Walking on Unstable Ground: Exploring Registered Nurses’ and Licensed Practical Nurses’ Experiences of Learning to Work Together using a Methodologically Plural Approach

by

Diane Butcher
B.N., University of Calgary, 1986
M.N., University of Victoria, 2013

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

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Abstract

My own experiences of disjuncture sparked questions related to how practical nursing education is situated within the larger nursing disciplinary landscape. On acute care nursing units, work relationships are changing between RNs and LPNs as new collaborative care models are introduced, creating ambiguity and confusion with increasingly overlapping scopes of practice. Gaps remain in knowing how RNs and LPNs experience changes in these intra-professional team contexts, and how patient care, nursing work, and nursing education may be influenced by these new collaborative models. This has been the foundation for the journey towards graduate study and this dissertation work.

In this dissertation I address the overarching research question: *How are registered and practical nurses’ experiences of learning to work together being organized by educational and work contexts?* This question consists of two sub-questions: 1) *What are the experiences of pre-licensure health professional students and educators learning to work in intra-professional teams?* and, 2) *How are institutional texts organizing post-licensure nurses’ experiences of learning to practice on intra-professional teams?* The first sub-question is addressed using the Joanna Briggs Institute (JBI) qualitative systematic review methodology to reveal what is currently known about how pre-licensure health professional students learn to work on intra-professional teams. The second question is approached using an institutional ethnographic analytic lens to explore how post-licensure nurses’ (RNs and LPNs) work is socially organized via educational, union, health authority, and regulatory texts and how this social organization impacts intra-professional relationships.
Taking a plural approach to knowledge construction allows for a multi-perspectival view of RNs and LPNs experiences and the role of educational and work contexts in shaping how they learn to work together. Incorporating methodologies as diverse as a JBI systematic review and institutional ethnography raises methodological tensions. Each has its own philosophical assumptions, reflecting particular strengths and limitations in the production of knowledge. The challenges of employing a plural approach are explored alongside new knowledge and possibilities for exploring and understanding how best to care for patients and educate students within complex, collaborative environments.
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Finally, I thank the nurses who stepped up to participate in this much-needed research. I continue to be inspired by the everyday nursing work that is being provided in extremely challenging contexts.
Dedication

To my husband Marty, and children Ashleigh and Mia – who patiently supported my many hours at the computer, and were always there for conversation and support when I most needed it – I could not have completed this journey without you all by my side.

To my parents, Bob and Hazel, who always encouraged the pursuit of post-secondary education as a means toward greater opportunities.

To my late grandfather, Reverend Dr. R.H. MacKinnon. I am inspired by stories of how Grandpa challenged the taken-for-granted as he preached in various churches throughout southern Alberta.

‘We are each blinded by our own perspective. Truth is always partial . . . we must create a new narrative, a narrative of passion and commitment, a narrative that teaches others that ways of knowing are always already partial, moral, and political’

Foreword

A revisiting of and reflection upon my embodied experiences as a practical nursing (PN) instructor while simultaneously enrolled in graduate school fundamentally underpins this dissertation (Butcher, 2013a; 2013b; Butcher & MacKinnon, 2015). Utilizing Dorothy Smith’s (1990) institutional ethnographic (IE) approach to inquiry as a lens, I appreciate how my everyday work experiences of chafing – the unsettled, alarming, and disquieting disturbances that were occurring within my being – could be interpreted as Smith’s notion of a disjuncture. As I noted in my Master’s project (Butcher, 2013a), I experienced this chafing as “personal tension as I struggled with teaching from a content-driven, skills-based curriculum with the goal of expediting nurses into the workforce” (p. 5). In conversations with other practical nurse instructors, it was noted how several did not want to teach certain courses, as they preferred not to teach theory. Further, pedagogically, there were personal tensions as leaders of the PN program were suggesting the development of standardized slide presentations, so that classes could be taught by ‘anyone’ in response to chronic shortages of instructors. Thus, “my tensions stem[med] from the awareness that certain pedagogical approaches, philosophical underpinnings, and/or theoretical influences from nursing literature were not prevalent” (p.5) within my PN teaching context. In addition, I was involved in discussions about how, as PN educators, we were going to accommodate the new, expanded, provincial PN curriculum, which many felt mirrored the old RN diploma program. Discussions centered around how instructors would teach the new skills for the expanded LPN scope of practice, while I wondered to myself how I could reconcile the competing conversations of expanding LPN scopes of practice, the baccalaureate degree as entry to nursing practice, and where (and if) practical nursing was intertwined within the discipline of nursing.
I will explore underpinnings and assumptions of IE more deeply below, and why it is a particularly relevant method of inquiry for my research but for now, it is these experiences of disjuncture that set the stage for this dissertation. As Smith (1987; 1996, 2005; 2006) argues, disjuncture occurs at experiential moments of contradictory or competing realities in experience. It is from this experience of disjuncture that questions were raised about nursing education. For me, IE grew to be a particularly influential lens to understand, validate, and extend my experiences of disjuncture, from which my Master’s project became one of querying how practical nursing education was discursively constructed and enacted in relation to the discipline of nursing. My experiences teaching in both baccalaureate and more recently, practical nurse contexts, created questions related to nursing disciplinary knowledge, educational silos, and how expectations for inter- and intra-professional collaboration in workplace contexts might influence expectations for how we teach future nursing students. Therefore, what began as graduate work (as an MN student), has now evolved into this dissertation.

This chafing has been further re-conceptualized throughout my graduate (PhD) education. It relates to tensions around teaching experiences not foregrounding how nursing students learn to be and know as a nurse (disciplinary knowledge and situated learning), but instead focus on (or being organized by) discourses of scopes of practice and skill differentiation. This disjuncture sets the stage upon which my empirical work (a JBI systematic review and an IE-informed study) is based. That is, my feelings of unsettledness relate to how professional nursing education is becoming eclipsed by various institutional discourses. Thus, this project focuses on how RNs and LPNs experiences of learning to practice together are organized by various educational and workplace texts. More specifically, I analyze intra-
professional learning between RNs and LPNs using two methodological lenses, as multiple ways to inform nursing education and disciplinary knowledge development.

This methodologically plural work consists of two planes of analysis - one plane involving the work (and related assumptions) related to conducting a Joanna Briggs Institute (JBI) systematic review and IE work; the other on the on-going critical analytic task of reflecting on how my work may reinforce or challenge ideas around evidence, truth, and taken-for-granted knowledge. So, it is among and within these two planes that I explore my experiences of disjuncture by investigating what is currently known about how students of various diploma and baccalaureate programs learn to engage intra-professionally, and how RNs and LPNs experiences of learning to practice are organized by various educational texts.

**Purpose and Research Questions**

The purpose of my dissertation involved the creation of three papers which explore intra-professional relationships among pre-licensure nursing students (in preparation for practice), as well as among RNs and LPNs working together in practice contexts. More specifically, my dissertation is framed by the following over-arching research question:

*How are registered and practical nurses’ experiences of learning to work together being organized by educational and work contexts?*

I have explored this phenomenon in a methodologically plural way, by utilizing two approaches of inquiry that are situated differently along a philosophical continuum related to knowledge production (Barnett-Page & Thomas, 2009; Bearman & Dawson, 2013; Crotty, 1998; Ellingson, 2009; 2011; Paterson, 2012; Saini & Shlonsky, 2012). These authors suggest that forms of primary research, as well as research synthesis, can be underpinned by
assumptions about knowledge across post-positivist, constructionist, and interpretive realms. It is by journeying along this continuum, and explicating the tensions, as well as the ontological and epistemological assumptions (views of what is and how we know) that are along this continuum, that I demonstrate how contested views of knowledge development can complement and extend understanding. A Methodological Plurality diagram (Appendix A) outlines the relationship among the overarching research question, sub-questions, methodological perspectives, and philosophical underpinnings. Thus, the methods of inquiry utilized for this work involve iteratively negotiating within and around diverse means of knowledge production and critique by utilizing various “angles of vision” (Thorne, 2016, p. 86).

To explore the phenomenon noted above, two sub-questions have been generated with corresponding methodological approaches. The initial approach is a Joanna Briggs Institute (JBI) qualitative review protocol with systematic review, exploring intra-professional learning experiences of students and their educators in preparation for practice. The second approach is an institutional ethnographic examination of the social organization of post-licensure RNs and LPNs learning to work together. The initial sub-question is:

1) What are the experiences of pre-licensure health professional students and educators learning to work on intra-professional teams?

This question entailed the completion of a Joanna Briggs Institute (JBI) qualitative systematic review protocol and subsequent systematic review (Butcher, MacKinnon, Bruce, Gordon, and Koning, 2015; Butcher et al., 2017). Situated within a post-positivist orientation, the purposes of a JBI review are to provide Best Practice guidelines and other supportive recommendations for practitioners at the point of care. Transparent, systematic, standardized,
and comprehensive procedures related to creating a focused research question; searching, screening, and critically appraising literature; extracting findings; aggregating/synthesizing findings; and creation of recommendations for practice form this highly structured approach that constitutes a JBI systematic review (JBI, 2013a; 2013b). Manuscript #1 below (Butcher et al., 2015) is the published JBI review protocol which utilized the JBI template for outlining how the systematic review was conducted. The second manuscript in this dissertation is the published JBI systematic review (Butcher et al., 2017).

The second sub-question addressed in this dissertation is the following:

2) How are institutional texts organizing post-licensure nurses’ experiences of learning to practice on intra-professional teams?

This third paper consists of an analysis (utilizing an institutional ethnographic lens) of RN and LPN interviews that were conducted as part of a larger study which began in September 2014 (MacKinnon, Bruce, & Butcher, 2015a; 2015b). This second sub-question emerged as I explored the nurses’ standpoints and their experiences of learning to work together within the larger study. Twenty in-depth semi-structured interview transcripts and audio-recordings of RNs and LPNs working in acute care were analyzed for this primary research study, in addition to pertinent texts and conceptual resources. This third paper is currently under review for publication. (In addition, I am second author on another submitted paper from the larger IE study). The end of this Foreword offers a more detailed overview of the chapters and manuscripts included in this dissertation.

**Background/context**

Previous work (Butcher, 2013a; 2013b; Butcher & MacKinnon, 2015) identified diverse perspectives on how practical nurse education is conceptualized throughout Canada.
Significantly, very little research is available regarding practical nurse education. Predominating discourses in the literature situate PN education within skilled worker conversations, providing employers with health care workers who are best ‘trained’ for various roles. Exploring changing work relationships between RNs and LPNs in acute care (MacKinnon et al., 2015b), has revealed shifting expectations for both RNs and LPNs. This shift is related to expanding LPN scopes of practice and the introduction of health care aides (HCAs) into acute care contexts. The recent introduction of unregulated health care workers (such as HCAs) into acute care (Island Health, 2014b) raises further questions regarding expectations for knowledge when HCAs are positioned as the eyes and ears of an institution. Further, it has been revealed that “discourses about shifting scopes of practice are framed as differences in technical skills and not as differences in disciplinary knowledge or clinical reasoning” (Butcher & MacKinnon, 2015, p. 8).

Educational silos exist between baccalaureate (RN) and diploma (PN) programs, which limits nurses’ understandings of others’ roles and scopes of practice when they graduate and are then expected to work in team contexts in acute care settings. As well, in my local area there is no bridging program for LPNs who wish to return to school to obtain a nursing degree. Tensions remain surrounding the conceptualization of practical nursing education in curricular documents, and whether it is underpinned by philosophical and theoretical orientations, and if so, how these may/not relate to the larger nursing disciplinary landscape. Therefore, within changing practice and educational contexts several questions arise such as, what factors influence the development of intra-professional collaboration, and what is known about the impediments or limitations that currently exist? How can one begin the conversation, and why now?
Situated within various constructed realities of PN education, are current changes to health care teams in acute care contexts in British Columbia. As noted in research exploring collaborative work experiences between RNs and LPNs (MacKinnon et al. 2015b), acknowledged nursing shortages have resulted in the introduction of new care delivery models and expanding scopes of practice for various health care workers. Work relationships are changing between RNs and LPNs as collaborative care models are introduced, which is creating ambiguity and confusion with increasingly overlapping scopes of practice. Significantly, changing work relationships that result from new care models have yet to be examined in Canada, and McGillis-Hall et al. (2006) argue for more evidence related to care delivery models and nurse staffing. Significant gaps remain in knowing how RNs and LPNs experience changes in how they provide nursing care, and how nursing education may be influenced by these changes in nurses’ expectations in acute care practice contexts.

Within this context of diverse ways of understanding practical nursing, unaddressed relationships with nursing disciplinary knowledge, and gaps in evidence related to changing nursing teams in acute care, are questions about how nursing students may learn to work together within (and in preparation for) such complexity and ambiguity. Realizing that there are also tensions around situating nursing education to be responsive to employer needs (perhaps at the expense of disciplinary understandings of nurse-patient relationships and nursing care), it is helpful and rigorous to approach my research in a plural way to encourage a continual critical, multi-perspectival view. Therefore, it is not the goal to provide a definitive final answer, but rather to explore this phenomenon from various standpoints, to raise new questions, while also critically reflecting on these same standpoints for their contributions to evidence and to enhance understandings about how nurses learn to care for
patients in team contexts. In the Afterword section, I offer further discussion of the research context and how my research evolved in a plural way.

