) was emailed to potential participants, outlining the voluntary nature of the study, their right to decline answering questions, and their ability to withdraw at any time. Informed consent (Appendix C) was obtained via email and confirmed through both a signed consent form submitted prior to the interview and a recorded verbal agreement at the start of each online session.

Data Collection Methods

Three qualitative data collection methods were used in this study: semi structured individual interviews, observational field notes derived from interview recordings, and document analysis. The sources of data included interview transcripts and recordings from recent nursing graduates, researcher observational field notes, and selected school of nursing curriculum documents related to clinical practice. Transcripts and video recordings of the interviews were reviewed for observations and field notes, and the school of nursing' curricular framework and associated articles were used for document analysis. Semi-structured individual interviews provided rich and detailed qualitative data to understand participants' experiences and the meaning they made of those experiences (Merriam & Tisdell, 2016; Rubin & Rubin, 2012). This method was selected because the purpose of the study was to understand how best to facilitate clinical learning based on nurses' experiences when they were students. As each participant held a unique perspective on their personal learning experience, a semi-structured interview style

allowed for open-ended questioning guided by participants' responses, while still ensuring that key areas of interest were explored (Merriam & Tisdell, 2016). The interview guide (Appendix D) was intentionally designed to include questions focused on participants' perceptions of reflective practice and the role it played in their clinical learning. Rubin and Rubin's (2012) responsive interviewing approach, which emphasizes flexibility in design, informed the interview process. While the interview guide structured the conversation, the order of questions was adapted in response to the interviewees' comments to support the natural flow of dialogue (Merriam & Tisdell, 2016). Participants were met virtually on Zoom to ensure accessibility; a password and waiting room were used to maintain privacy and confidentiality. Interviews lasted between 40–50 minutes, and no follow-up interviews were required. Member checking, also referred to as informant feedback or member validation, was conducted by offering participants the opportunity to review their transcribed interviews and final study notes to ensure accuracy (Varpio et al., 2017). Transcripts were emailed to participants with a request to review and revise any errors or omissions within one week. None of the participants responded, therefore, the original transcripts were used.

The interviews were recorded using Zoom after verbal consent was obtained for the participant to be audio and videotaped. As the researcher, my role was that of an observer as participant, and this position, along with the related observer activities, was disclosed to participants prior to the interview (Merriam & Tisdell, 2016). Recording the interviews provided the opportunity to carefully review participants' responses and engage in early reflective analysis. Immediately following each interview, the video recording and autogenerated transcript were downloaded from Zoom and rewatched by myself for the purpose of beginning preliminary coding, identifying early patterns in the data, and assessing the clarity, completeness, and depth

of participant responses. The recordings were then deleted from Zoom to maintain data security. The transcript was transferred into a Microsoft Word document and reviewed line by line to ensure accuracy. As the video was reviewed, field notes were added directly in the transcript margins using a structured set of observational criteria, which included participants' nonverbal behaviour such as facial expressions, gestures, and posture, the tone and pace of speech, pauses or hesitations that suggested active reflection, observable signs of engagement, and moments that appeared to show deeper meaning making related to reflective practice. These observational notes were used to supplement the verbal transcript and to provide additional context that supported interpretation during later stages of data analysis.

Documents analysis offered an additional source for data collection (Merriam & Tisdell, 2016). Initially, I sought out curriculum documents regarding clinical practice found in the public domain. I had hoped potential documents would emerge during the interviews in the form of clinical assignments or reflective journals completed by the participants, to be used as artifacts to enhance the findings. This was not the case. The curricular framework of the School of Nursing was the first document examined. The second document to be examined were the syllabi for the clinical courses in which direct clinical practice takes place under the supervision of a Nurse educator. These resources provided the structural component for the case study, as the documents are rooted in the integration of theory to practice.

Data Analysis

Data analysis involved putting segments together into a meaningful conceptual pattern (Polit & Beck, 2008). The process was complex and required researcher engagement throughout the study (Merriam & Tisdell, 2016; Thorne, 2000). An inductive approach allowed findings to emerge from the data. The process was ongoing, as the data was unfocused, repetitious, and

overwhelming in the sheer volume of material needing to be reviewed (Merriam & Tisdell, 2016). Because of this, data analysis was emergent, beginning with the first transcript. Initially, I browsed each transcript and made notes about first impressions. Then I reread the transcripts again, one by one, line by line using the process of open coding. Open coding involves going through the data and breaking it down into pieces to examine closely, compare for similarities and differences (Polit & Beck, 2008). Any word or phrase related to a concept that seemed to be responsive to the research question were identified (Merriam & Tisdell, 2016). Each subsequent participant transcription was then compared to the previous when identifying the open codes. Using a self-constructed table on a Microsoft Word document, I made comparisons between all transcriptions and field note observations, based on each participant. The extensive list of codes was then grouped together as more abstract concepts or categories known as axial codes (Merriam & Tisdell, 2016; Polit & Beck, 2008). Axial codes, defined by Strauss and Corbin (1998) as “axial because coding occurs around the axis of a category, linking categories at the level of properties and dimensions” (p. 123). Initially the themes that emerged were very general, and required re-examination based on more detailed and focused axial codes. I went back to the data, following the same procedure with a more refined set of codes to produce the final themes from the data.

Reflexivity

Reflexivity is a central component of qualitative research and is essential to enhancing the trustworthiness and credibility of the study. Within an interpretive social constructivist paradigm, reflexivity involves an ongoing process of critical self-reflection through which the researcher examines how personal experiences, professional roles, assumptions, and interactions influence the research process and the co-construction of knowledge (Finlay, 2002; Lincoln,

Lynham, & Guba, 2018). Rather than asserting neutrality or objectivity, reflexivity acknowledges that the researcher is an active participant in meaning-making (Finlay, 2002; Berger, 2015). Reflexivity is distinct from positionality. While positionality refers to the researcher's social, cultural, and professional location in relation to participants and the research context, reflexivity represents the continuous methodological practice of critically interrogating how that positioning shapes decisions, interactions, and interpretations throughout the study (Berger, 2015). In this research, reflexivity was intentionally enacted across all phases of the study rather than being confined to a single descriptive statement.

My reflexive engagement is informed by both my personal and professional experiences in nursing. As a newly graduated nurse entering professional practice, I did not feel adequately prepared to manage the complexity of clinical decision-making, the application of theoretical knowledge in unpredictable practice settings, or the expectations placed on novice practitioners. Feelings of uncertainty and lack of confidence during this transition shaped my long-standing interest in how nursing education prepares graduates for practice and how the theory–practice gap is experienced by learners. Acknowledging this experience was critical, as it had the potential to influence how I framed the research questions and interpreted participants' accounts. My reflexivity is also deeply shaped by my role as a nurse educator. In this role, I have repeatedly observed learners struggle to integrate theoretical knowledge into clinical practice, particularly in fast-paced or high-acuity settings. Watching students grapple with applying concepts they understand academically but find difficult to operationalize in practice, has influenced how I understand clinical learning and reflective practice. These observations could predispose me to view participants' narratives through an educational lens, potentially emphasizing structural or pedagogical explanations over participants' own meaning-making.

Reflexivity was therefore essential to ensure that participants' perspectives were not interpreted primarily through my educator assumptions or professional expectations.

Operating within a constructivist lens, I recognized that my experiences as both a graduate nurse and an educator represent situated knowledge, shaped by context, role, and time, rather than universal truths (Crotty, 1998; Schwandt, 2015). Reflexive practice required sustained attention to ensuring that participants' meanings remained central and that my interpretations were grounded in their accounts rather than aligned with my own experiences or professional beliefs about effective clinical education. Reflexivity also enabled explicit examination of power relations between myself and the participants. Although participants were no longer students, my identity as a nurse educator carried the potential for perceived authority. This awareness informed several methodological decisions, including the exclusion of former students from participation, the recruitment of graduates rather than current learners, and clear communication regarding voluntariness, confidentiality, and the absence of academic or professional consequences. These strategies reflect reflexivity as an ethical and methodological practice rather than a passive acknowledgment of power (Finlay, 2002; Merriam & Tisdell, 2016). Throughout data collection and analysis, reflexivity was enacted through the maintenance of field notes and analytic memos documenting my reactions, assumptions, and emerging interpretations. These reflexive records included attention to moments when my experiences transitioning to practice or my educator role could shape interpretation. By revisiting these memos during coding and theme development, I critically examined whether interpretations were grounded in participants' narratives or influenced by my own perspectives (Berger, 2015). Regular peer examination with my supervisory committee further supported reflexive scrutiny of analytic decisions. By engaging reflexively rather than claiming objectivity, this study makes

transparent how meaning was constructed and how the researcher's experiences informed but did not dominate the interpretive process. Reflexivity functioned as an integral methodological practice, strengthening credibility, confirmability, and trustworthiness, and ensuring that participants' voices remained central to the findings (Lincoln et al., 2018). Building on this reflexive stance, the following section outlines the strategies used to establish trustworthiness in the study.

Trustworthiness

Trustworthiness was used as the framework for evaluating rigor in this qualitative study (Klopper, 2008). Guided by an interpretive social constructivist paradigm, credibility, dependability, confirmability, and transferability were used to support the integrity of the research process and findings (Lincoln & Guba, 1985). These criteria emphasize transparency, reflexivity, and coherence between methodological choices and interpretation. The rigor of the study was supported through careful attention to its conceptualization and to the coherence and transparency of the methods used for data collection, analysis, and interpretation (Merriam & Tisdell, 2016). Ensuring authenticity of qualitative research was achieved by informing participants in the Invitation to Participate that their participation was voluntary, that they could refuse to answer any questions without leaving the study, and they could also stop participation at any time without negative consequences. All participants also signed a Consent Form. The process of member checking ensured accuracy in the collected data.

Credibility

Credibility refers to the extent to which qualitative research findings accurately represent participants' experiences and meanings and can be trusted by the reader (Polit & Beck, 2008). In this study, credibility was supported through triangulation, member checking, peer examination,

and ongoing reflexive practice (Klopper, 2008; Merriam & Tisdell, 2016). Triangulation involves the convergence of information from multiple data sources to deepen understanding of the phenomenon under study (Carter et al., 2014; Merriam & Tisdell, 2016). In this study, triangulation was achieved through the use of several data sources, including semi-structured interviews, observational field notes, and curricular documents. Each source offered a distinct perspective, and together these data contributed to a more comprehensive and balanced interpretation of participants' clinical learning experiences.

Peer examination further strengthened credibility. My supervisor, Dr. Roy, and committee members Dr. Hansen-Ketchum and Dr. Coady reviewed the study design, analytic decisions, and emerging interpretations to ensure alignment with qualitative methodology and to identify areas requiring clarification. Their feedback served as a critical check on the analytic process and helped guard against unnoticed bias or over-interpretation. Researcher reflexivity was central to maintaining credibility. Reflexivity involves ongoing awareness of how the researcher's assumptions, background, and positionality shape both the generation and interpretation of data (Merriam & Tisdell, 2016). In this study, reflexive practice was enacted through the development of a positionality statement, the maintenance of analytic memos, and sustained reflection throughout data collection and analysis. Analytic memos documented reactions to the data, decisions made during coding, and moments where professional identity as a nurse educator could influence interpretation. These memos were revisited regularly to ensure that emerging themes were grounded in participants' accounts rather than the researcher's expectations.

Member checking also supported credibility by offering participants the opportunity to review their interview transcripts and confirm the accuracy of their accounts. Although

participants did not request changes, this process provided an opportunity for clarification and enhanced confidence that the findings reflected participants' intended meanings. Together, these strategies supported a transparent, thoughtful, and trustworthy interpretation of the data. By attending deliberately to methodological rigor and researcher positionality, credibility was enhanced through both systematic procedures and reflexive engagement with the research process.

Dependability

Dependability in qualitative research refers to the stability and coherence of the research process over time and the extent to which the study's methods are logical, traceable, and clearly documented (Lincoln & Guba, 1985; Merriam & Tisdell, 2016). Rather than focusing on replication, dependability emphasizes transparency in decision-making so that readers can understand how conclusions were reached. In this study, dependability was addressed through a clearly articulated research design and systematic documentation of the research process. A qualitative case study approach was consistently applied, and decisions related to sampling, data collection, and analysis were guided by the study's purpose and interpretive social constructivist framework. Data collection procedures, including the use of semi-structured interviews, observational field notes, and document analysis, were standardized across participants. Analytic procedures were conducted in a deliberate and iterative manner. Transcripts were reviewed multiple times, and coding progressed from open coding to axial coding to support consistent theme development. Analytic decisions and changes to coding categories were documented through ongoing memo writing. Peer examination by the supervisory committee further

supported dependability by providing external review of analytic decisions and ensuring coherence between the data, interpretations, and emerging themes.

Confirmability

Confirmability refers to the degree to which the findings are grounded in the data rather than shaped primarily by researcher bias, preferences, or assumptions (Lincoln & Guba, 1985). Confirmability is strengthened when researchers demonstrate reflexive awareness and provide transparent links between data and interpretation. In this study, confirmability was supported through deliberate reflexive practices and the maintenance of an audit trail. Reflexivity was embedded throughout the research process, with the researcher engaging in regular self-examination to consider how professional background, assumptions, and experiences as a nurse educator might influence interpretation (Finlay, 2002; Merriam & Tisdell, 2016). Analytic memos and field notes documented these reflections, as well as decisions made during coding and analysis. Confirmability was further enhanced through triangulation of multiple data sources, including interview transcripts, observational field notes, and curricular documents. Themes were developed only when patterns were evident across data sources, strengthening confidence that interpretations were grounded in participants' accounts rather than the researcher's perspective. Peer examination also contributed to confirmability by providing an external check on interpretation and helping to identify potential bias or over-interpretation. Together, these strategies supported transparent, data-driven analysis and ensured that findings reflect participants' experiences while acknowledging the researcher's role in meaning-making.