**Overview of Manuscripts**

The results of this research are presented in three papers, two of which have been published; the third paper has been submitted for publication. The first paper (Chapter 1) is co-authored, as per the requirements of the Joanna Briggs Institute and their expectations for having a review team which includes primary and secondary reviewers and research librarian support. For purposes of completing independent work as a PhD student, I worked on this JBI protocol independently, and obtained feedback throughout the process from my supervisor as per the student-supervisory relationship for any dissertation work. This published manuscript (Butcher, et al., 2015) demonstrates the utilization of JBI processes and template for the creation of the review protocol for a JBI qualitative systematic review. This peer-reviewed paper outlines the necessary background, research question, definitions, specific search criteria, and standardized appraisal and extraction tools that were utilized for the systematic review.

The second paper (Chapter 2) outlines the completed systematic review (Butcher et al., 2017) published with the JBI. The processes involved in conducting and writing this systematic review were supported by templates and computer-based tools (CREmS and QARI) provided by the JBI. Although this paper was co-authored (as per the requirements of the JBI), I did this work independently, as I organized and conducted the review, with my supervisor as secondary reviewer.
The third paper (Chapter 3) is under review for publication. This paper reports findings from an IE-based exploration on how nurses’ learning to work together is being organized by various texts and conceptual resources.

The Afterword consists of a discussion of the significance and implications of both the plural methodological process and the knowledge generated by my research project as a whole. In addition, suggestions for future directions for researchers, educators, and policy makers are provided.

**Overarching Methodologically Plural Approach**

For purposes of this dissertation, I realize that I am far - very far - from the detached observer; rather I have been embedded within numerous life experiences while constructing, as well as being constructed by, the language shared by many. Vast experiences across clinical and educational contexts in nursing have significantly impacted how I make sense of the world, in addition to my own assumptions, beliefs, and attitudes – my mental model (Greene, 2007). I acknowledge the relationship I had with my research endeavor and how I began with questions from a certain socially-embedded place. Most significant for informing my choice of research questions, were my personal experiences of teaching baccalaureate and practical nursing students. It is noteworthy that my dissertation research grew out of experiences in these domains and the questions and tensions that arose, particularly within practical nurse (diploma) contexts. As Greene (2007) suggests, “all social inquiry is conducted from within the inquirer’s particular way of seeing, hearing, and understanding the social world” (p. 66). This awareness of my historical and contextual situatedness while completing graduate studies, stimulated further interest in reflecting on how I could somehow integrate or reflect on relationships between a Joanna Briggs Institute systematic review and a
primary research project. How might I reconcile two approaches to knowledge and understanding within my larger dissertation landscape?

An iterative approach to research provides a means for learning through examination of phenomena from more than one standpoint. Greene (2007) suggests that social inquiry is effectively served by researchers’ “intentionally and thoughtfully employing the full extent of their methodological repertoire” (p. 53) to address complex social issues. The generative potential of a plural approach to research can bring together various partial views about a phenomenon; a conversation from which new understandings, new research questions, or differences and tensions can be revealed. Further, the complexity of social research often benefits from a research purpose which generates more than one research question; each examining one facet of the phenomenon utilizing a particular lens or methodology (Greene, 2007). Here, the overarching goal is one of inviting multiple ways of understanding or knowing to offer possible answers, in addition to generating further questions.

Therefore, I have brought together two empirical papers (the systematic review and IE analysis) in the Afterword oriented as a philosophical inquiry. This supports the reciprocal dance of science and philosophy as a means of furthering understandings and raising new questions about intra-professional relationships (Grace & Perry, 2013; Pesut & Johnson, 2008). I explore the findings from each sub-question in relation to the overarching research question, and how they contribute to nursing knowledge in both complementary and contested ways. Utilizing a philosophically-orientated stance, I will reflect on the methodological locations and assumptions of these two research endeavors in the Afterword. I will discuss the significance, limitations, and challenges of undertaking a plural approach to
a research project. Below, I provide an overview of philosophical inquiry as a way of situating findings from a plural research project.

**Philosophical inquiry as a way of situating findings.** Pesut and Johnson (2008) suggest utilizing philosophical inquiry as a means of challenging or refining evidence, integrating facts with ideas, and offering a place that supports the reciprocal nature of scientific and philosophical knowing for informing nursing education and practice. Grace & Perry (2013) argue for philosophical inquiry in nursing, as empirical methods are important in providing us with data. But in the absence of ongoing philosophical scrutiny about the place, role, and limits of these data, they (the data) are not likely adequate to answer the broader existential meaning and possibility questions that attend human lives. (p. 65)

As McIntyre and McDonald (2013) reiterate in their argument for a framework of philosophical interrogation, “philosophical inquiry does not lead to one correct answer but enables the articulation of various views of knowledge and therefore of nursing practice” (p. 12). With philosophical inquiry, I can journey with realities that are plural and changing. I also realize that inquiry with multiple perspectives allow for learning from each other; it assists with engaging with difference or tensions; and allows one to consider multiple/divergent sources of evidence as no single perspective is exhaustive in creating complete understanding or truth. Further, methodological plurality provides an opportunity to move beyond divisions created by paradigmatic orientations toward science and knowledge. Risjord (2010) argues that it is inappropriate for the discipline of nursing to align knowledge in paradigmatic ways, as nursing problems are “most effectively approached with a plurality of methods, methodologies, theories, and value orientations” (p. 202). My plural approach
supports an understanding of knowledge as a web rather than a pyramid, where various theoretical perspectives are mutually supporting in helping to maintain the entire web of knowledge. As well, coherence among ontology, epistemology, and method (of each research approach) provides justification of each approach within the larger web or quilt of knowledge (Risjord, 2010).

Therefore, this opportunity for scrutiny of the plural research design helps to deepen understandings of the complexities surrounding intra-professional education, in addition to raising critical questions and areas for further empirical and philosophical inquiry. Below, I introduce each research perspective utilized for each sub-question, including the philosophical assumptions of each realm.

**Methodologies for Addressing Two Research Sub-questions**

**Literature review – JBI qualitative systematic review.** As outlined above, the following research sub-question was addressed through this JBI qualitative systematic review:

1) **What are the experiences of pre-licensure health professional students and educators learning to work in intra-professional teams?**

**Background.** Various methodologies are currently available to conduct systematic reviews of research literature (Hannes & Lockwood, 2012; Holly, Salmond, & Saimbert, 2012; Paterson, Thorne, Canam, & Jillings, 2001; Saini & Shlonsky, 2012; Sandelowski & Barroso, 2007). Meta-analytic approaches towards synthesizing quantitative research (addressing the effectiveness of interventions) have been developed by various organizations such as the Cochrane Collaboration (2014), Campbell Collaboration (n.d.), and the Joanna Briggs Institute (JBI, 2013a; 2013b; 2014). However, there is increasing interest in pursuing
the development of qualitative evidence syntheses to provide evidence related to questions of appropriateness, feasibility, and meaningfulness (Joanna Briggs Institute, 2013b), and under what circumstances and contexts interventions may/may not be effective (Dixon-Woods et al., 2005; Saini & Shlonsky, 2012; Hannes & Lockwood, 2012).

Reviewing the literature (Dixon-Woods, et al., 2005; Dixon-Woods, Fitzpatrick, & Roberts, 2001; Hannes & Lockwood, 2012; Holly et al., 2012; Paterson et al., 2001; Polit & Beck, 2012; Saini & Shlonsky, 2012; Sandelowski & Barroso, 2007) regarding qualitative systematic reviews reveals various tensions and identifies questions which should be addressed prior to deciding which particular methodology to adopt for conducting a qualitative synthesis. Areas suggested to consider include the nature of the question, underlying epistemological and philosophical concerns, expertise of team members, and resources available to assist with completion of the review.

While many systematic review methodologies share the common characteristics of being systematic, transparent, and comprehensive, there are also differences in methodologies that represent differing epistemological perspectives, analytical understandings, and expected goals or outcomes of a particular methodology. Thus, while the focus of my literature review is to undertake a JBI systematic review, it is also significant to appreciate that there are other, equally valid and important methodologies for undertaking a comprehensive and systematic review. Below, I briefly outline the philosophical underpinnings of the JBI approach, to highlight its particular location within the systematic review landscape.

**Philosophical assumptions and rigor.** Previous discussions (Butcher, 2015) outlined the philosophical underpinnings and tensions surrounding synthesizing qualitative research utilizing the JBI approach. As noted, within the frame of reference of JBI, knowledge is
assumed to be somewhat stable and objectively real, in the sense that it can be found (through comprehensive, transparent, and reproducible means) through detailed processes during the construction of a JBI protocol. For example, the extensive, comprehensive, and transparent searching processes (utilizing numerous databases) as required for a JBI review is suggested to find ‘all’ of the literature on an identified topic. This requirement is to prevent presumed bias of the researcher/team characteristic of other types of reviews in which search criteria and processes are partial and not transparent, leading to researchers only focusing on research that supports a certain stance or opinion (JBI, 2014). Thus, I see assumptions of knowledge within a JBI approach to include that of knowledge being a relatively stable, truthful commodity, external to oneself, that can be found (through systematic, transparent and comprehensive search processes), pooled and aggregated or synthesized, while the researcher is expected to serve as a relatively neutral collector and screener of primary research literature. JBI leaders (JBI, 2014) note how reviews should be replicable, and that various researchers should be able to complete the same searches, pooling, and analysis, and thus produce or reach similar conclusions. Thus, there seems to be an assumption that the researcher’s position in terms of a JBI review is quite neutral, in that adherence to JBI protocol and tools will satisfy or maintain rigour while preventing or minimizing bias with a reviewer. As stated in the JBI Reviewer’s Manual (2014), “JBI advocates for, and expects standardization in, systematic review development, as part of its mission to enhance the quality and reliability of reviews being developed across an international collaboration” (p. 13).

As well, JBI (2014) leaders outline how various qualitative methodologies (such as ethnography, grounded theory, phenomenology, action research, and discourse analysis) can be combined within a qualitative systematic review, as the findings are pooled and therefore
are assumed to be an integration or analysis of qualitative data coupled with the primary researcher’s analytic lens (QL methodology). This, JBI leaders argue, retains the necessary elements of the original study and the methodological lens within which it is situated. JBI leaders note this as follows in the Reviewer’s Manual (2014):

[T]he traditions of the methodology associated with a particular paper are considered to be embedded within the findings, rather than distinct to the findings. This implies that when a finding is extracted, the perspective or context that the author intended for the finding is not lost but embedded in the extraction. (p. 18)

Situated also within a transcendental, Husserlian philosophical perspective (JBI, 2012), aggregation of qualitative findings is also thus supported by the presumed intersubjective stance of the systematic review team, which includes minimal interpretation or neutral aggregation of findings. It is noted in JBI documents (JBI, 2012) how systematic reviewers must bracket their pre-understandings of phenomena while engaged in the review process. As noted by the JBI (2012), the goal of a JBI qualitative review is to reveal “universal essences of meaning; preserve intended meaning of the text; [and] provide useable findings” (slides 53 & 54). Thus, commonalities of experience (as embedded in the findings of the primary research studies) is assumed to be maintained throughout the aggregative process. The reviewer utilizing a JBI approach does not seek to re-interpret primary researcher’s findings, but to pragmatically synthesize findings to make evidence usable and practical for those at the point of care.

As Duranti (2010) argues, Husserl’s perspectives regarding inter-subjectivity prevents a subjective-objective dichotomy, by providing a balance between personal and universal views about reality. Duranti reiterates how Husserl “wanted to find a way to reconcile the
intersubjective quality of human experience with its subjective foundation” (p. 10). Cohering with a Husserlian (descriptive phenomenological) approach is a belief in universal essences in meaning, which would align with pragmatist expectations (as well as transferability) for synthesizing findings for use as Best Practice guidelines in practice or to inform policy decisions. This supports the pragmatist orientation towards production of usable, broadly accessible best practice documents for practitioners (Hannes & Lockwood, 2012). Tufanaru (2013) further argues that “the goal of transcendental phenomenology is to provide absolute knowledge, descriptions of essences understood as universal a priori necessary characteristics” (p. 39) of a phenomenon, which also serves an orientation towards creating various Best Practice documents and guidelines.

It is significant to note, however, that other philosophers, including Heidegger, did not agree with the tenets of reducing experience to decontextualized, universal essences; this stimulated the development of hermeneutic or interpretive approaches to phenomenology (Munhall, 2013; Tatano Beck, 2013; Stanford Encyclopedia of Philosophy, 2016). Munhall stresses the significant differences of these phenomenological approaches to knowledge, where descriptive phenomenology focuses on …themes, essential structures of an experience, which can be considered universal. Interpretive phenomenology seeks to understand the meaning of experience, the meaning of being human within varying situated contexts of being; the particular and the differences, and how this translates into changing practice to be more authentic to the experience. (p. 152)
Therefore, the approach of the JBI leaders is to create systematic reviews of primary research with the somewhat contested assumption that universal essences of experience may be found, aggregated, and presented as *Best Practices* across various contexts.

**Method of Inquiry for Second Sub-question - Institutional Ethnography**

In this study, I focused on RNs and LPNs experiences with their pre-licensure nursing education and its impact on working together post-licensure within health care teams. This was an analytic thread from a larger study that explored changing work relationships between RNs and LPNs in acute care (MacKinnon, et al., 2015a; 2015b). Interview data were analyzed utilizing an IE lens. More specifically, this research focused on the second research sub-question outlined below:

2) *How are institutional texts organizing post-licensure nurses’ experiences of learning to practice on intra-professional teams?*

This research involved conducting 20 interviews (10 RNs and 10 LPNs); I completed and/or participated in 19 interviews over two hospital sites (additional details are presented later). The focus of my second sub-question evolved from analyzing interview data from the larger study and related texts to examine how pertinent educational and related regulatory texts and discourses intersect with and organize nurses’ work in acute care practice settings. Further, my analysis revealed how various institutional (educational, union, regulatory, governmental, and health authority) texts and resources are organizing how nurses learn to work on intra-professional teams. Manuscript #3 presents this research and findings, which has been submitted for publication and is currently under review.
Philosophical Underpinnings of Institutional Ethnography (IE)

Dorothy Smith (1987, 1990, 2005, 2006) offers an alternative to traditional sociological ways of looking at the world, through the development of Institutional Ethnography (IE). Focused on exploring the experiences of everyday/evverynight work (work as embodied; requiring effort and time; occurring over space and time; and connecting us with others in social relations), IE allows for an exploration of how local work experiences are organized by discourses and institutional work processes (Campbell & Gregor, 2008; DeVault, 2006; Smith, 1987, 1996, 2005, 2006). These processes and enacted discourses extend well beyond the local setting, thus creating generalizing effects and marginalization of various individuals and groups. Rooted in feminist theory and influenced by Karl Marx, Smith (2005, 2006) argues for a theoretical approach to empirically explore how things are happening in the world.

DeVault (1996) discusses how Marx’s materialist approach to work (as enacted locally and organized beyond local settings) serves the basis for Smith’s extension of Marx’s ideas towards a more expansive notion of work. IE is also rooted in feminist theories, as Smith’s work in the ‘60s arose from her personal experiences as a woman during the rise of feminism during this decade and her personal, situated experiences as a single mother and lone female professor in a department of Sociology (Smith, 1987). Thus, IE can assist to explore the embodied experiences and perspectives of those who are marginalized or minimally represented in various social contexts. As Smith (1987, 1990, 2005, 2006) and others (Bisaillon & Rankin, 2012; Campbell & Gregor, 2008) argue, IE is inherently political and situated, as a particular standpoint is chosen (often of marginalized or under-represented individuals) from which the exploration evolves and extends. As described by Bisaillon and
Rankin (2012), “standpoint is a social position within the bodily experiences, relevancies, and everyday knowledge of people in a designated group or social position” (p. 2).

In an IE inquiry, a particular standpoint is taken in order to begin to understand the everyday work of a group of people in a social context. Thus, an IE inquiry starts on the ground in material practices with people, not from a theoretical domain (MacKinnon & McCoy, 2006). Smith argues for a social ontology— that is, people engaged in everyday work with others which includes putting into practice various texts and resources as part of their work. It is the nature of these texts and work processes, that Smith (1987, 2005, 2006) argues control or rule the very social relations that people engage in with their work- and that these texts and work processes produce generalizing effects over various work contexts (have translocal effects) that are the focus of IE exploration. Inherent to these translocal, generalizing processes and texts is the idea of power—that is, how power circulates within and among these ruling relations (MacKinnon, 2012; Rankin & Campbell, 2009; Smith, 1987, 2006) which serve to control and organize people’s work. Put another way, Rankin and Campbell (2009) suggest that “the researcher observes and talks to people to identify ‘clues’ in the local setting that can be followed to track and map how people are linked together in chains of activities connecting them with others across time and geography” (p. 3). It is discovering these chains, with their processes and enacted discourses, which helps to show how everyday work is socially organized and experiences are shaped.

Taking a particular standpoint often begins with moments of chafing or disjuncture, or as Rankin and Campbell (2009) note - a “yucky feeling” (p. 10) - where contradictory realities create disjunctures in experience from which an initial problematic to investigate is launched. For me, this yucky feeling began while teaching in a practical nurse program where
my previous experiences as a nurse were contradictory to my teaching experiences in my current domain. Thus, this began for me a journey in investigating not only the literature surrounding practical nurse education in Canada (as a Master’s student) but moving on to participate in our current research by utilizing an institutional ethnography lens to study the experiences of RNs and LPNs from their standpoint within acute care contexts.

In contrast to my discussion regarding JBI systematic reviews above, Smith (1987, 2006) does not call for a prescriptive, highly standardized, protocol-driven approach to inquiry. Rather, Smith denounces referring to institutional ethnography as a methodology, as she is concerned that by doing so researchers will expect or adopt prescriptive, rule-bound ways of conducting IE research which Smith insists constrains IE inquiry.

**Assumptions of IE.** Similar to the JBI systematic review methodology discussed above, institutional ethnography is also an empirical approach to inquiry (DeVault, 2006). IE focuses on observing the “technologies of social control” (DeVault, 2006, p. 294) and how these technologies are textual, discursive, and material (Isupport12, 2009; Smith, 2006). However, knowledge is embodied in people’s everyday work and social in nature, with people *doing things* as they engage in work in social contexts (Isupport12, 2009; Smith, 1987, 2005, 2006). Institutional ethnography focuses on explicating ruling (power) relations by studying intersecting work processes, as work activities are fundamental to social life (DeVault, 2006).

Various philosophical and theoretical influences underpinning IE include feminist theories, a Marxist materialist approach, and post-structuralist views on discourse (including Foucault’s discussions regarding power, truth and knowledge). Significant to an IE approach (in contrast to the JBI approach discussed earlier), IE began out of Smith’s (1987) embodied
experiences as a woman in the ‘60s. Her own situated and bifurcated experiences (between single parent and sociology professor) during a historical period of shifts in the women’s movement created a need to explicate women’s experiences as a site of knowing. Although there are various forms of feminist theory (Kohli & Burbules, 2013), basic tenets characteristic of their influence in IE include the need to give voice to those marginalized; moving away from patriarchal and objectified ways of knowing; recognizing knowledge as politically, socially, and historically situated; exposing structures of power and authority; and critiquing traditional approaches to science (truth, objectivity, and neutrality). Thus, IE’s focus on beginning in the everyday experiences of not only women, but any particular group of people whose experiences are not predominantly noted, can be seen as rooted in Smith’s (1987, 2005, 2006) personal experiences and subsequent development of IE’s approach to inquiry.

Focusing on the role of texts also allows for examination of intersections between power, knowing, and discourses that is characteristic of post-structuralist ideas, including Foucault’s (1976) discussions surrounding claims to truth. An IE approach, building upon Foucault’s conceptualization of power/knowledge, can assist in revealing relationships between truth production and diffuse power relationships. According to Foucault (1976), discourses of truth circulate and exercise power, and Foucault calls for an ‘on-the-ground’ examination of how this occurs:

Let us ask, instead, how things work at the level of on-going subjugation…we should try to discover how it is that subjects are gradually, progressively, really, and materially constituted through a multiplicity of organisms, forces, energies, materials,
desires, thoughts, etc. We should try to grasp subjection in its material instance as a constitution of subjects. (p. 233)

Smith (2005) argues that Foucault locates discourse externally as systems of knowledge and “as an order that imposes and coerces” (p. 17) individuals. In IE, Smith suggests that people participate in discourse; power is enacted in observable forms of social interactions. Smith (1990) asserts that Foucault’s notion of discourse does not address individual agency, and suggests that in IE, “power is understood as arising as people’s actual activities are coordinated to give the multiplied effect of cooperation” (p. 70).

As defined by Smith (2006) texts are “a kind of document or representation that has a relatively fixed and replicable character…that allows them to play a standardizing and mediating role” (p. 34). Texts, according to Smith (1987), are the “primary medium of power” (p. 17) which create abstracted, generalized knowledge across multiple work contexts. Texts are often identified and utilized as part of daily work, which serve to initiate or frame certain work processes, subsequently creating textually-mediated work processes (Smith, 1987, 2006). For example, in our RN-LPN study (MacKinnon, et al., 2015a; 2015b), RNs utilize standardized care plan forms (texts) and describe their work of care planning (completing the form), and enacting institutionally-sanctioned patient care planning. Smith (1987, 2006) further argues that ruling of individuals’ consciousness occurs through the organized complexes of various institutions (such as governmental, legal, business, financial, educational, or professional) which objectify and de-personalize individual experience. This concept of ruling relations (Smith, 1987) “creates alienation of individuals from their bodily and local existence” (p. 81) and textually-mediated work processes reflect, and become the means by which these ruling relations exert their effects/power.
Participants. RNs (10) and LPNs (10) were recruited via purposive sampling from two acute care hospitals located on Vancouver Island, and included nurses currently providing care on acute in-patient units. Acute medical-surgical units were identified by the health authority at two hospital sites with healthcare team configurations (RN and LPN; RN-LPN-HCA) pertinent to the research question. In addition, these units had introduced a new care model two years’ prior, which resulted in new healthcare teams. Five RNs and five LPNs were interviewed from each hospital site for a total of 20 interviews. All interviews were audio-recorded and transcribed verbatim. A brief overview of the study is noted below; further details are presented in Chapter 3.

Data collection methods. Interviews for this IE-informed study were conducted with nurses during the fall of 2014. Initial interview questions are noted in Appendix B. Observations of nurses at work were limited to attendance at two interdisciplinary structured team report meetings and tours of the two hospital sites. The original audio-recorded and transcribed interviews, plus field notes, reflections, and team meeting notes, presentation materials, analytic notes and various texts and resources constituted data that were analyzed for this study.

Data Analysis. Audio-recorded interviews and transcripts were uploaded into NVivo© (QSR International) to assist with data management. An IE lens was utilized for the analysis of educational threads and questions from the interviews with nurses. Since IE is an emergent design, transcripts and audio-recordings were analyzed for traces of how nurses’ prelicensure educational experiences were being socially organized in their local setting via texts and various conceptual resources.
**Rigor and IE.** Institutional ethnography begins in the material everyday work of people, thus avoiding a “conceptual distance” (p. 55) that Smith (2005) argues is the nature of mainstream sociological investigations. Thus, people are viewed as the experts in their own lives and are not abstracted from their material, everyday experiences. For the researcher, the goals are to explore, discover, and map how people’s everyday work is constrained and organized by social processes which are mediated by texts across multiple settings.

My active participation in this research (interviewing 10 nurses at one site; observing/assisting with 9 interviews at the second site; observing nurses engaged in their work; writing on-going field/reflective notes and actively engaging in the analysis of transcripts with the research team for other analytic threads) was crucial for me to learn data analysis via an IE lens. Thus, revealing various work processes (by tracing texts and conceptual resources that frame nurses’ work) reveals how enacted discourses standardize and replicate practices across multiple settings. As outlined by Campbell and Gregor (2008) “generalizability in institutional ethnography relies on discovery and demonstration of how ruling relations exist in and across many local settings, organizing the experiences informants talk about” (p. 89). Thus, truth begins and remains situated within the real work of people.

Assessment of rigor of qualitative work remains contested. However, Rolfe (2006) and Sandelowski (2015) offer insights into what might be thoughtful approaches to issues surrounding rigor, both for an IE inquiry and the larger, methodologically plural approach of my research. This is discussed further below.

**Rigor and Methodological Plurality**

While rigor was addressed within the context of both a JBI qualitative systematic review and an institutional ethnography, it is also important to address rigor as it pertains to
the more global project of methodological plurality, upon which this dissertation work is based. Rolfe (2006) suggests that it is futile to attempt to construct frameworks or predetermined criteria for quality assessment of qualitative research. Sandelowski (2015), concurs, rejecting standardized checklists as a means for quality assessment of qualitative research; rather calling for a more aesthetic approach and the treatment of qualitative research as art forms. Hence, criticism surrounding qualitative research involves judgments of taste - “a judgment not only about the quality of objects to be appraised but also about a person’s ability to appraise” (Sandelowski, 2015, p. 87) and involves drawing upon ones’ past knowledge about an object to judge its value.

Further, readers of research may belong to various taste cultures (Sandelowski, 2015) which frame their informed judgments surrounding research appraisal. Therefore, I would consider my proposed methodological foci as belonging to various taste cultures, including those from the JBI systematic review realm, those who engage in IE work, and those who write critical discursive analytic literature (authors who utilize various philosophical and/or theoretical perspectives to explore how societal power relations are established or reinforced through language). Each taste culture may have different views regarding the presentation of research, and prioritize different elements. As a student, I continue to engage with members (and members’ resources such as publications) of various taste cultures, most notably with my supervisor and committee members, who have critiqued my work and provided valuable feedback as I have proceeded through this work.

As a student and novice researcher, there are also ways that I can contribute to rigor in my dissertation work. Learning about each taste culture, continuously reflecting on my place as a situated, partial knower, and appreciating “reader/writer/text interactions” (Sandelowski,
2015, p. 90) as significant in making taste judgments, assist me in conducting and writing different methodologically-informed papers that are situated within various taste cultures.

**Ethical Considerations within a Methodologically Plural Research Design**

**JBI systematic review.** For the work addressing the initial sub-question, it was not necessary to obtain ethical approval, as this was secondary research of previously published literature in which ethical approval was noted for each individual study, and participant confidentiality and anonymity was noted to be maintained by the authors of the primary research studies. Appendix C contains the Ethics Exemption Letter for this systematic review.

**IE-informed inquiry:** Ethical approval was obtained for the original RN-LPN research study (Appendix D), and I assisted with the development of the ethics application for submission.

**Limitations**

Along a continuum of philosophical perspectives about knowledge and knowing, rather than seeing each methodology as having limitations, I think about each as producing partial knowledge. They each offer one lens (of many) to view a particular sub-question, contributing to new understandings and generating new questions. Rather than producing the *final word* or final truths regarding my overarching research and sub-questions, I recognize and appreciate the significance of *how* examining questions from various perspectives can contribute to probable truths and tentative ideas “arrived at using multiple angles of vision” (Thorne, 2016, p. 86), and are subject to change with ongoing inquiry.

However, some limitations to my research are important to note. The JBI review was produced from eight primary research articles, and only one of these articles involved nursing
students and educators. More primary research specific to RN-LPN student learning is needed, in order to consider how the history and contexts of other health professional programs and groups (such as occupational therapy, physiotherapy, or dentistry) may be impacting current findings. More data from educators is important for future studies, as in this JBI review most data in the primary studies are from student participants.