Transferability

Qualitative research is not generalizable; nevertheless, researchers often seek understanding that might prove useful in other situations (Polit & Beck, 2008). Applicability is

the degree to which the findings could be generalizable, using the strategy of transferability (Klopper, 2008; Merriam & Tisdell, 2016). Lincoln and Guba (1985) defined transferability as the notion in which “the burden of proof lies less with the original investigator than with the person seeking to make an application elsewhere and the investigator needs to provide sufficient descriptive data to make transferability possible” (p. 298). To achieve this, the use of rich descriptions in the findings section of the completed study allowed readers to determine the extent to which their situation matched the research context (Merriam & Tisdell, 2016). By providing detailed accounts of participant experiences, clinical settings, and educational structures, the study offers a foundation for readers to assess relevance to their own environments. While the findings are not intended to be universally applicable, they may resonate with educators, practitioners, and researchers working in similar rural or academic nursing contexts. The emphasis on context-specific insights supports the potential for transferability, encouraging thoughtful application of the findings where comparable conditions exist.

The research methodology employed in this study was carefully selected to align with the interpretive social constructivist worldview, allowing for exploration of nursing graduates’ clinical learning experiences. Through the use of case study design, purposeful and snowball sampling, and semi-structured interviews, the study captured rich, contextually grounded data. The integration of curricular documents and field notes further supported triangulation and deepened the understanding of the participants’ perspectives. Ethical considerations were rigorously addressed, and strategies to ensure trustworthiness and methodological rigor were embedded throughout the research process. The coding process, beginning with open coding and evolving into axial coding, allowed for the emergence of meaningful themes that reflect the

complexity of translating theory into practice. These themes, shaped by the voices of recent graduates and grounded in their lived experiences, form the foundation of the findings presented in the following chapter.

Ethical Considerations

As a graduate student within the Department of Education at St. Francis Xavier University, I applied for approval from the St. Francis Xavier University Research Ethics Board, and ethics approval was secured before participant recruitment began (Appendix E). Researchers have an obligation to conduct research in an ethical manner (Merriam & Tisdell, 2016). In considering potential ethical dilemmas, Merriam and Tisdell (2016) noted that the researcher's relationship to participants can shape the research process and must be approached with transparency. My positionality as a nurse educator, and therefore as someone who holds professional authority within the field of nursing, required careful attention. Because I was seeking to understand the perceptions of nurses about their past learning experiences, I acknowledged that issues of power could influence how participants responded. To address this, the Invitation to Participate clearly described the purpose of the study, what participation involved, and the participant's right to decline questions or withdraw at any time without consequence. Participants were informed of the strategies I would use to protect their confidentiality, which included the use of pseudonyms and the removal of names of locations, organizations, and individuals that could reveal their identity. I also asked participants to avoid naming specific educators during the interview, and if names were mentioned, these were deleted during transcription. Zoom was used to facilitate the interviews, and the session included a password and waiting room to support confidentiality. After the interview, the recording was downloaded and saved to my password protected computer and then deleted from Zoom. I

completed all transcription myself using the transcription feature in Microsoft Word. As a Registered Nurse, I was also professionally accountable to the Canadian Nurses Association Code of Ethics (2017), which guides my practice and informed my conduct as a researcher, particularly in terms of respect, confidentiality, and professional integrity.

My positionality also shaped how I interpreted the data. Entering the research as someone with experience in nursing education provided familiarity with the clinical learning environment, which supported deeper understanding of the context participants described. However, it also required deliberate reflexivity to ensure that my own assumptions or beliefs about effective clinical teaching did not overshadow the participants' perspectives. Throughout the research process, I engaged in ongoing reflection by maintaining field notes and analytic memos in which I documented my reactions, assumptions, and decisions. This reflexive practice helped me remain aware of the influence of my background and professional identity and supported a more balanced and trustworthy interpretation of the data.

Introduction of Participants

This study included four recent graduates from a baccalaureate nursing program at a university in rural Nova Scotia. The participants were registered nurses who had completed either the four-year program or the on campus accelerated program within the past two years. The decision to include only recent graduates, rather than current students, was made early in the research design to avoid potential conflicts of interest and power dynamics, as I currently hold a nurse educator role with active students. This approach ensured that participants could reflect on their clinical learning experiences in a psychologically safe environment and speak freely, thereby enhancing the credibility and accuracy of the data.

Selecting graduates also provided the advantage of hindsight. Each participant had transitioned into professional practice and could evaluate which aspects of their clinical education were most valuable in preparing them for the responsibilities of a registered nurse. Two participants had less than six months of experience, offering perspectives from the early stages of practice, while the other two had approximately two years of experience, contributing insights shaped by more extensive clinical exposure. At the time of the interviews, three participants were employed in acute care hospital settings, and one was on leave from an acute care position. Pseudonyms are used throughout this study to protect confidentiality. Individually identifying details, including workplace locations and specific demographic characteristics, are intentionally limited to prevent recognition within the nursing community. Collectively, the four participants represent a range of educational pathways, life circumstances, and clinical transitions that enrich the study's exploration of the theory to practice gap and the role of reflective practice in clinical learning.

Anja

Anja completed the accelerated undergraduate nursing program two years before the study. After graduation, she relocated to an urban centre where she began working as a registered nurse in an acute care environment. Reflecting on her transition to practice, Anja described feeling only partly prepared for the realities of nursing. While her education helped her feel comfortable within the hospital setting and with basic routines, she entered practice with uncertainty related to advanced clinical skills, communication in complex situations, and the expectations of higher acuity practice areas. Her educational history, move to an urban setting, and early professional experiences provide important context for interpreting her perspectives in this case study.

Beth

Beth also graduated two years before the study from the accelerated undergraduate program. She began her career in a rural hospital, initially on a medical surgical unit before transitioning into critical care in an emergency department, where she continues to practice. Beth had developed peer relationships with other participants during her program, including Anja. Her clinical learning was strongly influenced by disruptions created by the COVID 19 pandemic, which reduced in person clinical exposure and altered the structure of her training. In reflecting on her transition into practice, Beth reported feeling prepared for medical surgical nursing but noted that entering specialized settings, particularly emergency care, required additional time, experience, and confidence development.

Callie

Callie was a mature student and mother who completed the four-year nursing program six months before data collection. At the time of her interview, she was working as a graduate nurse. Callie's education was shaped by pandemic related limitations, including restricted access to simulation labs and reduced hands-on practice across several clinical courses. Balancing parenting responsibilities with academic and clinical demands added further complexity to her learning experience. Although she valued the education gained from her final clinical placements, Callie reported feeling underprepared at graduation and noted that additional clinical exposure and practice time would have strengthened her confidence as she entered professional practice.

Dani

Dani completed the four-year nursing program and graduated within six months of this study. Originally from an urban area, she relocated for her nursing education and later returned

to an urban setting following graduation. At the time of data collection, she was working on a general surgical unit where she cared for a broad mix of postoperative and acute patients. Her clinical education was shaped by pandemic related adjustments, including a third-year placement that shifted from acute care to long term care. Dani completed her final consolidation on the same type of surgical unit where she later secured employment, which enhanced continuity and eased her transition into practice. She described feeling as prepared as possible for entry level nursing, supported by strong preceptorship, increased hands-on practice during consolidation, and the demands of a busy surgical environment.

Summary

This chapter has described the research design, analytic approach, and participant characteristics that guided this inquiry into how recent graduates made sense of the theory to practice gap and the role of reflection in their clinical development. These methodological elements provide the context required for interpretation and create the lens through which participants' perspectives can be understood. The following chapter now moves from description to analysis, presenting the findings that speak to the purpose of the study by illuminating the key patterns that emerged from the data and highlighting the themes that capture how new nurses understood their preparation, challenges, and early clinical experiences.

Chapter 4: Findings

In this study, the aim was to explore the theory to practice gap in baccalaureate nursing education and the role of reflective practice in clinical education in bridging this gap to enhance learning. Participants shared their experiences of learning in the clinical practice setting during their baccalaureate nursing degree. Their perspectives on specific aspects of their clinical experiences were examined, with participants focusing on third- and fourth-year placements. In third year, students complete clinical rotations in acute care settings, where they begin applying foundational skills such as medication administration, patient assessments, and documentation under the supervision of a Nurse Educator. Fourth-year clinicals include a preceptorship, during which students assume greater responsibility for patient care to support their transition into professional practice. These stages represent a progression from structured, educator-led learning to more autonomous practice. Themes to emerge from the data include perceptions of reflective practice, psychological safety, fostering self-confidence, and informal workplace learning. Guided by the research question articulated in Chapter one, this analysis focuses on approaches that support clinical practice and the barriers that influence the translation of theory to practice.

Initially, the focus of the interviews was reflective practice. The concept was explored with each interviewee, who consistently highlighted its purpose as a tool for learning and growth, underscoring its importance in nursing. Participants described reflection as a critical part of their job, involving discussions with colleagues about their experiences, both positive and negative, to gain different perspectives and improve their practice. Callie described reflection as essential for learning, growth, and improving clinical practice, emphasizing the importance of looking back on experiences to learn and move forward, often through informal debriefings with colleagues. They noted that reflection helps them learn from their experiences, identify areas for

improvement, and apply their knowledge in future situations. Overall, reflective practice was seen as essential for professional growth, enhancing clinical skills, and ensuring high-quality patient care. Reflection was described as a natural process for some, while others found it challenging but recognized its value in enhancing practice and building self-confidence. Anja noted that while some find reflection comes naturally, it is a valuable skill that can be developed and is highly relevant in healthcare settings. When asked about their recollection of structured post-conference debriefing sessions, responses indicated that reflective practice was promoted during their education, though more emphasis on it would have been beneficial. Beth expressed a desire for more structured reflective practices, such as journaling, which they believed would benefit students in clinical placements. Largely, reflection was portrayed as fundamental for professional development, quality improvement, and learning from different perspectives. It is important to note that these findings are based on a small sample size, which may limit generalizability and potentially lacks diversity in participant experiences. The following is a summary of findings and a description of the themes that emerged from data analysis.

Perceptions of Reflective Practice in Clinical Learning

Exploring reflective practice was a key focus during the interviewing process. Each participant was asked to describe what reflective practice meant. Overall, there was a common theme, a process one engages in to promote growth and improvement in their clinical practice. Anja went as far as to describe it as part of the job, meaning it is a thought process one must engage in everyday in order to ‘think like a nurse’. Dani described it as being mindful of what you’re doing and how you are growing as a nurse. Essentially, reflective practice was viewed as a tool that enhances their ability to respond in the clinical setting; by reflecting on an experience, one could make improvements in order to deliver quality and efficient patient care.

Another commonality of reflective practice amongst the participants was that it was not always an individual activity as reflective practice occurred by sharing their thoughts on an event to gain feedback from colleagues, examining the different perspectives to learn from an experience, and promote improvement in their delivery of care. It was not always a formal process; it occurred in daily conversations. For Callie, it even occurred outside of her immediate colleagues, gathering perspectives from sharing experiences with friends who are also nurses. Being mindful of confidentiality and not sharing patient specifics, they discussed lived experiences, shared similarities between the experiences, and provided feedback through asking questions to one another.

Reflective practice in the clinical setting as undergraduate student nurses was explored by asking participants to share their thoughts on post conference clinical debriefing. These semi-formal debriefing were meetings that followed a clinical day, led by the Nurse Educator with the purpose of promoting reflection on action and allowing students to unpack their experience and connect it to course concepts. Many of the participants did not actually recall the post conference debriefings, requiring a refresher on the procedure and purpose of the meetings. Beth recalled feeling very nervous, and not wishing to participate in the discussions, stating, "I dreaded the clinical days in the group sessions;" when this was explored further, they added, "I just found it wasn't a great learning experience for me, I don't learn like that, I am not one of those people that can just get into it right off the bat." She identified that she needed the time to sit and process the experience before she could verbally articulate it. Callie had the opposite experience, indicating that she enjoyed the end of the day meetings for her learning, for she was able "to see how the other students interpreted certain situations", also indicating that the sessions helped to "answer questions or put their mind at ease" following a clinical day. Anja felt the post

conference debriefing was not meaningful due to the impact of the pandemic on the clinical placement since they were unable to have clinical experiences in acute care, so the discussions were not as relevant and the expected learning outcomes were not met as they did not have the typical experiences. Instead of being on a medical floor, the clinical placement took place in a Long-Term Care Facility with clinically stable residents. It appeared Anja undervalued the learning that occurred with this clinical placement, seeing it as a missed learning opportunity.

There was not much to debriefing, it was more discussions on how we felt about dealing with behaviours, managing residents with dementia and staff; I guess for skills and critically thinking there wasn't as much to apply in the nursing home because they were stable. (Anja)

Anja's reflection indicates that debriefing in the nursing home setting centered primarily on emotional responses and strategies for managing behaviors and dementia care rather than technical skills or complex decision-making. She perceived limited opportunities to apply clinical skills and critical thinking because residents were generally stable, suggesting a view of critical thinking as primarily relevant in acute or high-acuity contexts. This may indicate a misconception among learners that critical thinking is confined to technical interventions, rather than encompassing broader aspects such as communication, ethical reasoning, and problem-solving in long-term care environments.

Reflective practice was widely recognized by participants as being strongly promoted throughout their undergraduate education. Callie humorously noted that it became a running joke among peers: "we're reflecting, reflecting, then reflecting!" highlighting its frequent emphasis. Beth described reflection as a natural skill she had always possessed, stating, "I've always kind of reflected on things, even as a kid." In contrast, the other three participants viewed reflective

practice as something that began during their nursing program and gradually evolved into a habitual way of thinking. Initially introduced through formal assignments such as reflective journals and simulation debriefings, reflection eventually became a more informal and intuitive process integrated into their clinical learning.

Perceptions of Clinical Structure and Learning Activities

The structure of the clinical day was explored with participants to gain a sense of their experience. Particular attention was given to the post-clinical debriefing facilitated by the nurse educator. These sessions, held in a group setting away from the clinical unit, were intended to provide students with an opportunity to reflect on their experiences in an informal, conversational format. Although the debriefing was not guided by a rigid structure, the nurse educator occasionally posed questions to promote deeper reflection and support the translation of clinical knowledge. These sessions were designed to encourage students to think critically about their actions and decisions during clinical practice. Surprisingly, none of the participants initially recalled the post-clinical debriefing and required an explanation from the researcher regarding the activity and its purpose. This lack of recollection suggests that the debriefing was not a prominent or memorable part of the clinical experience for most students. Once reminded of the activity, Callie was the only participant to speak positively about the sessions:

I thought it was good to listen to see how the other students interpret certain situations, do you know what I mean? Like one of the other [student] nurses that was with me during that particular experience, was an LPN [Licensed Practical Nurse, bridging to become a registered nurse] she kind of jumped in and started helping, but I just kind of stayed back because I'm a student, and I don't know if they wanted her in there, but no one said anything. You know, she was just trying to help, but I thought it was more meaningful for

us to watch because we're not [registered] nurses. She was an LPN, so she had a different take on it than I did. So that was really interesting. I did like having those chats [post clinical day] to see what other people have learned and stuff. It was nice to debrief and then talk about it and then have questions answered or your mind put at ease, I guess.

Callie's recollection highlighted the potential value of these debriefing when they were experienced as intended. She described how hearing different perspectives, particularly from a peer with prior experience as an LPN, helped her reflect on her own role and learning needs. Callie also emphasized the emotional benefit of these discussions, noting that they provided reassurance and clarity. However, the absence of similar recollections among other participants indicates that the debriefings may not have consistently achieved their intended purpose.

Beth and Dani's reflections on the post-clinical debriefing presented a contrasting perspective to Callie's, revealing the varied ways students experienced reflective practice. Beth recalled that the sessions created significant anxiety, stating, "the group ones, honestly, I did not enjoy them at all, I kind of dreaded the clinical days in the group sessions." Her comments suggest that the group setting may have felt uncomfortable or evaluative, making it difficult for her to engage openly. Dani, while more neutral, pointed to the timing and cognitive load of the sessions as barriers to meaningful engagement. She explained that the debriefing occurred at the end of already exhausting clinical days, making it difficult to mentally process and articulate her experiences:

I think they were [good], [Yes], they were good. But also, I feel like we were all so tired after the day that it was hard to wrap your mind around what, like you even did [in terms of clinical practice, skills, and interactions with patients and the healthcare team]. And then like, I don't know, I just remember them as being really long. (Dani)

Her comment that the sessions felt “really long” further suggests that the structure and scheduling may not have aligned well with students’ energy levels or learning needs. Together, Beth and Dani’s accounts emphasized that while reflective debriefing can be valuable, their effectiveness is highly dependent on contextual factors such as timing, facilitation style, and the emotional climate of the group.

In terms of the size of the clinical groups, participants expressed a strong need for smaller groups to feel more comfortable sharing their experiences. Typically, clinical group sizes ranged from six to nine students. All participants found group sizes challenging in some aspect, specifically to speak up in larger groups, which hindered their ability to discuss their clinical experiences openly. Additionally, they felt rushed and unsupported during clinical activities, often not fully understanding their tasks due to the fast pace and lack of comprehensive guidance. Callie described feeling like a “fish out of water” during research sessions, unsure of what they were supposed to be doing. They highlighted the confusion and lack of direction, as they were left to look up information and write things down without clear instructions. Callie suggested that more structured sessions would be beneficial. She emphasized the importance of having clear explanations of clinical practices and the use of resources, such as binders containing doctor's orders, progress notes, and other essential information. By providing detailed guidance on how to use these resources and what to focus on, students would feel more prepared and confident in their clinical practice. Overall, the participants called for a more structured and supportive approach to clinical education, with smaller groups and clear, detailed instructions to enhance their learning experience.

Although participants did not make explicit recommendations, their reflections suggest areas for improvement in clinical education. For example, the timing of post-clinical debriefing

may have influenced engagement, as sessions held at the end of long clinical days were described as challenging due to fatigue. Holding these discussions earlier in the day could allow students to participate more actively and apply insights to ongoing clinical tasks, while also providing space to revisit experiences from the previous day after time for reflection. Group size was another factor that shaped comfort levels. Although clinical groups typically ranged from six to nine students, participants perceived these numbers as large and reported difficulty speaking openly in such settings. Strategies such as beginning with paired discussions before sharing with the larger group may help create a more supportive environment for reflection. Finally, participants' comments about feeling rushed and uncertain during clinical activities suggest that clearer structure and guidance could enhance confidence and learning. These observations highlight opportunities to strengthen psychological safety through adjustments in timing, group dynamics, and instructional clarity. Reflective practice plays a pivotal role in shaping clinical competence, and participants' experiences offered valuable insights into how reflection was taught, experienced, and internalized throughout undergraduate nursing education. The following sections provide an in-depth examination of the remaining themes: psychological safety, fostering self-confidence, and informal workplace learning, and analyze their relationship to the integration of theoretical knowledge into clinical practice.

Psychological Safety

A theme to emerge from the data was the concept of psychological safety, which refers to a learning environment where students feel supported and able to ask questions or admit uncertainties without fear of judgment (Clark, 2019; Edmondson, 2019). For nursing students, this includes feeling safe to verbalize their uncertainty by seeking clarification during procedures, requesting guidance for unfamiliar tasks, and reflecting openly in clinical debriefs

without fear of judgement. Participants' sense of psychological safety was closely tied to their perceptions of the healthcare team and their interactions with mentors and preceptors. These interactions shaped students' willingness to ask questions, seek support, and take initiative, highlighting the critical role of team dynamics and mentorship in creating a safe and effective learning environment, and are discussed in detail in the following sections.

Perceptions of the Healthcare team

Anja recounted an experience where she felt unwelcomed by the nurses on the unit and suggested that "it was kind of hard because a lot of the nurses that were working on the floors didn't want students around." In her comments, she did not indicate a specific event or interaction that caused her to feel this way; rather, she perceived the non-verbal communication from staff as excluding, which made her feel she was considered "in the way of staff." These non-verbal cues did not align with the verbal reassurances she received, creating a sense of disconnect and reinforcing her perception of being unwelcome. Beth had a similar experience, perceiving frustration from the staff, indicating she felt "like a hindrance." She described an event when she was looking through a patient's medical chart to gather information for an assignment, and the nurse was looking for the chart "even though they were fine with it, indicating 'no worries', I just personally felt like I was being an annoyance." She did not indicate if the staff nurse directed non-verbal cues of frustration, but the verbal cues would indicate her use of the patient's chart was not an imposition. It appears she internalized her needs for reviewing the chart as less important than the work of the staff nurse, even though the staff nurse showed no sense of urgency and indicated they were not bothered by a student reviewing the chart.

The experiences shared by Anja and Beth highlight the subtle yet powerful influence of hierarchical dynamics within the healthcare team, which refers to the structured chain of authority and decision-making that governs clinical practice. In nursing, this hierarchy typically places staff nurses under the supervision of charge nurses and nurse managers, with physicians and advanced practice providers occupying higher levels of clinical authority. Both students described feeling unwelcome or burdensome, not due to overt hostility, but through non-verbal cues and internalized perceptions of their role within the unit. These accounts illustrate how hierarchical structures can create implicit expectations about who “belongs” and whose work is prioritized, often leaving students to navigate feelings of marginalization despite the absence of explicit negative behaviors. Such perceptions may stem from the traditional power differential between staff nurses and students, where the latter often feel their educational needs are secondary to patient care demands. This dynamic can lead students to self-limit their engagement in learning opportunities, fearing they may disrupt workflow or inconvenience staff. Furthermore, these experiences underscore the complexity of psychological safety in clinical education: while verbal reassurances may signal acceptance, incongruent non-verbal behaviors or students’ own interpretations can undermine that sense of safety. Ultimately, these findings suggest that fostering a culture of inclusion requires more than verbal affirmation; it demands intentional strategies to address implicit hierarchies, normalize student participation, and ensure that learning is viewed as integral to patient care rather than an interruption.

While not every participant discussed this, Anja’s account underscored how non-verbal communication—such as body language, lack of engagement, or exclusion from team interactions—can convey a sense of being unwelcome. Although she did not describe a specific incident, her perception that nurses “didn’t want students around” suggests a culture where

students were not fully accepted into the team. This perception may reflect a lack of intentional inclusion or mentorship, which can leave students feeling like outsiders and hesitant to seek learning opportunities. Beth's experience further illustrated the internalization of hierarchical roles. Despite the nurse verbally expressing that it was "no worries" for her to use the chart, Beth still felt like an annoyance. This disconnect between the nurse's words and Beth's feelings suggests that students may perceive themselves as subordinate or less important, even when staff are supportive. Her hesitation to assert her educational needs reflects a broader issue: students often defer to staff authority, even at the expense of their own learning. Both narratives point to an unspoken hierarchy where students are positioned at the bottom, leading them to minimize their presence and needs. This dynamic can be particularly pronounced in busy clinical environments, where staff may be focused on efficiency and patient care, unintentionally sidelining learners. The fact that neither Anja nor Beth discussed these feelings with staff or the Clinical Nurse Educator suggests a lack of psychological safety and highlights the need for proactive strategies to encourage open dialogue.

In contrast, Anja also described an experience where she felt welcomed and valued by the healthcare team, which created a positive and psychologically safe learning environment. She recalled:

A physician pulled me aside and was like, "hey, this is how I do this, and this is what I'm doing, and this is why I'm doing it." He explained everything, and he was so great, and it got me excited about being there and made me want to learn more and made me want to work there, and I just really appreciated him doing that and I wish more people would do that.

This interaction demonstrates the transformative impact of inclusion and active teaching on student engagement and confidence. By taking time to explain procedures and involve Anja in the process, the physician signaled that her learning was valued, reinforcing her sense of belonging and professional identity. Such experiences contrast sharply with those marked by perceived exclusion and underscore the importance of deliberate efforts to integrate students into the clinical team. When students feel included and supported, they are more likely to engage fully, develop competence, and envision themselves as future contributors to the healthcare environment.

Interactions with Mentors and Preceptors

While the other participants shared their experiences on feeling accepted by the healthcare team, Callie and Dani did not comment on their perceptions of staff but shared how they felt during interactions with their respective mentors. Callie described an interaction with the Nurse Educator that left her feeling unable to ask questions and emotionally distressed:

My nursing instructor almost made me cry; she just made it [feel] as I didn't really know anything. It was something to do with medication administration. I didn't know where to sign and I just felt [unsure] and [she] reprimanded me in front of other people. I was not happy about that. She said, 'you should know where to sign these' and I was like, 'you're right I should, but I don't because I don't know. The last time I did these I didn't really feel comfortable'. She was quite sharp with some of the [other] students too.

Callie did not share her feelings with the nurse educator but sought validation from other students who expressed similar experiences. This interaction appeared to make Callie feel incompetent and inferior to the nurse educator, contributing to a sense of psychological unsafety in the learning environment. The public nature of the reprimand and the sharp tone described by

Callie seemed to amplify her discomfort, leaving her hesitant to ask questions and uncertain about her abilities.

Aside from interactions with Nurse Educators, participants reflected on their experiences with preceptors during their final semesters. Callie emphasized that having a supportive preceptor greatly influenced the quality of learning, noting that preceptors who were willing to teach created positive and productive environments. In the context of nursing education, a mentor or preceptor who is “willing to teach” demonstrates behaviors that actively support student learning. This includes taking time to explain the rationale behind clinical decisions, inviting students to observe and participate in procedures, and encouraging questions without judgment. It also involves creating teachable moments during routine care, such as explaining medication choices, discussing patient assessments, and modeling effective communication with patients and the healthcare team. Callie explained that some preceptors were assigned students without being consulted, which sometimes led to negative experiences. Callie suggested improvements in preceptor assignment processes to ensure better alignment and engagement. Preceptors are generally experienced registered nurses but given the current shortage of nursing, preceptors can sometimes be new graduates themselves. The assignment process typically involves collaboration between the nursing program and the healthcare facility. Students are matched with preceptors based on factors such as clinical area availability, the student’s learning objectives, and the preceptor’s expertise and willingness to teach. In many cases, preceptors are selected by unit managers or clinical educators, and sometimes preceptors volunteer or are assigned by default, sometimes without awareness or consent. Similarly, Anja described a challenging experience during her final placement, where her preceptor appeared unwilling to teach and frequently delegated her to other staff. This lack of guidance created a stressful

environment, culminating in an incident where Anja was “yelled at by another nurse.” It is important to recognize the subjectivity of students’ experiences within the clinical setting. Perceptions of psychological safety and support are influenced not only by observable behaviors but also by individual interpretations shaped by prior experiences, confidence levels, and personal coping strategies. For example, what one student perceives as constructive feedback may feel punitive to another, depending on their sense of preparedness and resilience. These subjective interpretations are further amplified in high-stress environments, such as busy hospital units where time pressures and competing priorities dominate. Due to these issues, Anja reported she was reassigned to a different placement midway through the term, where she encountered supportive preceptors who helped restore her confidence. However, her final preceptor continued to provide minimal support and criticized her educational background, leaving Anja feeling unprepared and undermined. These accounts illustrate how the quality of mentorship varied significantly across placements, with supportive preceptors fostering confidence and learning, while unsupportive ones contributed to stress and feelings of inadequacy.