In terms of the IE analysis, observations of nurses at work were limited, and only two sites were included in the study. A more extensive IE exploration (including prolonged observations and/or interviews with HCAs and nursing instructors) could provide richer data to further inform intra-professional learning relationships. Finally, those who support a paradigmatic perspective toward theory and knowledge production may find my plural approach contestable. However, as noted above, I am drawing upon Risjord’s (2010) argument for viewing knowledge as a web, with numerous strands (supported by various theories and philosophical perspectives) intersecting and supporting the entire web. Significantly, Risjord argues, a methodologically plural approach provides answers to various research questions, while also stimulating new questions for inquiry.

This dissertation offers evidence of my journey as a student, nurse, and novice researcher, who has experienced educational disjunctures resulting in significant questions about how nurses are learning to work together, as well as disturbing the notion of why they must learn to work together. My hope is that addressing complex research questions from plural perspectives will generate new possibilities, create new questions, disturb assumptions and realities, and ultimately stimulate discussions regarding how students, educators, and nurses learn to collaborate in complex healthcare environments, as well as how discursive constructions influence expectations for collaboration. In the Afterword, I will specifically
discuss the significance, challenges and implications of this research project, in terms of both the processes involved in conducting the research, and the findings that were generated. Below, is a brief discussion of the significance of this project in more general terms.

Significance

Findings from this research are significant for me personally as well as for professional reasons. As noted earlier, this project evolved out of my personal, embodied experiences and knowing/not knowing, as I experienced moments of disjuncture while teaching in a practical nurse program. As I continued with my learning in graduate school, the complexity of the questions raised (acknowledging my own positionality in it all as a baccalaureate-prepared nurse) aligned with many philosophical and theoretical ideas I was reading and discussing. So much resonated with me, especially notions of working among competing realities; noting how various feminist lenses can expose challenges to how women know (and come to know); and how nurses continue to be marginalized in health care contexts. Coupled with work in examining nurses’ experiences in changing acute care contexts (where care models are introduced in conjunction with health care teams and expectations for collaboration), it seemed relevant to focus on a plural approach to research. Here, I could be situated in the realm of two competing realities (sets of assumptions), each contributing knowledge about intra-professional teaching and learning. Further, the question of where knowledge resides can be explored within a plural project, to highlight the different locations (within published articles and within nurses’ everyday experiences) that are foregrounded within a JBI review and an IE.

As we in health care continue to experience on-going discussions regarding worker shortages, care model reform, expanded scopes of practice, economic constraints, and
collaborative practice, I find myself increasingly cognizant of how the predominating buzzwords, and their associated discourses, are taken up as ‘real’; however, while working within the realities created by these discourses, we can also disturb them through raising the questions, and having the conversations, that have yet to be put forward. The knowledge created by the findings of my study provide such partial understandings and are significant for nursing education and disciplinary leaders. Performing and reflecting upon plural research unravels the taken-for-granted realities, to reveal how we can be held in ways of being and working that constrain (and reinforce) predominating realities about how we know nursing.
Chapter 1


Review Title

The experiences of pre-licensure or pre-registration health professional students and their educators in working with intra-professional teams: a systematic review of qualitative evidence protocol

Reviewers

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Review question/objective

The aim of this review is to identify the experiences of pre-licensure or pre-registration health professional students and their educators of intra-professional teams.

The objectives of this review are:

1. To identify the experiences of pre-licensure or pre-registration health professional students about learning how to work in intra-professional teams.
2. To identify the experiences of health professional educators about teaching intra-professional collaboration across categorical and/or regulatory boundaries of professional groups.

The specific question for this review is:

What are the experiences of pre-licensure health professional students and educators learning to work in intra-professional teams?

**Background**

Nursing education and practice are influenced by the complexities inherent in the need to provide professional care to patients, families and communities in varying contexts across the globe. While numerous initiatives under the umbrella of health care reform (such as interprofessional practice and collaborative practice) are addressed in nursing literature, there has been less attention paid to exploring relationships between categories of nurses (such as registered nurses and licensed practical nurses) who are expected (through regulation and discourses of intra/interprofessional practice) to effectively engage in collaborative practice (CCPNR, 2011; CNA, 2011; NLN, 2011). While other health care professionals are also encouraged to engage in collaborative, interprofessional practice (Canadian Interprofessional Health Collaborative, 2014; Center for Interprofessional Education, 2014; University of Minnesota, 2013) there is little literature available which discusses intra-professional experiences of professionals within various health care programs. Thus, questions are raised as to how interprofessional, intra-professional, and collaborative practice are conceptualized in literature, but also how students and educators experience intra-professional relationships while in pre-licensure health care education programs.

Intra-professional practice is not consistently defined in the literature. Some authors refer to intra-professional practice as students from differing years of a particular program (such as a baccalaureate nursing program) engaging in learning together, whether in
classroom, clinical or community contexts (Leonard, Shuhaibar, & Chen, 2010; West, Holmes, Zidek, & Edwards, 2013; Yang, Woomer, & Matthews, 2012). Leaders from the Center for the Advancement of Interprofessional Education (2014) describe interprofessional education as two or more professions learning with, from and about each other but do not address intra-professional learning. While it is expected that interprofessional education will indeed result in improved outcomes for not only patients but health care professionals and the health care system, Martin Saarinen (2008) suggests that the predominating movements towards adoption of interprofessionalism have overlooked the significance of exploring intra-professional education, such as collaborative nursing programs, with registered nursing (RN) students and practical nursing (PN) students learning together. Thus, for purposes of this review, intra-professional education will be defined as various categories of students under one disciplinary umbrella, such as nursing, (which would include RNs, licensed practical or vocational nurses (LPNs/LVNs), and registered psychiatric nurses) engaged in learning processes together in various educational contexts (classroom, clinical, community or simulation laboratory).

While there are initiatives, guidelines and regulatory documents which support interprofessional practice (European Interprofessional Practice & Education Network, n.d.; National Center for Interprofessional Practice & Education, 2014; IOM, 2013, WHO, 2010), less attention is given to research regarding intra-professional practice in both practicing (post-licensure) and educational contexts. DeMarco (2000), in discussions regarding intra-professional alliances, suggests that intra-professional relationships (which involve a relational contract based on respect and commitment) need to be promoted in nursing curricula. Further, DeMarco suggests that there is a need to "broaden understandings of patient outcomes by exploring them as part of a context of work relationships with each
other” (p. 177). The National League for Nursing (2011) acknowledges the significance of interprofessional relationships in health care but also recommends that nurse leaders focus on inclusivity of nurses (LPN/LVNs and RNs) by developing intra-professional learning experiences where students of various nursing-related educational programs learn side-by-side. New models of academic progression are called for, where “nurse educators and clinical practice partners work together to create new models of academic progression” (NLN, 2011, para.3).

While there is a significant focus throughout the literature on interprofessional collaboration, Wackerhausen (2009) suggests that interprofessional collaboration is impeded by barriers created by ineffective intra-professional relationships. The development of intra-professional relationships has been linked to how professional identity is created and maintained within individual professions. Professional identity development based on first-order reflection involves self-affirming activities which maintain the status quo, whereas second-order reflection is achieved through utilizing expanding conceptual resources which increases the perspectives from which one can reflect. It is only within second-order reflection, Wackerhausen argues, that intra-professionalism can be effectively developed through which interprofessional relationships can evolve. Similarly, Powell and Davies (2012), in a study exploring experiences of acute pain service team members, found that “intra-professional boundaries (within the medical and nursing professions) hindered collaborative working among doctors and limited the influence that the acute pain service nurses could have on improving the practice of other nurses” (p. 807).

Thus, there are discussions regarding a need to explore relationships between and among various categories of health care providers, in order to support effective working relationships which ultimately can impact on patient outcomes. In Canada, changing care
delivery models in various acute care contexts (with the introduction of increasing numbers of LPNs and health care aides) impact intra-professional working relationships. While it is important to explore these relationships among working nurses, it is also significant to explore how they experience these relationships as students, and how their educators experience these relationships. Questions arise as to if, and how, these relationships are appropriately supported in educational contexts (JBI, 2013a; Pearson, Wiechula, & Lockwood, 2005; Stern, Jordan, & McArthur, 2014), and the conduct of this review can provide important insights into how intra-professional collaboration is experienced by both students and educators.

Currently, there is little research that addresses intra-professional relationships among categories of pre-licensure nursing students. There are currently no systematic reviews available on this topic. However, our preliminary searches have found several qualitative studies within social work, occupational therapy, and dentistry that provide qualitative findings related to experiences of intra-professional collaboration, as well as a literature review exploring inter- and intra-professional relationships. Therefore, the focus of this systematic review is to explore how all health professional students and their educators experience intra-professional practice before students graduate, become licensed/registered as a health care professional, and enter the workforce.

In July 2014, a preliminary search of the literature was undertaken with the guidance of a research librarian. The CINAHL and Medline databases were searched, in order to ensure that relevant literature with qualitative findings could be found for this review. The search was intentionally kept broad due to the various ways that inter/intra-professional, inter/intra-disciplinary and collaboration are conceptualized in the literature. The reviewers
decided to err on the side of caution by searching more broadly and reviewing a larger number of abstracts for inclusion in the study. In this way, pertinent literature would not be erroneously excluded from the search.

Upon review of the abstracts and search terms for results from the above search, it became evident that large numbers of articles pertaining to inter-professional education or practice were found but they did not include findings on intra-professional experiences of students or educators. Thus, a revised search was performed with the assistance of a research librarian in February 2015, removing the terms related to “interprofessional” from the search, and adding “intraprofessional collaboration”. In consultation with the research librarian, the search strategy was further refined, discussed in detail below. The search below will be re-run and refined as necessary as part of the three-step search strategy process.

A search of the Cochrane Library of Systematic Reviews, the PROSPERO database, and the JBI Database of Systematic Reviews and Implementation Reports has been conducted. No systematic reviews of qualitative studies exploring pre-licensure health professional students’ experiences learning intra-professional practice are evident in the literature. Currently, little is known about students’ experiences in learning how to engage intra-professionally with other entry-to-practice students within a particular discipline. Our proposed systematic review therefore fulfills all requirements for the PROSPERO database.

**Inclusion criteria**

**Types of participants**

This review will consider studies that investigate pre-licensure health professional students' and educators’ experiences of intra-professional teams. We will define pre-licensure health professional students as those students enrolled in a health-related diploma or degree program leading to the writing of a licensure or registration exam prior to engaging in
practice (i.e. regulated health care provider programs). Health related programs that will be included are those that have multiple points of entry-to-practice under one disciplinary domain. This could include (but will not be limited to) disciplines such as dentistry, nursing, medicine, occupational therapy, pharmacy, physiotherapy, or social work. Thus, we will consider studies that include experiences of students and educators working in various disciplinary domains (such as dentistry, medicine, nursing, occupational therapy pharmacy or physiotherapy) focusing on regulated health professions which have more than one point of entry into practice for their students (e.g. baccalaureate degree or diploma). This review will not include studies which describe students of a particular disciplinary domain (i.e. nursing) engaging in collaborative learning with students from varying years of a particular or single baccalaureate or diploma program. We will exclude literature that pertains to any health care student who is already licensed but engaged in post-licensure continuing education or higher degree programs. Our intent is to focus on students’ experiences in an initial diploma or degree program (in order to become a health care professional), as well as educators who teach in these contexts.

**Phenomena of interest**

This review will consider studies which explore how pre-licensure students and educators experience intra-professional collaboration among various entry-to-practice categories of a particular discipline. As expectations continue for various healthcare professionals to collaborate effectively in their workplaces, this review will focus on instances where intra-professional collaboration or teamwork is experienced in pre-licensure educational contexts and how this collaboration or teamwork is experienced. This review can provide important insight for educators regarding how best to prepare health professional students for practice in various shifting health care contexts.
Context

The purpose of this review is to consider how this body of knowledge can inform how nursing students (baccalaureate and diploma) and their educators experience intra-professional teamwork in Canadian educational contexts. We are interested in studies conducted in contexts that are similar to those in Canada, and studies will be limited to the following countries: Canada, United States of America (USA), Australia, Great Britain, New Zealand and Nordic countries: Denmark, Finland, Sweden, Iceland and Norway.

Types of studies

This review will consider studies that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research and feminist research. Qualitative findings from evaluation research (including mixed methods studies) and peer-reviewed case reports will be included when they report on the relevant learning experiences of students or educators. Studies published in English will be included in this review. Studies published in other languages will be tallied (but not translated) to provide an indication of the availability of international literature available on students’ and educators’ experiences related to intra-professional practices.

Search strategy

The search strategy aims to find both published and unpublished studies. A three-step search strategy will be utilized in this review. An initial limited search of Medline and CINAHL (see strategy outlined below) will be undertaken followed by an analysis of the text words contained in the title and abstract, and of the index terms used to describe article. A second search using all identified keywords and index terms will then be undertaken across all included databases. Thirdly, the reference list of all identified reports and articles will be searched for additional studies. Studies published in English will be considered for inclusion.
in this review. Studies published in other languages will be tallied (but not translated) to provide an indication of the range of international literature available on this topic. Studies published after 2000 will be considered for inclusion in this review as these studies are more likely to be relevant for current health education contexts.