These accounts demonstrate how interactions with mentors, both Nurse Educators and preceptors, significantly shaped students’ perceptions of their competence and confidence. Supportive mentors created environments that encouraged learning by offering clear explanations, inviting questions without judgment, providing constructive feedback, and reassuring students that mistakes were expected parts of the learning process. These behaviours fostered psychological safety and helped students feel valued and capable. In contrast, dismissive or disapproving behaviours, such as abrupt criticism, impatience, or limited willingness to engage, contributed to feelings of stress, inadequacy, and exclusion. The variability in these

experiences highlights the critical role of mentorship in influencing the overall quality of clinical education.

Although participants did not make explicit recommendations, their reflections suggest areas for improvement in clinical education. For example, the timing of post-clinical debriefing may have influenced engagement, as sessions held at the end of long clinical days were described as challenging due to fatigue. Holding these discussions earlier in the day could allow students to participate more actively and apply insights to ongoing clinical tasks, while also providing space to revisit experiences from the previous day after time for reflection. Group size was another factor that shaped comfort levels. Although clinical groups typically ranged from six to nine students, participants perceived these numbers as large and reported difficulty speaking openly in such settings. Strategies such as beginning with paired discussions before sharing with the larger group may help create a more supportive environment for reflection. Finally, participants' comments about feeling rushed and uncertain during clinical activities suggest that clearer structure and guidance could enhance confidence and learning. These observations highlight opportunities to strengthen psychological safety through adjustments in timing, group dynamics, and instructional clarity.

Fostering Self Confidence

The theme of self-confidence emerged prominently when exploring psychological safety in clinical settings. Participants frequently described feeling unprepared to participate independently in the clinical environment and lacking reassurance in their abilities as practitioners. Confidence appeared closely tied to opportunities for hands-on practice and the level of support provided during clinical placements.

Anja described feeling challenged when expected to perform tasks independently, such as patient assessments and health histories, after learning them primarily in a theoretical context. Although students are deemed competent in technical skills following demonstration in their second year and are never left unattended for those procedures, Anja expressed that observing a skill being performed before attempting it herself would have helped her feel more prepared and confident. She explained that while Nurse Educators were available, they were often assisting multiple students simultaneously, which limited individualized support. Anja wished for more involvement from bedside nurses in demonstrating skills:

I felt like a lot of the time we were sent off to do stuff on our own but had never done it before. It was like we learned it in a book and were told to just go do it. But that is not how I learn. I would rather see someone do [the skill] first then attempt it. I know the [Nurse] Educators like to help us, but they are helping [multiple] students all at once, it would have been nice if the nurses on the floor could have helped show us things. (Anja)

Anja's comments reflected the difficulty of translating theoretical knowledge into practice without prior observation. She acknowledged the support of Nurse Educators but felt that additional guidance from staff nurses could have eased the transition to independent practice. Callie shared a similar experience, emphasizing the importance of hands-on practice during clinical placements. Initially, she felt unprepared and lacked confidence, but real-world experience—such as interacting with patients and observing nurses in practice—helped her develop essential skills. She explained, “I felt like I didn't know anything [in the beginning of the clinical placement] ... but by the end I was doing it!” Callie noted that an additional summer placement was crucial for building time management and clinical skills, although it was challenging at first. She emphasized, “There needs to be more in 3rd year. There needs to be

something in second year.” Callie also highlighted the need for more practical training earlier in the program, which could include increased hands-on skills labs, simulation-based learning, and structured clinical experiences in the first and second years. This might involve practicing fundamental nursing skills such as medication administration, patient assessments, and documentation, in controlled environments before entering acute care settings. Additionally, integrating short observational placements or shadowing opportunities early on would allow students to connect theoretical concepts with real-world practice sooner, reducing anxiety and building confidence before more complex clinical rotations. While Callie felt confident in her theoretical knowledge, she described a gap in practical skills: “I could talk about theory all day, but I didn’t have confidence in my hands-on abilities.” She appreciated the variety of skills practiced during later preceptored placements, such as intravenous insertion and patient assessments, which she felt were not adequately covered in earlier years of her education.

Callie also reflected on the supportive role of her preceptors, who provided valuable feedback and guidance, fostering greater self-confidence. Consistent, constructive feedback was particularly impactful during her preceptored placements in her final year, where her preceptor acknowledged her growth by saying, “You know what, at the beginning, I wasn’t sure of you... but you came a long way.” This validation helped Callie recognize her progress and reinforced her confidence in her abilities. Callie mentioned feeling nervous but excited about meeting patients and performing assessments, noting that repeated practice made these tasks easier over time: “The more you do something, the easier it is.” She emphasized that without her additional summer experience, it would have taken much longer to feel competent in her role. Dani highlighted that reassurance and the freedom to ask questions, even about simple tasks, were crucial for building confidence in new nurses. This supportive environment helped her feel more

secure in her abilities. She also mentioned that the unit orientation she received prior to starting the clinical experience and experience from a previous clinical practicum on the same unit boosted her confidence. Familiarity with the unit, including equipment and procedures, contributed to her sense of preparedness. However, confidence varied depending on the unit's pace and complexity. For instance, she felt more confident on slower-paced medical units such as geriatric rehabilitation, where patients' medical acuity was low, compared to busier surgical units where she still had more to learn in terms of clinical assessments and psychomotor skills. Beth reflected on having mixed feelings about her clinical practicums. She felt more comfortable with basic tasks like introducing herself to patients and pulling medications from the Pyxis medication delivery system. Still, she wished for more hands-on guidance with psychomotor skills such as intravenous line insertion and wound care, which were learned during her second-year skills labs. She felt that this would have better prepared her for her role. While the training helped her feel more at ease in the hospital environment, she believed it could have been more comprehensive in teaching practical skills.

To summarize, self-confidence seemed closely linked to a task-based focus, with clinical confidence often tied to the number of psychomotor skills completed during a clinical placement. Two of the four participants highlighted that their self-confidence was strongly associated with experience performing specific skills. This task-based focus meant that without sufficient hands-on practice, they felt unprepared and unsure of their abilities. Callie echoed this sentiment, stating that while her theoretical knowledge was strong, she lacked confidence in her practical skills and emphasized the need for more practical training earlier in the program to build confidence in performing clinical tasks.

Self-confidence also appeared to be impacted by limited feedback from mentors and fear of patient interactions. Participants noted that restricted time with educators hindered their ability to receive constructive feedback, which is crucial for building confidence. For example, Anja mentioned that while Nurse Educators were willing to help, they were often busy assisting multiple students at once. This lack of individualized attention made it difficult for her to gain confidence in performing new tasks. The fear of interacting with patients due to an anticipatory lack of guidance from educators was another theme that emerged. Participants felt more comfortable focusing on patient health records rather than direct patient care, stemming from a lack of confidence in their clinical skills. Callie mentioned feeling nervous but excited about meeting patients and performing assessments, and she found that repeated practice helped ease this anxiety over time. However, without adequate preparation and support, this fear could hinder their ability to confidently engage with patients. These experiences highlight that while formal education provides a foundation of theoretical knowledge, students often rely on informal learning opportunities to bridge the gap between theory and practice. The desire for observation, mentorship, and real-time feedback suggests that confidence is not solely built through structured curriculum but also through spontaneous, experiential interactions within the clinical environment. This reliance on informal learning will be explored in the following section.

Informal Workplace Learning.

Informal workplace learning is defined as learning that occurs outside formal learning contexts, predominantly self-directed, intentional, and field-based (Decius et al., 2019). It involves activities such as problem-solving, seeking advice from colleagues, and experimenting with new approaches. This type of learning is crucial for developing work-related skills and competencies in an authentic setting, which supports the transfer of learning (Decius et al.,

2019). The participants highlighted the importance of informal workplace learning in their clinical training, indicating that seeing skills performed and explained in real-time helps solidify understanding. They emphasized that hands-on experience and detailed explanations from experienced nurses were crucial for understanding and performing tasks effectively. Anja explained that many nurses working on the floors seemed unwilling to have students around, which made learning more difficult. She shared, “I feel like if they were more willing to kind of have a student with them, then we’d learn a lot more of what they’re doing.” She indicated that her learning would have been better supported by watching practical skills, as in-person demonstrations by experts are more effective than theoretical learning from books:

[Provide] hands on [opportunities] and actually explaining things, not just, ‘I’m doing this,’ and then doing it. [If they were] actually explaining it because you can only learn so much from a book, but when you're there in person, it makes more sense. So, I like people explaining something that I probably already know but it's nicer to see it in person and being by someone that's an expert. (Anja)

Structured opportunities for learning by observing other nurses extends beyond psychomotor skills; it includes communication and interpersonal competencies essential to nursing practice. Interacting effectively with patients, families, and members of the healthcare team is critical. Modeling occurs as nurses demonstrate rapport-building and professional communication. Anja emphasized that observing nurses communicate with patients was “probably the most valuable thing” she learned during clinical placements. This illustrates that communication skills, such as building rapport and interacting professionally are often developed through modeling rather than formal instruction. In addition to patient interactions, participants also highlighted the importance of learning how to communicate within the healthcare team. Dani noted that

observing these interactions during her consolidation placement was critical for understanding professional collaboration. Anja echoed this point, describing the challenges of learning when and how to communicate with physicians:

I was so nervous to take phone calls and knowing when to call the doctor about things and knowing when I could just leave a note for them. Talking to doctors and [knowing] what information they need to know before you can give them a call, identifying what you are concerned about, basically what information to have ready for them, such as what they'll want to know, like blood work, recent vitals. All those little things. I feel like it's more the paperwork side of things.

Dani's reflection echoed Anja's in that practical, hands-on lessons were among the most valuable aspects of her clinical experience. She stressed the importance of learning informal systems within the hospital, such as sending medication orders to the pharmacy, which were not covered in nursing school but were essential for day-to-day practice. Time management and documentation, including charting and determining when to call physicians, were significant skills acquired through experience rather than formal instruction. Dani remarked that she arguably learned more informally than in nursing school:

I learned so many different things that I didn't even think of when I was in school. We [may have] briefly touched on, but even small things like how to hang TPN [Total Parenteral Nutrition which is a method of delivering complete nutritional support intravenously, bypassing the gastrointestinal tract entirely], or how to [administer a transfusion of] blood. I feel like in nursing school you learn [about] all those things, but then [performing the task is different], and the hardest part I found was learning charting, sending off a lab specimen [to the lab via the pneumatic tube system], and even how to

print labels [for specimens]. Just little things that are so important [for the job] that you don't even touch on in nursing school.

While Dani's statement suggests a distinction between nursing school and clinical learning, it is important to clarify that clinical placements are an integral part of nursing education. Her comment reflects a perceived gap between classroom-based instruction and the practical, system-oriented skills required in clinical settings. These include navigating hospital workflows, managing documentation, and understanding informal processes—skills that extend beyond medical knowledge and are essential for functioning effectively in the workplace. Dani's experience suggests that while clinical learning is part of nursing school, the emphasis on these operational aspects may not have been sufficiently stressed in the formal curriculum. This highlights the need for nursing programs to better integrate system-based training and mentorship into clinical education to bridge the gap between theoretical preparation and real-world practice.

Overall, participants emphasized that informal workplace learning—through observation, guided practice, and peer support—was vital for developing practical skills and building confidence. These experiences reinforced the importance of experiential learning and highlighted the need for stronger connections between theoretical instruction and the procedural, communication, and organizational demands of nursing practice.

Additional Observations

Throughout the interviews, participants demonstrated a growing sense of self-awareness regarding their learning needs, which is a key aspect of reflective practice. This awareness was not merely evident in their recall of clinical events, but in how they critically evaluated their experiences and identified what supported or hindered their development. They reflected on their

individual learning preferences, such as the need for observational learning before hands on practice and recognized specific gaps in their knowledge that were not addressed in formal education. Moreover, they articulated the types of support they required to succeed, including clearer guidance, more structured clinical activities, and mentorship that aligned with their learning styles. These reflections indicate an evolving capacity to assess their own competencies and advocate for their educational needs, which is essential for professional growth and confidence in clinical practice. Anja expressed a clear preference for observational learning, stating that she learned best by watching a skill being performed before attempting it herself. This awareness of her learning style informed her expectations of clinical teaching and highlighted the need for more tailored instructional approaches. Dani's reflections revealed a growing understanding of the hidden curriculum in nursing, those unspoken, practical elements of the job that are not formally taught but are essential to functioning in a clinical environment. Her ability to identify and adapt to these informal systems demonstrated a maturing professional identity and a deeper awareness of what it means to be a nurse beyond textbook knowledge. Callie's experience with the nurse educator, while negative, prompted her to reflect on her emotional responses and seek validation from peers. While not always deeply introspective, these reflections collectively indicate a trajectory of professional growth and an increase towards critical reflection among the participants.

Although not directly aligned with the study's central themes, the impact of the COVID-19 pandemic on clinical placements offers important insight into experiential learning. Participants described how their placements shifted from acute care hospitals to long term care facilities; however, they emphasized that the opportunity for in-person learning remained intact. This continuity allowed students to engage in concrete experiences, which is an essential

component of Kolb's experiential learning cycle. Despite the altered setting, learners were still able to interact with patients, apply theoretical knowledge, and reflect on their practice. However, several participants expressed concern that the long-term care environment limited their ability to apply psychomotor skills learned in the classroom, such as performing complex assessments or procedures typically encountered in acute care settings. This gap in skill application highlights a significant constraint in the experiential learning process, wherein the clinical context may limit students' exposure to the full range of nursing competencies, particularly psychomotor skills. In environments such as long-term care facilities, where patient conditions are often more stable and routine, opportunities to perform complex procedures such as intravenous insertions, catheterizations, or emergency interventions are reduced. As a result, students may struggle to integrate classroom learning with real-world practice, potentially impacting their confidence and readiness for more acute clinical settings.

Summary

These findings underscore the critical role of experiential learning and reflective practice in bridging the theory to practice gap in baccalaureate nursing education. Through thematic analysis of participant interviews, three interrelated themes emerged: psychological safety, fostering self-confidence, and informal workplace learning. Together, these themes illuminate the conditions necessary for effective experiential learning and professional development in clinical settings. Psychological safety was identified as a foundational prerequisite for meaningful engagement in clinical education. Participants described how perceptions of inclusion, mentorship, and team dynamics shaped their willingness to participate, ask questions, and take initiative. Experiences of feeling unwelcome or judged, whether through verbal interactions or subtle non-verbal cues undermined confidence and hindered learning. Conversely,

supportive relationships with mentors and preceptors fostered a sense of belonging and encouraged active participation. Fostering self-confidence was closely linked to hands-on practice, timely feedback, and instructional approaches that aligned with individual learning preferences. Participants emphasized the importance of observational learning prior to skill execution and expressed a need for more structured and individualized support. Confidence development was not only task-based but also influenced by emotional validation and opportunities for repeated practice in psychologically safe environments. Informal workplace learning emerged as a critical, though often underrecognized, component of clinical education. Participants valued learning through observation, peer dialogue, and real-time problem-solving activities that occurred outside formal instructional settings but were instrumental in developing clinical judgment and professional identity. These informal experiences often filled gaps left by formal education, particularly in navigating institutional systems and performing routine clinical tasks.

Additionally, participants demonstrated an evolving capacity for self-awareness and reflective thinking. While not all reflections reached the depth of critical analysis, the ability to identify learning needs, articulate emotional responses, and seek peer validation marked a trajectory toward professional maturity. Collectively, these findings highlight the need for nursing education programs to foster psychologically safe environments, provide early and consistent hands-on learning opportunities, and recognize the pedagogical value of informal learning. These elements are essential to bridging the theory to practice gap and preparing nursing students for the complexities of professional clinical practice.

Chapter 5: Discussion

This chapter discusses the study's findings in relation to existing knowledge, drawing on the literature to outline what is currently understood and to identify areas where gaps in understanding remain. Understanding how nursing students acquire knowledge and develop competence within clinical environments is essential to the design of effective educational strategies. Attending to students' lived experiences and learning processes enables educators to strengthen teaching practices, support the application of classroom-based theory in real-world contexts, and enhance the development of clinical judgment. Despite sustained efforts in nursing education, a persistent gap remains between the theoretical concepts taught in the classroom and students' ability to apply these concepts effectively in clinical practice. Traditionally, attempts to bridge this theory–practice gap have focused on identifying pedagogical strategies that promote the transfer and integration of theoretical knowledge into clinical experiences.

Although this study initially conceptualized the theory to practice gap as a challenge that could be addressed primarily through improved integration of theoretical knowledge, the findings complicate this assumption. While theoretical knowledge played a role in participants' experiences, it was neither the sole nor the primary factor influencing their ability to translate learning into practice. Instead, participant narratives emphasized the significance of additional forms of learning, including experiential learning, informal workplace learning, and developing an understanding of how clinical environments function in practice. Nuances such as navigating informal systems, understanding unit culture, and building confidence through relational and contextual support emerged as equally influential. These findings suggest that the theory to practice gap cannot be understood solely as a problem of knowledge transfer, but rather as a complex interaction of formal, informal, social, and experiential learning processes.

This study explored graduate nurses' perspectives on their clinical learning experiences in order to identify factors that influence the translation of learning into practice. By examining these perspectives, this discussion highlights conditions that foster meaningful learning and support the development of professional competence. The focus on reflective practice emerged from observed challenges encountered by students in clinical settings, alongside a desire to refine teaching approaches that more effectively support learning. Analysis of participant narratives demonstrated the central role of experiential learning, informal workplace learning, and reflection in professional development. Experiential learning theory emphasizes engagement in real-world practice, reflection on experience, and the integration of new insights into future action. Informal workplace learning refers to learning that occurs organically through everyday clinical interactions, observation, and problem-solving. Reflection functions as the process through which these experiences may be examined and integrated, supporting the development of critical thinking and clinical reasoning.

Several themes emerged from the data, including perceptions of reflective practice, psychological safety, fostering self-confidence, and informal workplace learning. In relation to the purpose of the study, these themes illuminate conditions that supported clinical learning as well as barriers that constrained participants' ability to translate learning into practice. Each theme reflects experiences within clinical environments that shaped how participants engaged with learning opportunities and developed professional competence. Although reflective practice informed the conceptual framework of this study, the findings themselves are best understood as accounts of learning experiences that either enabled or hindered learning for newly graduated nurses. Themes such as psychological safety, perceptions of the healthcare team, interactions with mentors and preceptors, self-confidence, and informal workplace learning represent

environmental and relational conditions that shaped learning rather than explicit reflective activities. Reflection and critical reflection did not consistently emerge as deliberate or articulated practices among participants; instead, reflection serves as an interpretive lens through which these experiences can be understood. Accordingly, reflective practice is used in this discussion not as a discrete finding, but as a framework for examining how participants made sense of their experiences and how those experiences influenced learning and professional development.

Before examining each theme in detail, it is important to consider the role of reflective practice in professional development. Reflection provides a means through which experiences can be examined, interpreted, and integrated into future practice. Without reflection, the significance of factors such as psychological safety, confidence-building, and informal learning would remain primarily descriptive. Reflection enables these conditions to be understood as part of a learning process that supports growth, insight, and the development of clinical competence, positioning reflective practice as a foundational component of effective experiential learning.

Pedagogical Implications of Students' Clinical Learning Experiences

Participants consistently described reflective practice as a deliberate process aimed at fostering growth and improving clinical performance. It was perceived as integral to “thinking like a nurse,” serving as a mechanism for developing mindfulness and adaptability in patient care. Reflection enabled students to pause, evaluate their actions, and consider alternative approaches, reinforcing their ability to respond effectively in dynamic clinical environments. Importantly, reflection was not confined to solitary activity. Many participants emphasized the value of informal, collaborative reflection, which often occurred through conversations with peers and colleagues. These exchanges provided opportunities to share perspectives, validate

experiences, and engage in problem-solving. While confidentiality was maintained, these discussions allowed students to explore different interpretations of clinical events, promoting deeper understanding and collective learning. For some, these interactions extended beyond the clinical setting, involving trusted friends in nursing who could offer additional insights and support. Post-conference clinical debriefing, designed to encourage structured reflection-on-action, elicited mixed responses. Several students appreciated these sessions for clarifying uncertainties, reinforcing learning, and alleviating anxiety after challenging clinical days. Others, however, reported discomfort and reluctance to participate, citing feelings of being unprepared to articulate their experiences immediately after practice. This variation suggests that timing and format significantly influence the effectiveness of group reflection. Although reflective practice was strongly emphasized throughout undergraduate education, initially through structured assignments such as journals and later as an informal habit, participants' reflections often lacked depth. This superficial approach limited the transformative potential of reflection, reducing opportunities for meaningful professional growth. Developing self-awareness emerged as a critical missing component, essential for connecting external experiences with internal processes and fostering true critical reflection.

Critical reflection, as defined by Mezirow (1990), involves a deliberate examination of one's assumptions, values, and emotional responses with the goal of transforming understanding and behavior. In this study, while participants were able to describe clinical events and articulate their emotional reactions, their reflections often lacked the introspective depth necessary to analyze experiences meaningfully or translate insights into changes in practice. A key component missing was the development of self-knowledge, an awareness of one's internal frameworks and how this influence clinical decision-making (Bultas et al., 2023). Without this

introspective lens, reflection risks becoming a superficial recounting of events rather than a transformative learning process. Participants frequently described what had occurred and how they felt in the situation but rarely explored *why* they felt that way or how their interpretations were shaped by personal biases or emotional responses. This suggests a gap in the learner's ability to consciously reflect on and understand their thinking processes. In the context of nursing education, it means being aware of how one learns, makes decisions, and solves clinical problems, while also recognizing one's own cognitive strengths and limitations, all of which are essential for higher-order reflective practice (Rolfe et al., 2001). Although their narratives demonstrated engagement with reflective observation, as outlined in Kolb's (1984) experiential learning cycle, they often did not progress to the stages of abstract conceptualization or active experimentation. Similar to Tanner's (2006) Clinical Judgment Model, which emphasized the importance of reflection in developing clinical judgment, the limited depth of participants' reflections suggests missed opportunities for advancing this competency, particularly in the areas of noticing, interpreting, and responding to clinical situations. Furthermore, while students could articulate the benefits of reflection, such as learning from mistakes, improving care, and building confidence, the findings suggest that many viewed it as a natural or intuitive process rather than a skill that can be intentionally developed and refined. This perception may limit their ability to fully engage in the kind of critical, structured reflection that fosters transformative learning and developing clinical judgment. Without structured guidance, such as facilitated debriefing, targeted questioning, or reflective writing prompts, participants struggled to transform their experiences into learning or actionable insights. The superficial nature of many reflections suggests that students require more intentional pedagogical support to move beyond description toward critical analysis and transformative learning. Educational scaffolding offers a framework

for providing this support by helping students bridge the gap between experience and understanding. The following section discusses the role of scaffolding in facilitating deeper reflective practice and enhancing students' clinical learning.

Educational Scaffolding: Supporting Deeper Reflection and Clinical Judgment

This limitation underscores the importance of educational scaffolding in clinical learning environments; a concept strongly reflected in the experiences of participants in this study. Scaffolding refers to the intentional support provided by educators to help learners progress from dependent to independent practice, gradually building competence and confidence (Coombs, 2018). Recent nursing research confirmed that structured scaffolding strategies enhance students' ability to integrate theory into practice and develop clinical judgment (Bobo et al., 2023; Johnsson et al., 2023). Structured support mechanisms such as mentorship, simulation debriefings, and guided journaling are critical for moving students beyond surface-level reflection toward deeper cognitive processing and professional growth (Dogham et al., 2025; Hobenu et al., 2025). Simulation-based learning, when paired with scaffolded debriefing has been shown to significantly improve clinical reasoning, judgment, and confidence (Cant & Cooper, 2010; Daneshfar & Moonaghi, 2025). Similarly, scaffolded simulation activities, such as peer observation, structured feedback, and progressive responsibility, help students engage in critical thinking and reflective analysis, fostering adaptive decision-making skills (Bobo et al., 2023). The findings of this study reinforce these insights. Participants often described reflection as informal and descriptive, lacking the depth needed for transformative learning. This suggests that without structured guidance, learners struggle to interrogate assumptions, recognize emotional influences, and connect experiences to theoretical frameworks. Intentional pedagogical strategies such as unfolding case-based learning and competency-based approaches

can provide the scaffolding necessary to promote critical reflection and clinical judgment (Liu, 2024; Zhang, 2025). By fostering this deeper level of reflection through scaffolding, educators can support the development of decision-making skills that are responsive to the complexities of real-world patient care. However, the effectiveness of scaffolding depends on the conditions under which it occurs. For students to fully benefit from these supports, they must feel secure and respected in their learning environment.

Reflective Practice as Revealed in the Findings: The Need for Structured Support

Mixed experiences with post-conference debriefing highlight the importance of psychological safety and structured guidance in reflective activities. Literature advocates for intentional strategies such as guided debriefings, journaling, and simulation-based learning (Cant & Cooper, 2010; Freshwater et al., 2005) to support deeper reflection and bridge theory to practice gaps. While reflection was strongly promoted throughout undergraduate education, its implementation did not consistently facilitate the transformative learning process envisioned by these frameworks. Strengthening structured reflective opportunities and fostering critical self-awareness are essential steps toward developing competent, reflective practitioners capable of delivering safe, high-quality care.

Although the need to move beyond superficial reflection is well documented (Mann et al., 2009; Sandars, 2009), the current findings show that students continue to experience reflection primarily as a descriptive task. Participants frequently recounted clinical events and emotional reactions but rarely examined assumptions, reasoning processes, or personal influences on clinical decision making, which echoes concerns in the literature on reflective learning (Bulman & Schutz, 2013; Kuiper & Pesut, 2004). The present study adds that psychological safety, misconceptions about where critical thinking occurs, and the timing of

reflective activities all shape students' capacity to engage in deeper reflection. Educators should therefore prioritize explicit instruction in analyzing thinking, identifying personal biases, and linking emotional responses to clinical decisions. Structured guidance, including reflective models, targeted prompts, and facilitated discussion, can support movement from description toward interpretation and insight. The timing and format of reflective activities should also be responsive to learner readiness; many participants reported discomfort with immediate post clinical reflection, emphasizing the role of psychological safety in willingness to reflect openly (Hardie et al., 2022). In short, readiness matters, but it must be supported by shared understandings of reflective practice that promote consistent and meaningful engagement.