The databases to be searched include:

CINAHL, Health Source: Nursing/Academic Edition, ERIC, Medline (Pubmed), TRIP, Web of Science, PsycInfo

The search for unpublished studies will include: Grey literature sources such as government websites, OCLC PapersFirst for conference papers, OCLC Proceedings First for conference proceedings, Proquest Dissertations and Theses, the New York Academy of Medicine Grey Literature Collection, nursing education websites (such as the Canadian Association of Schools of Nursing), MedNar, and Google Scholar.

Initial keywords will include controlled vocabulary and keyword terms related to intra-professional teaching and learning and pre-licensure or pre-registration health professional students. These terms will be identified, refined, and combined according to the conventions of each database searched. Initial keywords to be used will be: intraprofessional relations*; intraprofessional collaboration; intraprofessional or intra-professional*; student*; faculty or instructor*; education. If a large volume of studies is identified without limiters, qualitative research terms will be used to focus the search.

The following search strategy will be used:

S1: (MH “Intraprofessional relations”) or (MH “intraprofessional collaboration*”)
S2: MH intraprofessional*
S3: MH intraprofessional* or intra-professional*
S4: MH “Students, Nursing, Diploma Programs”) or (MH “Students, Nursing,
Baccalaureate+”) or (MH “Students, Pre-Nursing”) or (MH “Students, Nursing+”)
S5: student*
S6: (MH “Faculty, Nursing”)
S7: (faculty or instructor*)
S8: (MH “Curriculum+”) or (MH “Course Content”)
S9: (MH “Education, Nursing+”) or (MH “Education, Nursing, Baccalaureate+”) or (MH
“Education, Diploma Programs+”)
S10: education
S11: S1 or S2 or S3
S12: S4 or S5 or S6 or S7
S13: S8 or S9 or S10
S14: S11 and S12 and S13
S15: S11 and S12 and S13 with limiters: published ≥January 1, 2001

Bibliographic information and abstracts will initially be reviewed for relevance to the review question by two independent reviewers. If either reviewer feels that the study may be relevant, the full paper will be retrieved for assessment. Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

**Assessment of methodological quality**

Papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardized critical appraisal instruments from the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI). (Appendix E). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer. Authors of primary studies will be contacted as needed to clarify findings.

**Data extraction**

Qualitative findings will be extracted by two independent reviewers from papers included in the review. Data will be extracted from papers using the standardized data
extraction tool from JBI-QARI (Appendix F). The data extracted will include specific details about the phenomena of interest, populations, study methods and specific objectives.

Data synthesis

Qualitative research findings will, where possible, be pooled using JBI-QARI. This will involve the aggregation or synthesis of findings to generate a set of statements that represent that aggregation, through assembling the findings rated according to their quality, and categorizing these findings on the basis of similarity in meaning. These categories are then subjected to a meta-synthesis in order to produce a single comprehensive set of synthesized findings that can be used as a basis for evidence-based practice. Where textual pooling is not possible the findings will be presented in narrative form. Unusual or refutational cases will be described in narrative form.

Conflicts of interest

The authors have no conflict of interest to declare.

Acknowledgements

We would like to acknowledge funding received from the School of Nursing, University of Victoria, to support JBI comprehensive systematic review training for the primary reviewer.

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Chapter 2


Executive summary

Background

Numerous inter-professional initiatives permeate the health care landscape, requiring professionals to collaborate effectively to provide quality patient care. Little attention has been given to intra-professional relationships, where professionals within one disciplinary domain (such as degree and diploma nursing students) collaborate to provide care. New care models are being introduced where baccalaureate and diploma students of a particular discipline (such as nursing, occupational therapy, dentistry, or physiotherapy), are working closely together in teams to deliver care. Questions thus arise as to how students and educators learn to work on intra-professional teams.

Objectives

To identify and synthesize evidence regarding experiences of pre-licensure health professional students and their educators on intra-professional teams, and to draw recommendations to enhance policy and/or curriculum development.

Inclusion criteria

Types of participants

Pre-licensure students and educators, focusing on regulated health professions which have more than one point of entry into practice.

Phenomena of interest

Experiences of intra-professional team learning or teaching within various entry-to-practice categories of a particular health-related discipline.

Types of studies

Eight qualitative studies were included in the review. Seven studies were descriptive in
nature; one study was a critical analysis.

**Types of outcomes**

The outcomes are in the form of synthesized findings pertaining to experiences of pre-licensure health care students and educators with intra-professional teams.

**Search strategy**

A comprehensive search of various databases was conducted between 2 June 2015 and 16 August 2015, and repeated in March 2016. The search considered all studies reported and published from 1 January 2001 to 7 March 2016. Only studies published in English were included in this review.

**Methodological quality**

Included papers were of low to moderate quality, however it is important to consider that post-positivist assumptions underpinned much of the primary research, which could explain why researcher positionality and/or influence on the research would not be addressed.

**Data extraction**

Data were extracted using the standardized data extraction tool from the Joanna Briggs Institute Qualitative Assessment and Review Instrument. The data extracted included descriptive details about the phenomena of interest, populations, and study methods.

**Data synthesis**

Research findings were pooled using the Joanna Briggs Institute Qualitative Assessment and Review Instrument. Sixty-seven findings were organized into nine categories based on similarity of meaning.

**Results**

Four synthesized findings reveal how students value intra-professional learning experiences. These experiences build positive collaborative relationships (including trust and respect), however educator and staff attitudes and conversations create hierarchies in academic and clinical contexts resulting in tension between student groups.

**Conclusions**

Despite its challenges, shared learning experiences assisted students in understanding each
other’s roles, develop communication and collaborative competencies, develop comprehensive care plans, provide more efficient care, and helped prepare them for their future roles as health care professionals. Various contextual elements could either hinder or facilitate shared learning experiences.

Keywords

Intra-professional education; health care students; pre-licensure education; collaborative education
ConQual Summary of Findings

Systematic review title: The experiences of pre-licensure or pre-registration health professional students and their educators in working with intra-professional teams: A qualitative systematic review

Population: Pre-licensure students and educators, focusing on regulated health professions which have more than one point of entry into practice

Phenomenon of Interest: Experiences of intra-professional team learning or teaching within various entry-to-practice categories of a particular health-related discipline

Context: how health professional students (baccalaureate and diploma) and their educators experience intra-professional teamwork in Canadian and similar contexts including the United States of America (USA), Australia, Great Britain, New Zealand and Nordic countries: Denmark, Finland, Sweden, Iceland and Norway

<table>
<thead>
<tr>
<th>Synthesized finding</th>
<th>Type of Research</th>
<th>Dependability</th>
<th>Credibility</th>
<th>ConQual Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>When various shared learning experiences (such as role-playing, orientation sessions, tutorials, journal writing, and shared clinical placements) are provided to students, students develop team-building, communication, leadership, and supervision skills. Students value intra-professional learning activities for learning others' roles, preparing them for the workplace, and developing their professional identity</td>
<td>Qualitative</td>
<td>Downgrade 1 level*</td>
<td>Downgrade 1 level**</td>
<td>Low</td>
</tr>
<tr>
<td>When there is effective communication between professional groups in academic and clinical environments, trust and understanding of others' roles develops and facilitates students' perceptions of improved care planning and patient care</td>
<td>Qualitative</td>
<td>Downgrade 1 level*</td>
<td>Downgrade 1 level**</td>
<td>Low</td>
</tr>
<tr>
<td>Educator and staff attitudes and enactment of educational discourses create hierarchical relationships which impede positive intra-professional learning for students. Despite its challenges, students found that intra-professional learning helps build trust and respect:</td>
<td>Qualitative</td>
<td>Downgrade 1 level*</td>
<td>Downgrade 1 level**</td>
<td>Low</td>
</tr>
<tr>
<td>Engagement in intra-professional learning assists students to clarify roles and negotiate scopes of practice, however lack of role clarity, poor communication, differences in clinical and academic education, and exclusion of categories of students creates tension and frustrations in intra-professional learning</td>
<td>Qualitative</td>
<td>Downgrade 1 level*</td>
<td>Downgrade 1 level**</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Downgraded one level due to common dependability issues across the included primary studies (all studies had no statement locating the researcher and no acknowledgement of their influence on the research)

**Downgraded one level due to mix of unequivocal and credible findings
Introduction

Background

Nursing education and practice are influenced by the complexities inherent in the need to provide professional care to patients, families, and communities in varying contexts across the globe. While numerous initiatives under the umbrella of health care reform (such as inter-professional practice and collaborative practice) are addressed in nursing literature, there has been less attention paid to exploring relationships between categories of nurses (such as registered nurses and licensed practical nurses) who are expected (through regulation and discourses of intra/inter-professional practice) to effectively engage in collaborative practice (CCPNR, 2011; CNA, 2011; NLN, 2011). While other health care professionals are also encouraged to engage in collaborative, inter-professional practice (Canadian Interprofessional Health Collaborative, 2014; Center for Interprofessional Education, 2014; University of Minnesota, 2013), there is little literature available which discusses intra-professional experiences of students within various health care programs. Thus, questions are raised as to how inter-professional, intra-professional, and collaborative practice are conceptualized in literature, but also how students and educators experience intra-professional relationships while in pre-licensure health care education programs.

Intra-professional practice is not consistently defined in the literature. Some authors refer to intra-professional practice as students from differing years of a particular program (such as a baccalaureate nursing program) engaging in learning together, whether in classroom, clinical or community contexts (Leonard, Shuhaibar, & Chen, 2010; West, Holmes, Zidek, & Edwards, 2013; Yang, Woomer, & Matthews, 2012). Leaders from the Center for the Advancement of Interprofessional Education (2014) describe inter-professional education as two or more professions learning with, from and about each other but do not
address intra-professional learning. While it is expected that inter-professional education will indeed result in improved outcomes for not only patients but health care professionals and the health care system, Martin Saarinen (2008) suggests that the predominating movements towards adoption of inter-professionalism have overlooked the significance of exploring intra-professional education, such as collaborative nursing programs, with registered nursing (RN) students and practical nursing (PN) students learning together. Thus, for purposes of this review, intra-professional education will be defined as various categories of students under one disciplinary umbrella, such as nursing (which would include RNs, licensed practical or vocational nurses (LPNs/LVNs), and registered psychiatric nurses) engaged in learning processes together in various educational contexts (classroom, clinical, community or simulation laboratory). Other disciplinary umbrellas with potential relevance for this review could also include physiotherapy (physiotherapy students and physiotherapy assistant students), occupational therapy (occupational therapy students and occupational therapy assistant students), and dentistry (dental students, dental hygiene students, and dental assistant students).

While there are initiatives, guidelines, and regulatory documents which support inter-professional practice (European Interprofessional Practice & Education Network, n.d.; IOM, 2013; National Center for Interprofessional Practice & Education, 2014; WHO, 2010), less attention is given to research regarding intra-professional practice in both educational (pre-licensure) and practicing (post-licensure) contexts. DeMarco, Horowitz, & McLeod (2000), in discussions regarding intra-professional alliances, suggest that intra-professional relationships (which involve a relational contract based on respect and commitment) need to be promoted in nursing programs. Further, DeMarco et al. suggests that there is a need to "broaden understandings of patient outcomes by exploring them as part of a context of work
relationships with each other" (p. 177). The National League for Nursing (2014) acknowledges the significance of collaborative relationships in health care but also recommends that nurse leaders focus on inclusivity of nurses (LPN/LVNs and RNs) by developing intra-professional learning experiences where students of various nursing-related educational programs learn side-by-side. New models of academic progression are called for, where “nurse educators and clinical practice partners work together to create new models of academic progression” (NLN, 2011, para. 3).

While there remains a significant focus throughout the literature on inter-professional collaboration, Wackerhausen (2009) suggests that inter-professional collaboration is impeded by barriers created by ineffective intra-professional relationships. The development of intra-professional relationships has been linked to how professional identity is created and maintained within and among individual professions. According to Wackerhausen, professional identity development based on first-order reflection involves self-affirming activities which maintain the status quo, whereas second-order reflection is achieved through utilizing expanding conceptual resources which increases the perspectives from which one can reflect. It is only within second-order reflection, Wackerhausen argues, that intra-professional practices can be effectively developed through which inter-professional relationships can evolve. Similarly, Powell and Davies (2012), in a study exploring experiences of acute pain service team members, found that “intra-professional boundaries (within each of the medical and nursing professions) hindered collaborative working among doctors and limited the influence that the acute pain service nurses could have on improving the practice of other nurses” (p. 807).

Thus, there are discussions regarding a need to explore relationships between and among various categories of health care providers to support effective working relationships,
which ultimately impacts patient outcomes. In Canada, changing care delivery models in various acute care contexts (with the introduction of increasing numbers of LPNs and health care aides) impacts intra-professional working relationships (MacKinnon, Bruce, & Butcher, 2015a; 2015b). While it is important to explore these relationships among working nurses, it is also significant to explore how they experience these relationships as students, whether these experiences better prepare students for the workplace, how they are perceived to impact patient care, and how their educators experience these relationships. Questions arise as to if, and how, these relationships are appropriately supported in educational contexts (JBI, 2013; Pearson, Wiechula, & Lockwood, 2005; Stern, Jordan, & McArthur, 2014), and the conduct of this review can provide important insights (benefits and/or challenges) into how intra-professional collaboration is experienced by both students and educators. Professional development, including identity formation and socialization into becoming a health care professional begins as a student, thus it is important to explore how students and educators learn to work together to provide care.

Currently, there is little research that addresses intra-professional relationships among categories of pre-licensure nursing students. As of our most recent literature search (March 2016), there are currently no systematic reviews available on this topic. However, our searches did find qualitative studies within physiotherapy, occupational therapy, nursing, and dentistry which provided qualitative findings for this review related to experiences of intra-professional collaboration, as well as a literature review exploring inter- and intra-professional relationships (Costa, Molinsky, & Sauerwald, 2012). Therefore, the focus of this systematic review is to explore how all health professional students and their educators experience intra-professional practice before students graduate, become licensed/registered as a health care professional, and enter the workforce. The objectives, inclusion criteria, and
methods of analysis for this review were specified in advance and documented in our protocol (Butcher et al., 2015b).