The findings also indicate that misconceptions about reflective practice can limit engagement, for example, the belief that deeper reflection or complex clinical reasoning only occur in high acuity hospital settings. Addressing these misconceptions requires curricular approaches that demonstrate the relevance of reflection across all contexts, including long term and community care. When reflection is framed as a dynamic process supported by scaffolding, mentorship, simulation, and collaborative dialogue, students are better positioned to transform clinical experiences into learning and to deliver evidence informed care across diverse environments. While prior research recommends guided prompts, structured models, and facilitated debriefing to strengthen clinical reasoning and professional identity (Mann et al., 2009; Sandars, 2009), participants in this study described reflective activities that were largely informal, descriptive, and variably supported. This gap between recommended and actual practice identifies clear opportunities for improvement through more intentional pedagogical design that consistently employs guided questioning, explicit models, and educator facilitated dialogue to deepen analysis and build confidence.

Educators should prioritize teaching students to question assumptions, recognize biases, and connect emotional responses to decision making. This can be achieved through reflective frameworks such as Kolb's experiential learning cycle and Schön's reflection in action, combined with activities that encourage analysis/interpretation analysis and interpretation rather than mere description (Shin et al., 2023). Timing and format of reflective activities should remain flexible to accommodate individual readiness and reduce performance anxiety. Reflective depth in nursing education can be enhanced through structured debriefing, which promotes critical thinking and cognitive reframing (Franco Tantuico & Btoush, 2025). Facilitated post simulation discussions further support self-reflection and professional insight by guiding learners through an intentional reflective process (Husebø et al., 2024). Additionally, collaborative peer-based processes, such as structured peer feedback and mentoring, offer avenues for shared learning, reflective engagement, and sustained professional growth (Cano García, 2024; Madel & Zimmerman, 2025).

Finally, misconceptions that critical thinking is exclusive to acute care settings must be addressed through curriculum design that emphasizes its relevance across all contexts, including long term care. Innovative strategies such as unfolding case studies and competency-based learning broaden students' understanding of critical thinking as encompassing communication, ethical reasoning, and problem solving in diverse environments (Macdiarmid et al., 2024; Zhang et al., 2025). By integrating reflective practice as a dynamic, interactive process supported by structured guidance, simulation, and mentorship, nursing programs can prepare adaptive, resilient, adaptable, and confident practitioners capable of delivering safe, evidence informed care in complex healthcare systems. However, the success of these strategies depends not only on their design but also on the conditions under which they are implemented. Reflection and

critical thinking flourish in environments where learners feel supported, respected, and free to express uncertainty without fear of judgment. These findings point to an essential consideration for educators: creating spaces that encourage honest dialogue and risk taking. These findings therefore highlight an essential consideration for educators: cultivating learning environments that encourage honest dialogue, curiosity, and thoughtful risk taking. This brings us to the next theme: psychological safety, a foundational element that shapes not only the depth of reflection but also the overall quality of clinical learning. This shift in focus leads directly into the next theme, psychological safety, which fundamentally shapes both the depth of reflection and the overall quality of clinical learning.

Psychological Safety in Clinical Education

Psychological safety is a foundational element in clinical education, shaping how nursing students engage with their learning environments and develop professional competence. Edmondson (2019) defined psychological safety as a shared belief that the team environment is safe for interpersonal risk-taking, while Clark (2019) expanded this definition to include the conditions under which individuals feel safe to learn, contribute, and challenge the status quo without fear of embarrassment or punishment. The experiences of nursing students in clinical placements revealed that psychological safety, or its absence, profoundly affected their learning, confidence, and professional development. Participants in the study described experiences that reflected varying levels of psychological safety within their clinical placements. Students did not report explicit hostility; however, they often felt unwelcome due to subtle behaviors and limited engagement from staff. For example, Anja observed that nurses appeared reluctant to involve students in care activities, and although she did not cite a specific incident, the lack of interaction and exclusion from team discussions contributed to her sense of being an outsider. Similarly,

Beth felt like a hindrance when accessing a patient chart, even though the nurse verbally reassured her that it was acceptable. This disconnection between verbal messages and observed behaviors created ambiguity, leaving students uncertain about their role and value within the team.

These experiences highlight how hierarchical dynamics and implicit norms within clinical environments shape students' perceptions of belonging (Chen, 2015; Hafferty, 1998). When students interpret minimal engagement or indirect cues as disinterest, psychological safety is compromised, even if staff do not intend to exclude them. Such conditions can lead students to minimize their presence, avoid asking questions, and suppress their educational needs, ultimately limiting opportunities for learning and confidence-building (Duffy, 2009; Hardie et al., 2022). Psychological safety in clinical education is not simply the absence of negative behaviors but the presence of inclusive actions that affirm students' role as learners. Creating environments where students feel actively supported and integrated into team processes is essential for promoting engagement, reducing anxiety, and fostering professional growth (Edmondson, 2019; Kolbe et al., 2020). This underscores the pervasive influence of hierarchical dynamics within clinical education and the positioning of nursing students at the lowest tier of the clinical hierarchy. Unlike licensed professionals, students occupy a learner role that inherently limits their authority, autonomy, and perceived credibility. This structural reality is not merely symbolic; it actively shapes how students interact within clinical environments and contributes to feelings of marginalization (Edwards et al., 2004; Pullen, 2021). When students perceive limited engagement or exclusion from team interactions, these perceptions are grounded in the actual hierarchy rather than imagined inferiority. Consequently, students often adopt strategies of self-minimization, such as remaining silent during rounds or avoiding questions to avoid

disrupting workflow or appearing incompetent. While these behaviors may reduce interpersonal tension, they simultaneously suppress educational needs, hinder confidence-building, and constrain opportunities for professional growth (Perry, 2011; Ravik & Bjørk, 2022). Recognizing this identity formation process is essential, as it directly shapes how students interpret their place within the clinical hierarchy and prepares the foundation for understanding the broader implications of their educational experiences.

The implications of these dynamics extend beyond the immediate learning environment. Clinical experiences serve as formative spaces where students begin constructing their professional identity, a process through which individuals internalize the values, norms, and roles of their chosen profession (Moseley et al., 2021; Wald, 2015). Professional identity formation is not a passive outcome; it is deeply influenced by the relational and emotional climate of clinical settings (Chen, 2015; Duffy, 2009; Pullen, 2021). Positive interactions can counterbalance hierarchical barriers and foster psychological safety, which is essential for learning and identity development (Edmondson, 2019; Hardie et al., 2022; Kolbe et al., 2020). For instance, Anja described an encounter where a physician deliberately included her in a procedural learning moment by explaining each step and articulating the underlying rationale. This intentional engagement made her feel valued and excited to learn, reinforcing her sense of belonging and validating her role as a future professional. Such experiences illustrate that while hierarchy is an inherent feature of clinical practice, it does not preclude inclusive behaviors. Intentional educational dialogue and collaborative engagement can transform hierarchical structures from barriers into scaffolds for learning, thereby promoting confidence and supporting the development of a robust professional identity.

The Role of Mentor Relationships

Mentor relationships emerged as a critical determinant of psychological safety in clinical education. Participants described how negative interactions with nurse educators, including public reprimands during clinical tasks, created environments where they felt incompetent and hesitant to ask questions. These experiences often led students to seek validation from peers rather than mentors, reflecting a lack of trust and openness within the mentor-student relationship. Preceptor experiences were similarly inconsistent. Some students reported that preceptors were assigned without consent, resulting in disengagement and limited support, while others experienced abrupt handoffs or harsh criticism that disrupted continuity and, in some cases, necessitated placement changes. Such encounters undermined confidence and contributed to feelings of marginalization. Conversely, students who worked with supportive preceptors described significant improvements in confidence and engagement, emphasizing the importance of mentors who demonstrate willingness to teach, provide constructive feedback, and foster inclusion. These contrasting experiences underscore the pivotal role of mentorship in promoting psychological safety and highlight the need for intentional preceptor assignment and comprehensive training to ensure mentors are equipped to create respectful, inclusive learning environments.

These findings highlight the need for intentional and thoughtful preceptor assignment as well as comprehensive mentor training. Preceptors must be equipped not only to teach clinical skills but also to create respectful and inclusive environments that affirm students' role as learners. Such practices support skill development, foster professional identity formation, and build resilience essential for long-term success in nursing practice. Research (Astrove & Kraimer, 2022; Chen, 2015; Duffy, 2009; Ravik & Bjørk, 2022) identifies several strategies to

strengthen psychological safety and improve mentor and preceptor relationships. Establishing psychological safety early is essential; preceptors should communicate that mistakes are part of learning and invite questions without judgment. Using inclusive language such as “*Let’s think this through together*” promotes openness and reduces fear of embarrassment (Hardie et al., 2022). Formal mentor and preceptor training is equally important. Competency frameworks, such as those developed by the Association for Nursing Professional Development, outline key roles including teacher, coach, role model, facilitator, and protector, and recommend structured programs to build these skills (Harper et al., 2023). Matching mentors and students thoughtfully based on shared goals and communication styles improves relationship quality and trust, and programs that incorporate mentor training and ongoing support are associated with higher student satisfaction and retention (Natalini-Whitmore, 2025).

Additional strategies include fostering accessibility and approachability by ensuring mentors are available for questions, providing timely feedback, and demonstrating empathy in high-pressure clinical settings. Promoting reflective practice among mentors strengthens teaching efficacy and adaptability. Evidence suggests that mentors who engage in structured reflection and peer support circles enhance their ability to create psychologically safe environments (Astrove & Kraimer, 2022). Creating psychologically safe and inclusive clinical environments is essential for preparing competent and confident nurses. When mentors and preceptors are equipped with evidence-based strategies, they not only enhance student learning but also contribute to workforce retention, professional identity formation, and long-term resilience in nursing practice. These findings highlight the importance of embedding psychological safety principles into clinical education policies and preceptor development programs to ensure that nursing students thrive in supportive and respectful learning environments.

Structural Factors Influencing Psychological Safety and Learning

The structure of clinical activities significantly shaped students' experiences of psychological safety and learning. Post clinical debriefing sessions, intended to promote reflection and consolidate learning, were perceived inconsistently. Callie described these sessions as helpful for reducing anxiety and gaining diverse perspectives, noting that hearing others' experiences allowed her to compare her own learning needs and recognize the value of peer learning. In contrast, Beth and Dani reported discomfort with the debriefing sessions. Beth found the group discussions stressful and anticipated them with apprehension, while Dani explained that the timing at the end of long clinical days left her mentally exhausted and unable to engage fully. She also felt the sessions were overly lengthy, which compounded fatigue. These reflections suggest that although debriefing can be pedagogically valuable, its effectiveness depends on contextual factors such as timing, facilitation style, and psychological safety, and the perceptions and outlook of individual learners, which ultimately shape how they interpret and benefit from these learning opportunities.

Group size also influenced comfort and engagement. Participants consistently preferred smaller clinical groups, as larger groups were perceived as intimidating and hindered open discussion. Students reported feeling rushed and unsupported during clinical activities, often lacking clear guidance. Callie emphasized the need for structured sessions with explicit instructions and access to resources such as physician orders and progress notes. She believed that clear explanations of how to use these tools would enhance preparedness and confidence in clinical practice.

These findings aligned with literature that emphasized the role of structured debriefing promoting reflection and learning. Kolbe et al. (2020) argued that debriefing was most effective

when psychological safety was actively managed through facilitation strategies that balanced openness with support. Similarly, Phillips and Tallentire (2023) highlighted that routine debriefing required alignment between timing, cognitive readiness, and pedagogical intent to prevent it from becoming a source of stress rather than learning. When implemented thoughtfully, structured debriefings transformed clinical experiences into opportunities for critical reflection, peer learning, and professional identity development, which were key outcomes identified in experiential learning theory. These findings were also consistent with principles of adult education, particularly Kolb's experiential learning theory, which emphasized the role of reflection in turning experience into meaningful learning. While clinical placements provided valuable hands-on opportunities, the data indicated that a lack of psychological safety disrupted the reflective stage of Kolb's learning cycle. Students who felt anxious or unsupported during debriefing were often unable to fully engage in reflective observation, which limited their ability to interpret experiences and apply what they learned.

Psychological safety emerged as a foundational element in clinical education, influencing students' willingness to ask questions, engage in reflection, and take ownership of their learning. When students perceived environments as supportive and inclusive, they were more likely to participate actively and develop professional identity. Conversely, settings characterized by judgment, unclear expectations, or hierarchical barriers led to self-protective behaviors such as silence and withdrawal, which limited learning opportunities. Structured strategies, including thoughtful mentorship and well-facilitated debriefing sessions, were shown to enhance psychological safety and promote deeper reflection, aligning with principles of experiential learning. Building on these insights, fostering self-confidence becomes the next critical focus. Confidence is not only shaped by psychological safety but also by opportunities for mastery,

constructive feedback, and autonomy in clinical practice. Creating conditions where students feel competent and empowered to act supports their transition from passive observers to active participants, reinforcing resilience and professional growth.

Fostering Self Confidence Through Experiential Learning

Self-confidence is a foundational attribute in nursing practice, defined as the belief in one's ability to perform clinical tasks and make sound decisions effectively (Perry, 2011). It is closely linked to the delivery of safe, competent care and the development of professional identity. Within the context of baccalaureate nursing education, self-confidence is not an innate trait, but a developmental outcome shaped by experience, mentorship, feedback, and the structural design of clinical placements. Exploring how these elements contribute to confidence-building situates the findings within the broader framework of adult learning theories, particularly experiential learning theory.