**Objectives**

The aim of this review was to identify the experiences of pre-licensure or pre-registration health professional students and their educators learning to work in intra-professional teams.

More specifically, the objectives were to identify the evidence on:

1. The experiences of pre-licensure or pre-registration health professional students about learning how to work in intra-professional teams.

2. The experiences of health professional educators about teaching intra-professional collaboration across categorical and/or regulatory boundaries of professional groups.

The specific question for this review is:

What are the experiences of pre-licensure health professional students and educators learning to work in intra-professional teams?

**Inclusion criteria**

**Types of participants**

This qualitative review considered studies that included pre-licensure health professional students' and educators’ experiences of intra-professional teams. We defined pre-licensure health professional students as those students enrolled in a health-related diploma or degree program leading to the writing of a licensure or registration exam prior to engaging in practice (i.e. regulated health care provider programs). Health related programs that were included were those that have multiple points of entry-to-practice under one disciplinary domain. This could include (but was not limited to) disciplines such as dentistry,
nursing, medicine, occupational therapy, pharmacy, or physiotherapy. Thus, we considered studies that include experiences of students and educators working in various disciplinary domains (such as dentistry, medicine, nursing, occupational therapy, pharmacy, or physiotherapy) focusing on regulated health professions which have more than one point of entry into practice for their students (e.g. baccalaureate degree and diploma). This review did not include studies which describe students and/or educators of a particular disciplinary domain (i.e. nursing) engaging in collaborative learning with students from varying years of a particular or single baccalaureate or diploma program. We excluded literature that pertains to any health care student (and their educators) who is already licensed but engaged in post-licensure continuing education or higher degree programs. Our intent was to focus on students’ experiences in an initial diploma or degree program in order to become a health care professional, as well as educators who teach in these contexts.

**Phenomena of interest**

This qualitative review considered studies that investigate how pre-licensure students and educators experience intra-professional collaboration among various entry-to-practice categories of a particular discipline. As expectations continue for various healthcare professionals to collaborate effectively in their workplaces, this review focused on instances where intra-professional collaboration or teamwork is experienced in pre-licensure educational contexts and how this collaboration or teamwork was experienced.

**Context**

We were interested in exploring studies conducted in contexts that are similar to Canada, including the following countries: Canada, United States of America (USA), Australia, Great Britain, New Zealand and Nordic countries: Denmark, Finland, Sweden, Iceland and Norway. We found studies from only three countries (Canada, Australia, and the
USA) that met the inclusion criteria for this review.

**Types of studies**

This review considered interpretive studies that draw on the experiences of health professional students and educators with intra-professional teamwork including, but not limited to, designs such as phenomenology, grounded theory, ethnography, action research and feminist research. Qualitative findings from evaluation research (including mixed methods studies) and peer-reviewed case reports were included when they report on the relevant learning experiences of students or educators.

**Search strategy**

In July 2014, a preliminary search of the literature was undertaken with the guidance of a research librarian. The CINAHL and Medline databases were searched to ensure that relevant literature with qualitative findings could be found for this review. The search was intentionally kept broad due to the various ways that inter/intra-professional, inter/intra-disciplinary and collaboration are conceptualized in the literature, and there was no limitation put on searching date. The reviewers decided to err on the side of caution by searching more broadly and reviewing a larger number of abstracts for inclusion in the study. In this way, pertinent literature would not be erroneously excluded from the search. Due to the varying ways in which inter- and intra-professional learning relationships were described in the primary research reports, the primary author found that screening abstracts did not provide adequate information. Thus, full-text articles were reviewed to determine whether the intra-professional relationship met the inclusion criteria for the review.

Upon review of the abstracts, full text articles, keywords, and search terms for results from the above search, it became evident that large numbers of articles pertaining to inter-professional education or practice were found but they did not include findings on intra-
professional experiences of students or educators. Upon preliminary review of this research, it was noted that no articles were found that met the inclusion criteria until 2002; thus, we subsequently applied a search date of January 1, 2001 to focus our search (and none of our previously found and included articles were dropped as a result). We also discussed how more recent articles might be more relevant to current educational contexts, however articles older than 2002 were not found on the preliminary search. Thus, a revised search was performed with the assistance of a research librarian in February 2015, removing the terms related to “interprofessional” from the search, and adding “intraprofessional collaboration” and the search date. In consultation with the research librarian, the search strategy was further refined, and outlined in detail below. The term ‘skill mix’ was not included in our search terms, as in preliminary searches and identification of articles, this term was not mentioned in the text or keywords in the literature. While this could be seen as a potential limitation of this systematic review, it is our experience that the term skill mix often relates to post-licensure workplace contexts and literature related to worker shortage and task shifting.

The search strategy aimed to find both published and unpublished studies (Appendix G). A three-step search strategy was utilized in this review. The initial limited search of MEDLINE and CINAHL noted above (July 2014), preceded subsequent analyses of the text words contained in the title and abstract, and of the index terms used to describe articles. A research librarian (also a JBI certified reviewer and team member) assisted with refining search terms and strategies. The MEDLINE and CINAHL searches were then repeated in June 2015. A second search using all identified keywords and index terms was then undertaken across all included databases in July and August 2015. Searches of all databases were most recently repeated in March 2016 which resulted in an additional 26 studies to be screened. See Table I below for the most recent specific search dates for the various
Thirdly, the reference list of all identified reports and articles were searched for additional studies, which resulted in 17 studies which were reviewed for possible inclusion. Studies published in English were considered for inclusion in this review. Studies published in other languages were tallied (but not translated) to provide an indication of the availability of international literature available on students’ and educators’ experiences related to intra-professional practices. There were nine studies that were found in other languages. Studies published ≥ January 1, 2001 were included in this review.

The databases that were searched included:

CINAHL, Health Source: Nursing/Academic Edition, ERIC, Medline (Pubmed), TRIP, Web of Science, PsycInfo

The search for unpublished studies included:

Grey literature sources such as government websites, OCLC PapersFirst for conference papers, OCLC Proceedings First for conference proceedings, Proquest Dissertations and Theses, the New York Academy of Medicine Grey Literature Collection, nursing education websites (such as the Canadian Association of Schools of Nursing), MedNar, and Google Scholar.

Initial keywords that were used included:

intraprofessional relations*; intraprofessional collaboration; intraprofessional or intra-professional*; student*; faculty or instructor*; education.
Table I: Search Dates for Databases

### Method of the review

#### Assessment of Methodological Quality

Qualitative papers selected for retrieval were assessed by the primary and secondary reviewers for methodological validity prior to inclusion in the review using the Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI) (Appendix E). Any disagreements that arose between the reviewers were resolved through discussion, and/or with a third reviewer who is also a certified JBI systematic reviewer.
Following the appraisal of the selected studies, the reviewers met and clarified their interpretation of the appraisal tool and discussed discrepancies in scoring. This included clarifying standards for inclusion or exclusion for the review, and whether certain critical appraisal questions should be considered essential for inclusion in the review. In discussions with the team, and considering areas of qualitative research expertise, as well as the larger literature landscape, it was decided to err on the side of inclusion and not specify any particular appraisal questions which were essential for inclusion for this review.

**Data extraction**

Qualitative data was extracted from papers included in the review utilizing the standardized data extraction tool from JBI-QARI (Appendix F). The data extracted included specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

Descriptive data that were extracted included the following:

- Study type
- Country and setting where the study was conducted (geographical and cultural)
- Participants (number, baseline demographics, age group and ethnicity)
- Phenomena of interest
- Author’s conclusions

Qualitative study findings were extracted as themes, declarations, or statements identified by the authors of each study. The presentation of the themes varied, sometimes appearing as headings and sub-headings in the paper. These findings were extracted with one or more illustrations from the text to support the finding.

All findings were assigned one of three levels of credibility, according to the following
criteria:

- Unequivocal (U) - Assigned if the findings were related to the evidence beyond reasonable doubt, including findings that were matter of fact, directly reported/observed and not open to challenge. These findings were supported by illustrations in the form of direct quotes from participants where the quote from the participant clearly supported the finding extracted.

- Credible (C) - Assigned to those findings that were, albeit interpretations, plausible in the light of the data in the study and/or the theoretical framework. They could be logically inferred from the data. These findings were supported by a direct quote from a participant.

- Unsupported (Un) - Assigned in cases where the study author’s finding was not congruent with or supported by identifiable data. These findings were presented without any supportive data or text.

Unequivocal and credible findings were included in the meta-synthesis; findings that were deemed to be Unsupported were not considered for inclusion in the final synthesis.

**Data synthesis**

Findings included identifiable themes, metaphors, statements, or declarations made by authors that arose from analyzed data. Studies in which findings were not identifiable, or studies which had findings without support with illustrations were excluded. Qualitative research findings were identified (through repeated reading of the papers), assigned an accompanying illustration, assigned a level of credibility, and subsequently pooled using JBI-QARI. This involved the aggregation or synthesis of findings to generate a set of statements that represent that aggregation, through assembling the findings rated according to quality, and categorizing these findings on the basis of similarity in meaning.
Since this systematic review was completed as part of the primary author’s doctoral dissertation, the primary author extracted all findings, created categories from the findings, and then discussed these with her supervisor (the secondary reviewer) for peer review, to maintain transparency and validity of the process. Categories and synthesized findings were then shared with the larger team. Creating categories was an iterative process whereby the primary reviewer reviewed and categorized the findings and illustrations five times (using posters) being thoughtful about the process and to facilitate discussion with the team. Final categories were then iteratively subjected to a meta-synthesis, which was also discussed with the secondary reviewer, to produce a single comprehensive set of synthesised findings that can be used as a basis for evidence-based practice.

Results

Description of Studies

The results of the search and study selection process are illustrated in Figure I which outlines the process of study search, selection, retrieval, appraisal, and synthesis. As shown in Figure I, 1102 papers were found from searching the noted databases and hand-searching reference lists of retrieved (n=62) full-text articles. After the removal of duplicates, 1025 articles remained. Due to the specific way in which the intra-professional relationship was defined for this review, reading only the abstracts of literature for potential review was often inadequate, as the type of intra- or inter-professional relationships under study were often not addressed in the abstract.
Records identified through database searching (n = 774)

Additional records identified through other sources (n = 328) (Nsg Ed: 135; Govt: 174; hand-searching: 19)

Records after duplicates removed (n = 702 + 323 = 1025)

Records screened (full-text) (n = 1025) → Records excluded (n = 963)

Full-text articles assessed for eligibility (n = 62) → Full-text articles excluded, with reasons (n = 49)

Articles for critical appraisal (n = 13) → Articles excluded at critical appraisal (n = 5)

Studies included in qualitative synthesis (n = 8)


Figure I: Flow-chart for the search and study selection process
Thus, the primary reviewer found it necessary to read the full text of all 1025 articles that were found in the various searches, as a way to screen and determine whether intra-professional relationships between students were outlined and applicable for this review. Frequently it was only after reading an entire paper that one could determine whether the pre-licensure intra-professional experiences (as described for inclusion in this review) were being addressed within each paper. In one case, the author (Lamontague, 2014) was contacted to confirm whether there was intra-professional learning in her research (she confirmed that there was not), as it was not clear from reading the thesis. Overall, after this initial round of screening, 963 papers were excluded for not meeting the inclusion criteria.

After reviewing 1025 articles, 62 articles remained that possibly met the inclusion criteria and required further full-text examination by team members. The primary reviewer reviewed all 62 articles; a secondary reviewer (working with an undergraduate student) reviewed 28 of these articles; a third reviewer assessed the remaining 34 articles. Appendix H outlines the 49 studies that were excluded (with reasons for exclusion) after review of these 62 studies. Thirteen papers (Brame, Mitchell, Wilder, & Sams, 2015; Dalmaso, Weber, Eley, Spencer, & Cabilan, 2015; Evans, Henderson, & Johnson, 2012; Evans, Henderson, & Johnson, 2013; Hoffart, Kuster-Orban, Spooner, & Neudorf, 2013; Jelley, Laroque, & Patterson, 2010; Jung, Sainsbury, Grum, Wilkins, & Tryssenaar, 2002; Jung, Salvatori, & Martin, 2008; Limoges & Jagos, 2015; Mathews, Smith, Hussey, & Plack, 2010; Plack, et al., 2006; Resson, Walker-Cleaves, & Ellis, 2015; Wareing, 2011) subsequently remained to be critically appraised by the primary and secondary reviewers. Appendix I includes those studies which were excluded (Dalmaso, et al., 2015; Evans, et al., 2013; Hoffart, et al., 2013; Resson, et al., 2015; Wareing, 2011) at the critical appraisal stage utilizing the QARI appraisal instrument. Appendix J outlines the 8 papers (Brame et al., 2015; Evans et al., 2012;
Characteristics of Included Studies

Appendix J outlines the main characteristics of each included study. This section that follows describes the characteristics of the studies as a set. Seven studies were published within the last 10 years (ranging from 2006-2015); one study was published in 2002. Four studies (Brame et al., 2015; Evans et al., 2012; Mathews et al., 2010; Plack et al., 2006) were mixed method designs and utilized surveys or questionnaires, reflective essays, or focus groups for data. Three studies (Jelley et al., 2010; Jung et al., 2002; Jung et al., 2008) were qualitative program evaluations, including two studies (Jelley et al., 2010; Jung et al., 2002) identified as qualitative descriptive studies that utilized thematic and content analysis respectively. The third evaluation study (Jung et al., 2008) was a program evaluation of a combined fieldwork placement model. These authors used thematic analysis as outlined in their data analysis discussion. A final qualitative study (Limoges & Jagos, 2015) was a critical analysis of how nursing educational discourses influence intra-professional relations between diploma and baccalaureate students.