The experiences of nursing students during clinical placements highlighted that hands-on practice was fundamental to developing self-confidence. Participants consistently indicated that theoretical instruction alone was insufficient for preparing them to meet the demands of real-world practice. Anja's experience illustrated the challenge of being expected to perform procedures previously encountered only in textbooks, emphasizing the need for observation and guided practice before independent performance. This preference for modeling reflects the importance of structured skill demonstration in clinical education. Similarly, Callie reported that while she felt comfortable discussing theoretical concepts, her practical abilities were initially limited. Her confidence improved through repeated practice and exposure to authentic clinical scenarios, particularly during an additional summer placement that facilitated the development of time management and technical skills. Collectively, these findings underscore the critical role of

experiential learning in bridging the gap between theory and practice, highlighting the need for early, frequent, and supported opportunities for skill acquisition within nursing curricula.

These accounts illustrate a task-based orientation to confidence development, where nursing students associate their sense of competence with specific psychomotor skills such as intravenous insertion, wound care, and patient assessments. This emphasis on hands-on experience aligns closely with Benner's (1984) Novice to Expert Theory, which conceptualized nursing skill acquisition as a progression through five stages: novice, advanced beginner, competent, proficient, and expert. At the novice level, learners rely heavily on rules and lack contextual understanding, often feeling uncertain and hesitant when faced with unfamiliar clinical tasks. As they gain experience, they begin to recognize recurring patterns and develop a more intuitive grasp of clinical situations. However, this progression is contingent upon repeated exposure to real-world practice and opportunities for reflection. In the context of this study, participants like Beth demonstrated comfort with basic tasks such as medication retrieval but expressed a lack of confidence in more complex procedures due to limited hands-on guidance. This reflects the characteristics of the advanced beginner stage, where learners begin to recognize meaningful elements in clinical situations but still require support to prioritize and act effectively (Benner, 1984). Without sufficient opportunities to practice and receive feedback, students may remain at lower proficiency levels longer than necessary, which can hinder their development of clinical judgment and autonomy. Benner (1984) emphasizes that experiential learning is essential for moving through these stages, particularly the transition from competent to proficient practice, where nurses begin to perceive situations holistically and respond with greater flexibility and insight. Therefore, clinical education must prioritize early and frequent opportunities for skill acquisition, mentorship, and guided reflection to support confidence-

building and facilitate progression through Benner's framework. Integrating structured experiential learning strategies such as simulation, supervised practice, and post-clinical debriefings can help bridge the gap between theoretical instruction and practical competence, ultimately preparing students for the complexities of professional nursing practice.

Mentorship and feedback emerged as critical factors in fostering self-confidence among nursing students. Supportive preceptors who provided guidance and reassurance played a pivotal role in helping students feel secure in their abilities, while structured orientation and familiarity with the clinical environment enhanced preparedness. These findings align with Knowles' andragogical principles, which emphasize relevance, experience, and self-direction in adult learning (Knowles et al., 2014). When students were able to ask questions freely and receive constructive feedback, they demonstrated greater engagement and confidence, reflecting the collaborative and learner-centered approach advocated by andragogy. Conversely, limited access to educators and insufficient individualized feedback created barriers to confidence-building, reinforcing literature that identifies mentorship as essential for bridging the theory to practice gap (Lewis & Bryan, 2021).

The role of mentorship also resonates with Wenger's (2009) communities of practice theory, which situates learning within social interaction and shared meaning-making. Clinical environments function as communities where novice nurses learn through participation and observation, and the absence of supportive relationships can hinder integration into these communities. Furthermore, the anxiety students experienced around patient interactions underscores the need for experiential learning opportunities that allow for gradual exposure and reflection. Kolb's (1984) experiential learning cycle provides a useful lens here: concrete experiences with patients, followed by reflective observation and feedback, enable students to

conceptualize and refine their practice through active experimentation. Without these structured opportunities, students risk remaining at novice stages as described by Benner (1984), limiting their ability to develop clinical judgment and autonomy.

Collectively, these findings and theoretical connections highlight that mentorship and feedback are not peripheral but central to confidence-building in nursing education. Embedding structured mentorship programs, fostering inclusive communities of practice, and integrating reflective strategies into clinical curricula can mitigate anxiety, promote skill acquisition, and support the development of competent, confident practitioners. Experiential learning theory reinforces this approach, defining learning as a process whereby knowledge is created through the transformation of experience (Kolb, 1984). In clinical education, students engage in concrete experiences through direct patient care and skill performance. Their emphasis on observing skills before performing them reflects the importance of modeling in early learning stages, while their desire for feedback supports reflective and conceptual phases. Repeated practice enables active experimentation, as illustrated by students' progression from uncertainty to confidence. Experiential learning promotes self-directed learning, enhances critical thinking, and bridges the theory to practice gap (Hill, 2017; Lisko & O'Dell, 2010; McCarthy, 2010), aligning with the pedagogical goals of clinical education to develop competent, confident practitioners.

In addition to experiential learning, other adult learning theories provide valuable insights into the development of self-confidence. Knowles' theory of andragogy emphasizes the importance of self-direction, relevance, and experience in adult learning (Knowles et al., 2014; Merriam & Baumgartner, 2020). Students in this study demonstrated a clear need to understand the purpose of their learning and to engage in tasks that were meaningful and applicable to their future roles, which reflects these principles. While Mezirow's transformative learning theory

offers a framework for understanding how learners critically reflect and potentially shift their perspectives, it is important to note that transformative learning involves a profound change in worldview rather than incremental growth. Although some students may experience elements of transformation, such as increased confidence and evolving professional identity, the findings suggest that most participants underwent significant learning rather than deep paradigm shifts. For example, Callie's progression from uncertainty to confidence illustrates meaningful development enabled by experiential exposure and mentorship but does not necessarily represent the profound change characteristic of transformative learning (Kear, 2013; Mezirow, 1991).

To enhance self-confidence in clinical education, several improvements are recommended. First, clinical programs should integrate hands-on practice earlier in the curriculum, ensuring that students are not expected to perform tasks without prior exposure. Second, bedside nurses should be encouraged and supported to take on teaching roles, supplementing the efforts of nurse educators. Third, structured orientation and continuity in clinical placements can help students build familiarity and confidence. Fourth, mentorship should be prioritized, with preceptors trained to provide consistent feedback and emotional support. Finally, reflective practice should be embedded throughout clinical education to help students process experiences and recognize their growth.

In conclusion, self-confidence in nursing students is cultivated through experiential learning, mentorship, and structured support. The development of confidence is task-based, shaped by opportunities to practice clinical skills and receive feedback. These findings underscore the importance of aligning clinical education with experiential learning theory and other adult learning principles to foster competent, confident practitioners. Understanding and

applying these theories in clinical pedagogy is essential for bridging the theory to practice gap and preparing nursing students for the complexities of professional practice.

Informal Workplace Learning

Informal workplace learning is increasingly recognized as a cornerstone of nursing education, providing students with opportunities to acquire tacit knowledge and adapt to the complexities of clinical practice. Unlike structured classroom instruction, informal learning emerges organically through observation, peer interaction, and engagement with institutional systems. These experiences enable learners to internalize professional norms, develop confidence, and navigate the persistent theory to practice gap. Findings from this study demonstrate that participants relied heavily on informal learning opportunities to develop essential competencies, including physician communication, workflow management, and advanced clinical procedures such as blood transfusions and total parenteral nutrition (TPN) administration—areas that were often perceived as underrepresented in formal curricula. This reliance highlights the limitations of traditional pedagogical approaches and underscores the importance of experiential learning as a central component of professional preparation.

Participants' accounts illustrated that informal workplace learning was shaped by both supportive and constraining experiences that either facilitated or hindered learning. Supportive interactions, opportunities for observation and participation, and inclusion within the healthcare team enabled students to acquire practical knowledge and build confidence. In contrast, experiences of exclusion, limited guidance, or unclear expectations restricted access to informal learning opportunities and, in some cases, contributed to hesitancy and self-limiting behaviours. These findings position informal workplace learning as a conditionally accessible form of learning, dependent not only on learner initiative but also on the relational and cultural dynamics

of the clinical environment. As such, informal learning emerged as an experiential process shaped by everyday interactions rather than as a deliberate or structured educational activity.

The significance of these findings is reinforced by existing literature, which conceptualizes informal workplace learning as self-directed, intentional, and situated within practice contexts (Decius et al., 2019). In nursing education, this learning frequently occurs within the hidden curriculum—the social and cultural norms embedded in clinical practice that influence professional identity development (Chen, 2015; Day & Benner, 2015). Hafferty (1998) described the hidden curriculum as the implicit values and expectations conveyed through organizational culture, shaping how learners interpret behaviours and navigate hierarchical structures. Wenger's (2009) communities of practice theory further elucidates the mechanisms of informal learning, emphasizing participation and social interaction as central to knowledge acquisition. Similarly, Kolb's (1984) experiential learning theory and Knowles' andragogical principles (Knowles et al., 2014) highlight the importance of relevance, autonomy, and experience in adult learning. Together, these theoretical perspectives affirm that informal learning is not supplementary to formal education but foundational to professional development in nursing.

Although reflection is emphasized within experiential and adult learning theories, participants in this study did not consistently describe engaging in deliberate or structured reflective practices in relation to informal learning experiences. Instead, learning most often occurred through action, observation, and participation, with reflection remaining implicit rather than explicitly articulated. In this context, reflection appeared to function as a latent process influenced by the availability of support, psychological safety, and opportunities for dialogue. This finding suggests that reflection, while potentially enhancing informal learning, is neither

automatic nor guaranteed; rather, reflective engagement is shaped by the same contextual and relational conditions that determine access to informal learning opportunities. These findings highlight the need for educators and clinical leaders to recognize the pedagogical value of informal workplace learning and to intentionally support conditions that enable it. Strategies such as promoting mentorship, creating opportunities for guided observation and participation, and fostering psychologically safe environments where students feel encouraged to ask questions and seek feedback can strengthen informal learning processes. Embedding real-world tasks within formal instruction, fostering communities of practice, and incorporating structured reflective activities may further support the integration of experiential learning and help address the theory to practice gap.

In summary, informal workplace learning is not merely complementary to formal education but is foundational to the development of clinical competence. It enables nursing students to internalize professional norms, build professional identity, and adapt to complex practice environments through situated, experience-based learning (Cacciattolo, 2015; Decius et al., 2019; Lave & Wenger, 1991). The findings of this study indicate that access to informal learning is shaped by workplace relationships, team culture, and inclusion, underscoring the importance of intentionally supporting learning environments that promote participation, guidance, and dialogue. Recognizing informal workplace learning as an experiential and socially mediated process deepens understanding of how learning occurs in practice and why it may be either supported or constrained within clinical settings. By acknowledging and integrating informal learning into nursing curricula, educational programs can better address the theory to practice gap and prepare students for the realities of professional nursing practice.

Significance and Contributions of the Research to Nursing and Adult Education

This study addresses a critical and enduring challenge in nursing education: how to effectively use critical reflection to cultivate clinical judgment in undergraduate nursing students. In today's rapidly evolving healthcare landscape, novice nurses are required to make complex clinical decisions that directly influence patient safety and outcomes. The development of clinical judgment is therefore not only a pedagogical priority but a professional imperative. Despite widespread recognition of its importance, nurse educators continue to struggle with how best to support this skill development, particularly within clinical settings where students often find it difficult to integrate classroom learning with the realities of practice. The significance of this research lies in its response to this persistent educational challenge, situated within the post-COVID-19 context, which has further heightened expectations for graduating nurses to enter practice as confident, adaptable, and safe practitioners.

Drawing on the experiences of recent baccalaureate nursing graduates in Nova Scotia, this study contributes a learner-centred perspective to the literature on reflective practice and clinical education. While theoretical knowledge remains an essential foundation for nursing practice, the findings of this research demonstrate that the theory to practice gap cannot be understood solely as a deficit in formal knowledge. Instead, participants' accounts revealed the importance of other forms of knowing—experiential, relational, contextual, and informal—in shaping their clinical judgment and reflective capacity. Much of students' learning occurred within informal clinical systems through observation, role modelling, interpersonal interactions, and engagement with unit culture. These forms of learning, though largely unarticulated and unsupported within formal curricula, significantly influenced how students interpreted experiences, made sense of uncertainty, and developed confidence in practice. This insight

represents an important contribution of the study, highlighting the need to recognize and intentionally address the informal and often invisible dimensions of learning in clinical education.

The findings further suggest that while students often value reflective practice, their engagement frequently remains at a descriptive or emotional level, lacking the analytical depth required for transformative learning. This superficial engagement appears to stem not only from limited instruction in reflective frameworks, but also from clinical environments that prioritize task completion and performance over inquiry, dialogue, and psychological safety. Without explicit guidance and supportive learning conditions, students may struggle to critically examine their assumptions, biases, and decision-making processes, thereby limiting opportunities for deeper learning and professional growth. By illuminating these dynamics, this study underscores the need for educational approaches that extend beyond content delivery to include intentional facilitation of reflection within both formal and informal learning contexts.

This research contributes to nursing and adult education by encouraging a shift in educator mindset—from teaching knowledge to cultivating reflective capability within complex social environments. It offers actionable insights for nurse educators, curriculum developers, and clinical preceptors seeking to design learning experiences that are pedagogically sound, emotionally supportive, and responsive to the realities of contemporary practice. By foregrounding the role of informal learning systems, psychological safety, and multiple forms of knowledge in clinical education, this study supports the development of more resilient, reflective, and competent nursing graduates. While bridging the theory to practice gap is inherently complex, this research advances understanding of how critical reflection can be more effectively supported through intentional, relational, and contextually grounded teaching

practices, contributing to the ongoing improvement of nursing education and professional preparation.