Of the four studies utilizing mixed method designs, two were clearly identified by authors (Brame et al., 2015; Evans et al., 2012) as a mixed methods study. The remaining study authors (Mathews et al., 2010; Plack et al., 2006) described their methods in terms of survey utilization (with quantitative data analysis) with added focus groups (Plack et al., 2006) or reflective essays (Mathews et al., 2010). Three studies (Evans et al., 2012; Mathews et al., 2010; Plack et al., 2006) included focus group questions as an appendix; the fourth mixed-methods study (Brame et al., 2015) referred to a script for the focus groups however.
did not include it in the published document.

Regarding the qualitative studies, the authors of one study (Jelley et al., 2010) did not explicitly refer to a qualitative methodology, however referred to qualitative data analysis of pre-and post-placement interviews and journals utilizing thematic analysis with NVivo 8© software (QSR International) to identify themes and patterns. The second study (Jelley et al., 2010) was identified by authors as qualitative, in which students’ journals were inductively analysed utilizing retrospective content analysis. In the third qualitative study (Jung et al., 2008) the authors also utilized retrospective content analysis for creating codes and categories from data. The authors (Limoges & Jagos, 2015) of the fourth qualitative study (a critical analysis of educational discourses influencing intra-professional relations) referred to Smith’s approach, in addition to discourse analysis, for revealing enacted discourses in social contexts. Reflective writing and interview data were iteratively analyzed after diploma and baccalaureate nursing students experienced a joint educational event.

In the qualitative program evaluation study (Jung et al., 2008) of a combined fieldwork student placement model, the authors utilized journal and focus group data for analysis (with journals being noted as the primary data collection tool), and noted how tutor and clinical educator data were utilized to increase perspectives and create a more comprehensive picture of the student experience. Students were encouraged to address guiding questions in their journals. The authors note that trustworthiness was addressed through member-checking, to ensure that information was translated correctly and not misinterpreted.

In considering the underlying epistemological underpinnings of the qualitative studies, the authors of one study (Jelley et al., 2010) expressed how they analyzed student journal data in addition to interview data to add breadth to understanding and explore the
range of experiences of the paired student clinical placements. In the second qualitative study (Jung et al., 2002) guidelines for student journal writing were minimal with respect to outlining type and amount of content (students were not bound to report on specific issues), with a minimal expectation of two journal entries per week during clinical placements. Data were then inductively analyzed, in that the authors argue that the themes arise from the data rather than being imposed on the data. Authors of the third qualitative study (Jung et al., 2008) included tutor and preceptor data to provide more comprehensive understanding. Participants were encouraged to write freely and openly in their journals; however, the authors did provide guiding questions. Categories created from a retrospective content analysis were member-checked with participants to enhance trustworthiness. Authors of the critical analysis paper (Limoges & Jagos, 2015) iteratively analyzed data to reveal social processes that structure and influence boundaries between categories of nurses and contribute to division instead of collaboration. Authors analyzed data for instances where knowledge and professional hierarchies were activated by students to categorize other groups of nurses.

With respect to the epistemological underpinnings of the mixed methods studies, one study (Evans et al., 2012) utilized a coding frame to create categories and themes, and subsequently utilized a software program to establish consistency. Homogeneous focus groups were also conducted by external facilitators with scripts, limiting bias. Authors also stated how data were triangulated to verify trends. Authors of another study (Brame et al., 2015) noted how their mixed method design was utilized for establishing a more comprehensive understanding of findings, however did also note that focus groups were conducted by independent, third-party facilitators who were given written scripts to maintain consistency in interviewing. Homogeneous focus groups were noted, in which categories of students were in separate focus groups. Similarly, authors of the third mixed-methods paper
(Plack et al., 2006) note how key ideas from homogeneous focus group interview data (obtained with semi-structured interviews with open-ended questions) were summarized for member checking, to ensure data accuracy. Additional researchers also were asked to confirm the analysis to limit bias and ensure accuracy in the analysis. In the final mixed-method study (Mathews et al., 2010) authors note how patterns of meaning were identified from reflective essay data, from which codes were developed by two researchers working independently to address credibility and trustworthiness.

In summary, this synthesis of the existing qualitative evidence related to pre-licensure students and educator experiences with intra-professional education is based on studies utilizing various qualitative methods including some studies with either unspecified or perhaps implicit epistemological underpinnings.

**Intra-professional learners:**

Of the eight studies included in this review, two studies (Brame et al., 2015; Evans et al., 2012) examined the experiences of various categories of students in dental programs (dentistry, dental hygiene, dental assistant or dental technologist); three studies (Jelley et al., 2010; Mathews et al., 2010; Plack et al., 2006) examined physical therapy and physical therapy assistant students learning intra-professionally, and two studies (Jung et al., 2002; Jung et al., 2008) examined occupational therapy and occupational therapy assistant students’ experiences with intra-professional learning. The final study (Limoges & Jagos, 2015) examined nursing students’ experiences of intra-professional learning as influenced by enacted educational discourses.

**Educator experiences:**

Of the eight included studies, three (Jelley et al., 2010; Jung et al. 2008; Mathews et al., 2010) included educators, preceptors, and/or tutors as participants in their study. One
study (Mathews et al., 2010) outlined instructor participants completing reflective essays in addition to students; another study (Jung et al., 2008) had tutors’ complete journals (in addition to students) and had preceptors participate in focus groups; a third study (Jelley et al., 2010) included instructors as participants, however only provided student illustrations to support findings.

The eight included studies were conducted in three different developed countries. Four (Jelley et al., 2010; Jung et al., 2002; Jung et al., 2008; Limoges & Jagos, 2015) were conducted in Canada, three (Brame et al., 2015; Mathews et al., 2010; Plack et al., 2006) in the United States of America, and one (Evans et al., 2012) in Australia.

A majority of the studies (6/8) explored the experiences of students and educators in major metropolitan areas (Brame et al., 2015; Evans et al., 2012; Jelley et al., 2010; Jung et al., 2002; Jung et al., 2008; Plack et al., 2006). One study (Mathews et al., 2010) did not state a specific city, only a southern US state. One study (Limoges & Jagos, 2015) took place at a college in a Canadian province, but no specific location was noted. Intra-professional learning settings included university and college classroom/lecture/lab settings (Brame et al., 2015; Evans et al., 2012; Limoges & Jagos, 2015; Plack et al., 2006) and various clinical settings. In one study, students were in fieldwork placements in acute inpatient, long term care, and rehabilitation (Jung et al, 2002); in another study, students were placed in adult acute or mental health in-patient settings (Jung et al., 2008). In the remaining two studies the clinical settings were not specified beyond stating they were fieldwork settings (Jelley et al., 2010; Mathews et al., 2010).

**Methodological Quality**

As seen in Table II, (results of the critical appraisal of the eight included studies), none of the studies (by a mark of ‘Y’) met all ten of the questions in the appraisal instrument.
It is worth noting that while JBI and others (Hannes, Lockwood, & Pearson, 2010; Munn, Porritt, Lockwood, Aromataris, & Pearson, 2014) suggest that high quality qualitative studies meet the criteria of 1) having statements that locate the researcher culturally or theoretically; and/or 2) include statements that addressed the researchers’ influence on the research (and vice-versa), none of our studies met these criteria (questions #6 and #7 of the critical appraisal instrument - Appendix E). Worth noting, however, is how potential, implicit epistemological underpinnings discussed earlier, could have influenced whether authors felt it necessary or appropriate to address the above two criteria. It would not be expected for these questions to be addressed, for example, if the researchers assumed a post-positivist stance for undertaking their research.

It is significant to consider that performing critical appraisal of qualitative research remains controversial (Atkins, Launiala, Kagaha, & Smith, 2012; Hannes et al., 2010; Nagata et al., 2013; Pace et al., 2012; Sandelowski, 2015;) and hence it may not be fruitful to exclude studies based on failing to meet certain/all questions in the critical appraisal. Rather, it is useful to utilize these questions to discuss the overall quality of the presented research in the context of a particular systematic review as well as in the context of available papers and team judgment (Attree & Milton, 2006; Carter & Little, 2007; Sandelowski, 2015). The Joanna Briggs Institute notes that their process of critical appraisal addresses overall research rigor and reporting; it is also significant to consider how reporting of research can vary, depending on epistemological assumptions of the researcher and expectations for reporting. Thus, in consultation with our team and reviewing the literature to understand current best practices of those engaging in qualitative syntheses and/or thoughts surrounding critical appraisal, we did not exclude any study for failing to meet all of the 10 questions. We also did not specify certain questions which were essential to be met, in order to be included in
this systematic review. Rather, we considered the overall value of the included papers against the available pertinent papers that were reviewed, while also maintaining sensitivity to the questions surrounding quality appraisal and epistemological assumptions inherent in the reviewed papers.

The following provides an overview of the results of the study appraisals for each question:

- One study (Limoges & Jagos, 2015) met criteria one, which assessed clear congruity between the research methodology and philosophical perspectives; underlying philosophical perspectives were not clearly addressed in the remaining seven studies.
- All but one study (Jelley et al., 2010) met criteria two, which is an assessment of congruity between the research methodology and the research question or objectives.
- All eight studies met criteria three, which assessed congruity between the research methodology and methods.
- All eight studies met criteria four and five, which assessed congruity between the research methodology and representation and analysis of data; and congruity between the research methodology and interpretation of results.
- None of the included studies included statements that located the researcher(s) culturally or theoretically.
- None of the included studies addressed the researchers’ influence on the research (and vice-versa).
- All of the studies adequately represented participants’ voices.
- Six (Brame et al., 2015; Evans et al., 2012; Jelley et al, 2010; Jung et al., 2002; Jung et al., 2008; Limoges & Jagos, 2015) out of eight studies clearly demonstrated conclusions that clearly flowed from the analysis or interpretation of the data.

To summarize the overall quality appraisal of the eight included studies, the evidence
base utilized in this systematic review is of moderate standard, as the studies met (Y) or possibly met (U) most of the critical appraisal questions. As the idea of critically appraising qualitative research remains unresolved in the larger systematic review landscape, we feel that it is important that all eight studies be included as they all offer useful findings (supported by data) that are important to inform practice and/or policy, and provides a breadth of understanding. There is no current consensus on criteria for assessing quality, or on the appropriateness of utilizing quality criteria at all for evaluating qualitative research (Saini & Shlonsky, 2012; Sandelowski & Barroso, 2002; 2007). We noted how primary authors have differing reporting styles, including presentation of findings, and we found that philosophical orientations or assumptions of the authors of the primary studies were rarely addressed. However, the main source of potential bias regarding the validity of primary qualitative studies on which this report is based, relates to potential influence of researchers over interpretation of study findings, and/or unrecognized epistemological assumptions of primary researchers.

**Meta-synthesis of Findings**

The objective of this review was to identify and synthesize the best available evidence on experiences of pre-licensure or pre-registration students and their educators with intra-professional learning. A total of 67 relevant findings addressing the question of interest were extracted from the included studies. From the 67 relevant findings, 61 were deemed to have an unequivocal level of credibility and 6 were deemed to have a credible level of credibility. Although 22 additional unsupported findings were noted during extraction, they were excluded from this review as they were not supported by data/illustrations. Thus, there were no unsupported findings included in this review. All the unequivocal and credible findings were supported by data presented in the studies, and were hence were pooled to generate
synthesized findings (see Table III). Findings were assigned to more than one category, depending on their relevance in meaning to each category, as reflected in the total (89) in the table noted below. The following table provides an overview of the levels of credibility in each synthesized finding. The meta-synthesis represents a selection of student and educator experiences from Australia (1 paper), Canada (4 papers), and the United States of America (3 papers).

<table>
<thead>
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<th>Citation &amp; Rating</th>
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<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
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Table II: Critical Appraisal Questions for Included Studies
### Table III. Summary of evidence credibility for all synthesized findings

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<tr>
<th>Synthesized Finding (SF)</th>
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<th>Unsupported</th>
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<td>18</td>
</tr>
</tbody>
</table>

Meta-synthesis of the findings from the eight studies generated four synthesized findings, after the findings were grouped into user-defined categories created on the similarity in description of student or educator experiences with pre-licensure intra-professional learning. The four synthesized findings were derived from nine categories developed by considering similarity of meaning across the 67 study findings. All the study findings with supporting illustrations are listed below in Table IV.

The synthesis results are presented below. The presentation is organized by synthesized findings. For each synthesized finding a description of the categories derived from the findings is provided. Some illustrative participant voices that informed the primary study findings are also offered to enhance understanding the dimensions of the experience captured by each synthesized finding.

**SYNTHESIZED FINDING #1**

*When various shared learning experiences (such as role-playing, orientation sessions, tutorials, journal writing, and shared clinical placements) are provided to students, students develop team-building, communication, leadership, and supervision skills.*

*Students value intra-professional learning activities for learning others’ roles, preparing them for the workplace, and developing their professional identity.*
Although many students are not currently exposed to intra-professional learning experiences, they see these as potentially important experiences to assist understanding of others’ roles, prepare them for the workplace, and help to develop their professional identity. Various approaches to shared learning (role-playing, pre-placement orientation sessions, tutorials, journal writing, and shared clinical placements) were noted to assist students develop team-building, communication, leadership, and supervision skills. Intra-professional role modelling by tutors in educational settings also assisted students in understanding their respective roles, and in developing collaborative relationships.