Implications

The findings of this study carry important implications for educators, preceptors, and curriculum developers who support student learning in clinical environments. For educators, the results emphasize the need to teach reflective practice as an intentional, skill-based process rather than assuming students naturally understand how to engage in deeper analysis. Participants' reflections often remained descriptive, highlighting the need for explicit instruction in structured reflective models, guided questioning, and reflective prompts that help learners move toward interpretation and insight. Educators must also foster psychological safety within classroom and simulation settings by using inclusive, non-judgmental communication and by normalizing uncertainty as part of the learning process. These approaches support the development of self-awareness—an essential yet frequently missing component of clinical judgment—that helps students connect emotional responses and assumptions to their decision making. By modelling their clinical reasoning out loud and demonstrating reflective thinking in real time, educators can further support students in understanding how expert judgment develops. Additionally, findings suggest that educators should work to dispel misconceptions that critical thinking only occurs in acute care environments; rather, they must intentionally demonstrate how reflective judgment and analytical reasoning apply across diverse healthcare settings, including long term care and community practice.

Preceptors also hold a significant influence on students' confidence, learning, and professional identity formation. The variability in preceptor support described in this study indicates a clear need for thoughtful preceptor assignment and robust training. Matching students

with preceptors whose communication styles and teaching approaches align with learner needs can foster greater trust, continuity, and engagement. Preceptors require preparation in mentorship, inclusive communication, and constructive feedback techniques that promote psychological safety and affirm students' roles as legitimate participants in care. Because subtle behaviors—such as inviting questions, explaining clinical reasoning, and offering reassurance—substantially shape students' perceptions of belonging, preceptors must recognize the powerful impact of their day-to-day interactions. Incorporating brief, well timed debriefings and providing opportunities for progressive skill development can further enhance students' learning, especially when fatigue and cognitive overload make end of day reflection difficult. The findings also underscore the importance of preceptors understanding their role in shaping emerging professional identities, as the quality of mentorship can determine whether students experience confidence and growth or uncertainty and marginalization.

For curriculum developers, the findings point to a need for more intentional integration of reflective practice, psychological safety, and informal workplace learning into formal nursing curricula. Reflection should be scaffolded across courses, progressing from structured, faculty guided activities to more independent reflective tasks that encourage critical examination of assumptions, emotions, and patterns of thinking. Similarly, simulation activities and unfolding case studies should incorporate structured debriefings that support deeper analysis rather than mere description. Because participants relied heavily on informal learning—through observation, peer dialogue, and workplace immersion—curricula must recognize and leverage informal learning rather than treating it as incidental. This may include adding reflective assignments that prompt students to analyze informal learning moments, integrating real world tasks into coursework, or aligning course objectives with experiential and workplace-based competencies.

Curriculum design must also address student misconceptions about where critical thinking occurs by incorporating cases and learning opportunities across multiple clinical contexts. Finally, psychological safety should be embedded into course expectations, clinical guidelines, and assessment criteria, ensuring that all learning environments—classroom, simulation, and clinical—support open dialogue, questioning, and risk taking.

Collectively, these implications highlight that bridging the theory to practice gap requires more than simply increasing clinical exposure. It requires coordinated, intentional efforts across educational and clinical structures to cultivate reflective capacity, foster psychological safety, support professional identity development, and integrate the often-overlooked contributions of informal workplace learning. Such efforts are essential for preparing nursing students to transition confidently into practice and to deliver safe, evidence informed care within increasingly complex healthcare environments.

Limitations

Several limitations of this study must be acknowledged. As a qualitative study, the findings are based on a small, context specific sample of recent graduates from one geographic region, which limits transferability beyond similar settings. Recruitment was challenging, and as a first-time researcher, the intentionally small sample supported methodological rigor and manageable analysis. Participant accounts were shaped by individual experience and may not reflect broader trends across institutions or healthcare contexts. The reliance on self-reported data introduces the possibility of recall bias and social desirability bias, particularly when discussing challenges or perceived shortcomings in education. The exclusive focus on graduate perspectives also means that insights from educators, preceptors, and other stakeholders were not captured, which could have added depth and triangulation to the analysis.

A further limitation arises from the COVID 19 pandemic's influence on clinical placements. Several participants described shifts from acute care hospitals to long term care settings. While in person learning continued and supported concrete experience consistent with Kolb's experiential cycle, opportunities to apply psychomotor skills commonly associated with acute care, such as complex assessments and procedures, were reduced. This contextual constraint may have shaped how participants experienced the theory to practice gap and may have influenced confidence and perceived readiness for higher acuity practice. These conditions illustrate how external factors can shape reflective opportunities, skill application, and the findings reported here.

Despite these limitations, the study contributes to nursing education by illuminating how reflective practice, educator facilitation, and psychologically safe environments influence clinical learning. Future research should incorporate multiple stakeholder perspectives, examine outcomes longitudinally across practice transitions, and evaluate the impact of specific reflective strategies on clinical judgment in varied settings, including long term and community care. Taken together, these directions can advance a more coherent integration of theory, reflection, and practice and support graduates' readiness for contemporary healthcare.

Conclusion

This study explored the experiences of recent baccalaureate nursing graduates in Nova Scotia to better understand how reflective practice supports the development of clinical judgment and the integration of theory into practice. The findings underscore the importance of fostering meaningful reflection in clinical education not only as a pedagogical strategy, but as a critical component of professional readiness within complex and socially situated learning environments. While theoretical knowledge remains foundational to nursing practice,

participants' experiences revealed that clinical judgment is shaped through multiple forms of knowing, including experiential, relational, contextual, and informal learning that occurs within everyday clinical practice.

Participants highlighted the value of supportive learning environments, guided reflection, mentorship, and psychological safety in helping them make sense of clinical experiences. These elements were essential in enabling deeper reflection beyond description, allowing students to examine assumptions, emotions, and decision-making processes. The findings further demonstrated that much of this learning occurred through informal systems—such as role modelling, interpersonal interactions, and unit culture—which significantly influenced students' capacity to reflect and apply knowledge in practice. These insights contribute to a more nuanced understanding of how nurse educators can facilitate reflective practice in ways that acknowledge both formal curricular structures and the informal dimensions of clinical learning. The study also revealed persistent barriers to reflection and critical thinking, including time constraints, emotional stress, competing clinical priorities, and inconsistent guidance during placements. These barriers often limited opportunities for meaningful reflection and highlight the need for more structured, intentional, and supported approaches to reflective practice within nursing curricula and clinical education settings. Addressing these challenges requires educators to move beyond content delivery toward intentionally facilitating reflection within emotionally and cognitively demanding practice environments.

By centering student voices, this research offers practical and pedagogically relevant insights for nurse educators, curriculum developers, and clinical preceptors seeking to bridge the theory to practice gap. It emphasizes the need to recognize and engage the informal and relational aspects of learning while creating educational environments that support reflection,

professional identity formation, and resilience. Ultimately, this study contributes to nursing and adult education by advancing understanding of how reflective practice can be more effectively supported to promote the development of competent, confident, and reflective nursing professionals prepared for the realities of contemporary practice.

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Appendices

Appendix A: Recruitment Email

Appendix B: Invitation to Participate

Appendix C: Participant Consent Form

Appendix D: Sample Research Study Interview Questions

Appendix E: Research Ethics Board Approval

Appendix A

Recruitment Email

Hello _____,

My name is Christine Chisholm. I am a nurse educator with St. Francis Xavier Rankin School of Nursing. As a graduate student at St. Francis Xavier, I am conducting a research study as part of the requirements for a Master of Education degree.

The purpose of my research is to explore baccalaureate nursing students' experiences with reflective clinical practice by understanding their perspectives on the approaches that best support learning in clinical practice. I am interested in the learning that occurs during clinical practice education and how this impacts future practice as a registered nurse. I am seeking recent nurse graduates.

Participation in this study involves a one-to-one online interview, lasting approximately one hour. The Invitation to Participate and Participant Consent Form is attached to this email for your review.

Thank you for your time and consideration to participate in this study. If you are interested in participating in this study or if you would like more information, please contact me directly by email.

Christine Chisholm RN BScN CPN (c)
Saint Francis Xavier University
Rankin School of Nursing [REDACTED]

[REDACTED]

Appendix B Invitation to Participate

Project Title:

Preparedness for Practice: Baccalaureate Nursing Students' Perceptions of Reflective Clinical Practice in Rural Nova Scotia: A Qualitative Case Study

Researcher:

Christine Chisholm, Master of Education student
St. Francis Xavier University
[REDACTED]

Invitation

I invite you to participate in a research study to further understand the learning that occurs in clinical practice education and how this impacts future practice as a registered nurse.

This research study is a part of the requirements for my master's in education degree at St. Francis Xavier University in Antigonish, Nova Scotia.

Purpose of the study

The purpose of this study is to explore baccalaureate nursing students' experiences with reflective clinical practice by understanding their perspectives on the approaches that best supported learning in clinical practice.

What will I be expected to do and how much time will it take?

If you agree to participate in this study, you will be asked to participate in a one-to-one online interview using Zoom. The interview will consist of questions to explore your learning experiences that took place while you were an undergraduate nursing student. Specifically, I will be asking you to reflect on experiences during clinical placements and how, if any, it has impacted your current practice as a registered nurse. The interviews will be recorded and will last approximately one hour. At any time, you can request the recording to be stopped. Once I have transcribed the data, I will send your transcript so you can revise it for accuracy.

Will anyone know what I said?

I will be the only one who knows what you said. The information collected for this research study will be completely confidential and pseudonyms will be used. The interviews will take place privately. The information I collect will be labelled with a pseudonym and there will be no names included with any material. All information collected will be kept in a locked drawer and electronic information will be stored on a password protected computer. Data will be kept for two years following the completion of the study and will then be destroyed.

What if I change my mind and wish to withdraw?

Participation in this study is voluntary, and you can refuse to answer any questions without ending your involvement in the study. You may withdraw from the study at any time. If you decide not to continue participating in the study, all data gathered from you will be destroyed.

What are the potential benefits and hazards associated with participating in the study?

The potential benefits may come from reflections on your practice as a nurse and this may impact your future practices as a nurse. There are no known harms associated with participation in this study. However, there may be unknown harms.

Where do I get questions answered?

You can contact me or my supervisor:

Researcher:

Christine Chisholm

St. Francis Xavier University

Rankin School of Nursing [REDACTED]

[REDACTED]

Supervisor:

Dr. Carole Roy

Department of Adult Education

St. Francis Xavier University

[REDACTED]

Thank you for considering participating in this study. I look forward to hearing from you.

Christine Chisholm

Appendix C

Participant Consent Form

I have received a copy of the “Invitation to Participate” for the research project title “Preparedness for Practice: Baccalaureate Nursing Students’ Perceptions of Reflective Clinical Practice in Rural Nova Scotia: A Qualitative Case Study”.

I have had the opportunity to read the information provided and have had questions I may have had answered. I understand that this is a voluntary study and that my confidentiality will be always maintained as outlined in the “Invitation to Participate”. I understand that I may choose not to answer some questions and that I may withdraw from the study at any time.

I voluntarily agree to participate in this research study.

Name of participant _____

Signature of participant _____

Email _____

Date _____

Researcher:

Christine Chisholm

St. Francis Xavier University

Rankin School of Nursing [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

Please sign a copy and return it to me and keep a copy of your record.

Appendix D

Sample Research Study Interview Questions

1. Tell me about a typical clinical experience. What did you do first on your clinical research day? *Experience and behaviour question*
2. How did you feel about your clinical practice experiences? How do you feel about the amount of time spent in clinical practice? *Feeling question*
3. Would you describe what you think the ideal clinical experience would look like? *Opinion and value question*
4. Reflecting on your various clinical practice experiences, can you recall an experience that was meaningful? What approaches or practices enhance that experience? *Background question.*
5. Describe your experience with post conference debriefing following your clinical day? *Experience and behaviour question.*
6. How did your post conference experience support –or not--your learning? *Knowledge question*
7. Tell me about a time when you felt you learned something valuable in your clinical practice experience. *Knowledge question.* Tell me about a time when you felt not so great about your clinical experience. *Knowledge question*
8. How did your clinical practice education prepare you for your current practice? *Opinion and values question*
9. What might have prepared you for your current practice? *Opinion and value question*
10. What else would you like to share about your learning in clinical practice? *Knowledge question*

Appendix E

June 05, 2023

Christine Chisholm (Principal Investigator)

Dr. Carole Roy (Supervisor)

Rankin School of Nursing\Nursing

St. Francis Xavier University

ROMEIO File #: 26485

Project Title: Preparedness for Practice: Baccalaureate Nursing Graduates' Perceptions of Reflective Clinical Practice in Eastern Nova Scotia: A Qualitative Case Study

Dear Christine Chisholm,

The Research Ethics Board (REB) has cleared the above cited proposed research project for ethics compliance with the Tri-Council Guidelines (TCPS) and St. Francis Xavier University's ethics policies. In accordance with the Tri-Council Guidelines, your project has been cleared for one year. At the end of each year, the REB will ask if your project has been completed and, if not, what changes have occurred or will occur in the next year. This will be required each year following approval until the project is reported to be completed, up to a maximum of five years.

Renewal Due-2024/06/05

You are reminded of your obligation to advise the REB of any adverse event(s) that occur during this one-year period. An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s).

You are also reminded that all changes that might affect human participants must be cleared by the REB. For example, you must report changes in study procedures or implementations of new aspects in the study procedures. These changes must be sent to the undersigned prior to implementation.

On behalf of the Research Ethics Board, I wish you continued success in your research.

Sincerely,

Dr. Christine Lomore

Professor and Chair

STFX Research Ethics Board