Students were concerned, however, that intra-professional experiences might be added to curricula without a full pedagogical redesign, which would create added time pressures to overloaded programs. Some final-year baccalaureate students suggested that it is not necessary to include intra-professional learning experiences. Other baccalaureate students felt disadvantaged in their knowledge level when partnered with diploma students who had already had some clinical experiences in their program. Students also noted how current learning experiences were very hierarchical and segregated. Despite the challenges, students suggested that shared learning experiences were worthwhile.

The first synthesized finding was derived from two categories underpinned by a total of 26 findings. A summary of each of the two categories is provided below, together with a few key illustrations that support them. Full details of findings and illustrations are presented in Table IV.

**CATEGORY 1.1: Various approaches to learning, such as role-playing, 2:2 clinical pairing, journal writing, and tutorials + fieldwork may facilitate intra-professional collaboration**
This category was developed from 21 findings with similar meaning. These findings indicated that various pedagogical approaches were utilized that students found helpful in understanding roles and developing collaborative relationships. Pre-placement orientation sessions, where students initiated relationships with peers and tutors, was noted as assisting with building trust and enhancing clinical partnerships. Role-playing activities helped students to understand their colleagues’ perspectives and also to broaden their understandings of roles and responsibilities of team members. Topics discussed in lecture/tutorial sessions were significant to students understanding of team roles, however it was also noted that topics such as delegation and utilization were presented in their diploma program, but not the baccalaureate program. Clinical 2:2 pairing (one diploma student; one baccalaureate student; one diploma tutor, and one baccalaureate instructor) was noted to assist the development of collaborative and supervision skills of students. Journal writing assisted students in working through and reflecting upon difficult or challenging issues that arose during their intra-professional learning experiences, and some students noted (in their journals) frustration related to working with other student groups.

Despite the challenges of shared learning, students supported and valued the continuation of the experience. Timing of shared learning experiences was also noted to be a concern, as those with less clinical experience felt intimidated by those who had previously had fieldwork experiences in their program.

Illustrations of the experience described by the findings in this category:

“I think the scenarios [were most helpful]. The class before we learned about their roles ...but actually putting that in to a scenario or practice is, I think, helpful” (Plack et al., 2006, p. 7)
“Even if it were 2 weeks or 1 day or a month that we go out there...there has to be more of that real-life situation, not just the textbook...the PT and PTA [student] spending time together. I just think that that day showed what could be possible, and that was the first step in the right direction” (Plack et al., 2006, p.8)

“The PTAs [diploma students] had more of a sense of the differences between our practices, they get more, training at it. It’s brought up to them a little bit more” (Plack et al., 2006, p. 7)

“All oral health professionals need to have a common base knowledge and an understanding of what each profession does, therefore by sharing education sessions this bridge can be closed” (Evans et al., 2012, p. 243)

“I felt a little underprepared. It was hard to try and keep up with specifics of things where we really didn’t know what we were talking about. It was hard to explain. The PTAs [diploma students] have more experience, they are more knowledgeable than we are, and it’s kind of intimidating” (Plack et al., 2006, p. 7)

**CATEGORY 1.2: Considering collaborative/shared learning models**

This category was developed from 5 findings with similar meaning. When asked about shared, intra-professional learning, students expressed support for the need to learn together. Some students noted how current experiences were very segregated and hierarchical, and that it would be beneficial to have students integrate together for learning. Students also expressed reservations about shared learning experiences not being an ‘add-on’ into already heavy programming, but part of a larger curricular re-design process. There was strong support by various students that intra-professional learning would be beneficial in preparing them for the workplace after graduating from their program.

Illustrations of the experience described by the findings in this category:

“I don’t know how feasible the [shared learning model] is. We’re already busy. To add more
“things for us to learn...it’s just too much” (Brame et al., 2015, p. 620)

“[Integrated learning] is just important for us to get us prepared for our real jobs...because that’s what we’re going to be doing every day if you’re in private practice or even if you’re in a public health setting. But I don’t think we are very prepared for that coming out of school right now” (Brame et al. 2015, p. 622)

“We tend not to do anything with the RN students so we’re automatically segregated when we get here. There’s a class distinction and I don’t really see integration between the two types of students” (Limoges & Jagos, 2015, p. 1025)

SYNTHESIZED FINDING #2

When there is effective communication between professional groups in academic and clinical environments, trust and understanding of others’ roles develops and facilitates students’ perceptions of improved care planning and patient care:

Experiencing intra-professional learning in clinical environments was noted by students to help clarify roles, develop trust, and improve communication and teamwork, which supported the development of comprehensive care plans for patients. Students felt that by developing positive intra-professional teams, more efficient and effective patient care could be provided by both members working together. There were concerns, however, regarding the experiences of diploma students in shared academic environments who felt that communication between the professional groups was poor, including exclusion from various events, which they felt negatively impacted patient care.

The second synthesized finding was derived from two categories underpinned by a total of 9 findings. A summary of each of the two categories is provided below, together with a few key illustrations that support them. Full details of findings and illustrations are presented in Table IV.
CATEGORY 2.1: Intra-professional student collaboration may improve team communication and care planning to provide improved patient care

This category was developed from 3 findings with similar meaning, including that students expressed how working collaboratively gave them a greater sense of teamwork, understanding of others’ roles, which assisted in collaborating to write more comprehensive care plans that would support the delivery of care by both student groups. By communicating patient assessment experiences with each other, students could generate care plans that incorporate more than one perspective.

Illustration of the experience described by the findings in this category:

“This is a major example of how each discipline and education level may have different views, levels of knowledge, and reasoning, but still can come together as a team respecting these differences and form a very complete and creative plan for a client” (Jung et al., 2008, p. 47)

CATEGORY 2.2: Intra-professional learning experiences may enhance communication and teamwork to improve patient care

This category was developed from 6 findings with similar meaning in terms of intra-professional learning experiences enhancing communication and teamwork to improve patient care. Students felt that by learning together as a team they could provide increasing comprehensive and efficient care, and some voiced excitement about being part of a new way of educating health care professionals. Included in this learning partnership is a recognized need for on-going communication between the students.

Illustrations of the experience described by the findings in this category:
“Collaborating on patient care and following a patient through from evaluation to discharge allowed for an opportunity to see the whole process unfold and which person’s responsibility it is for certain parts of the process. Knowing what each person can legally do and what portions of that process can be delegated provides swifter and more effective patient care” (Mathews et al., 2010, p. 55)

“The partnership that needs to exist for the students to provide care to clients is one of trust and an agreement on consistent, thorough, and concise updates on clients between OT and OTA [students]. We have worked on this in our arrangement, which is great...this focused time on communication has been very useful for organizing proper client care” (Jung et al., 2002, p. 99)

“I felt excited to be part of this pilot experience because I felt as though we were pioneering a new concept for educational institutions...it gave me a vision of how OT practice in Canada is developing to become more efficient and perhaps more effective for our clients” (Jung et al., 2002, p. 100)

SYNTHESIZED FINDING #3

*Educator and staff attitudes and enactment of educational discourses create hierarchical relationships which impede positive intra-professional learning for students. Despite its challenges, students found that intra-professional learning helps build trust and respect:*

Clinical experiences were noted to play a powerful role in either supporting or hindering the development of intra-professional relationships. Students experienced increasing hierarchies as they continued through their intra-professional educational program and felt that attitudes of academic staff reinforced divisions between categories of students. Students valued intra-professional experiences for helping them learn current clinical practices. Various shared learning activities (including pre-placement orientation sessions involving peers, preceptors and tutors; tutorials; role playing; and paired clinical experiences), helped to build feelings of trust and respect among students. Students noted that
collaboration improved their communication and consultation skills, through a better understanding of the other groups’ educational background and role. Instructors noted that intra-professional learning experiences provided insight into future staff development priorities, and how experiences are needed that will prepare students to work in teams. Although sometimes frustrating, students recommended continuing collaborative learning experiences as they developed a greater appreciation and respect for the relationship among the two categories of professionals. From a critical analytic perspective, educational discourses enacted by students (and reinforced by academic environments) undermined the development of intra-professional collaboration (note illustrations under 3.2).

The third synthesized finding was derived from three categories underpinned by a total of 36 findings. A summary of each of the three categories is provided below, together with a few key illustrations that support them. Full details of findings and illustrations are presented in Table IV.

**CATEGORY 3.1: Learning and communication may lead to increased trust, appreciation, and respect among intra-professional student groups**

This category was developed from 9 findings with similar meaning. Students found that learning together facilitated feelings of respect and trust towards each other and although sometimes frustrating, they felt learning together remained valuable in appreciating the relationship.

Illustrations of the experience described by the findings in this category:

“They [students] appeared very comfortable together like old friends; they laughed, looked at and touched each other frequently. They complimented one another and spoke of their
mutual respect. They indicated that they did not have similar working relationships with other staff and students. They were all very positive about their experiences and recommended that this working model be mandatory” (Jung et al., 2008, p. 47)

“It [shared learning] fosters us to start thinking about the preferred relationship with the PTA [diploma student]. The workshop teaches you how important both of us [PT and PTA students] are...we are one unit working together toward the same goal” (Plack et al., 2006, p. 7)

CATEGORY 3.2: External influences such as academic, clinical, workplace settings, and interactions with others intersect to influence intra-professional learning

This category was developed from 14 findings with similar meaning, related to contextual influences (including social processes and enacted discourses) which intersected with intra-professional learning. Instructors noted how witnessing intra-professional student relationships in practice helped to identify future planning of staff development activities and needs, as well as the realization of their influence as a role model for intra-professional interactions. Students noted that as they began their intra-professional experiences, they were on equal footing with peers; however, as they progressed through their programs, there was increasing hierarchies noted in the workplace. Students felt that these hierarchies were reinforced by academic staff, and that the clinical environment was very influential in either supporting or hindering intra-professional relationships, including who might be a nurse. Hierarchical ‘talk’ by students as to how categories of students were ‘the same’ was noted to reinforce the status quo and suggested power inequities between student groups. Organizational structure of clinical sites intersected with the students’ abilities to work together intra-professionally, as instructors noted how these structures controlled the frequency, duration, and quality of their interactions with each other. Students voiced concern
that, without attention to an overall re-design of the curriculum and/or program, adding in intra-professional learning activities would only overload their already heavy programming.

From a critical analytic perspective, educational discourses enacted by students (and reinforced by academic environments) undermined intra-professional collaboration. Student conversations activated talk of nursing categorization and hierarchies (skill vs. theory, college vs. university) which undermined facilitation of learning intra-professional collaboration. Students questioned the motives behind why, despite being taught that collaborative practice improved patient safety and outcomes, they were denied this educational experience.

Illustrations of the experience described by the findings in this category:

“It would be very short-term and limited benefit and there would be a lot of time gone that’s kind of wasted. If they [diploma students] were to hang out with us [baccalaureate students] when we are treating patients, it might be good for them [diploma students] for the first couple of times, but after that I think they wouldn’t get anything out of it and having them there would certainly not help us” (Evans et al., 2012, p. 243)

“It appears that despite the stated goals of [our] research study, the [hospital] organization structure determines the students’ ability to work collaboratively by controlling the frequency, duration, and quality of their interactions” (Jung et al., 2008, p. 47)

“Being able to witness various types of PT-PTA [baccalaureate-diploma] student interactions was also helpful to me as a [clinical educator] in planning staff development activities. The project made me rethink how I as a clinical educator serve as a role model for [intra-professional] student interactions” (Mathews et al., 2010, p. 56)

“It’s like, this is what you’re going to do in the workplace, you’re going to be working with these individuals, but we’re not going to tell you what their role is or how they are going to do it, you’re just going to have to figure it out on your own” (Limoges & Jagos, 2015, p. 1025)
“I think we see that we are all equal, that there really is no other category that we are all the same. There’s nothing different about us” (Limoges & Jagos, 2015, p. 1026)

The BScN program can perpetuate division by focusing on the importance of a degree education. The impression is given that the RN is more important, a more useful member of the healthcare team” (Limoges & Jagos, 2015, p. 1025)

CATEGORY 3.3: Intra-professional learning may impact instructors’ roles and understandings of teaching collaboration

This category was developed from 13 findings with similar meaning. Intra-professional and collaborative experiences provided learning opportunities for instructors or preceptors to learn about roles. Students noted how tutors or instructors played an important role in facilitating intra-professional discussions which assisted student learning. Students felt that instructors did not always assist in addressing boundaries and tensions in working relationships between categories of students, which maintained the status quo and did not assist in developing understandings of professional boundaries. Differences in curricula were noted, with baccalaureate students discussing how diploma students learnt about delegation and roles among students within their program, however baccalaureate students did not have opportunities for this learning in their program. Pre-placement orientation sessions were helpful in initiating intra-professional relationships not only with students, but also with preceptors and tutors. The actual experience of intra-professional collaboration among students was felt to be significant for improving relationships.

Illustrations of the experience described by the findings in this category:

“I think that this project provides a very interesting method of learning, and that it is effective because each student learns both the OT and OTA aspects of the field. It provides both an opportunity to learn, by this I mean not only the students, but also the clinical
supervisors. While speaking to my supervisors, I learned that for them, this was an opportunity to explore along with the students how an assistant could be used in various areas of practice” (Jung et al., 2002, p. 100)

“The tutors were quite helpful in stimulating the group with discussions and helping us phrase out our thoughts so that they would be meaningful to the groups’ learning” (Jung et al., 2008, p. 47)

The PTAs [diploma students] had more of a sense of the differences between our practices, they get more, training at it. It’s brought up to them a little bit more” (Plack et al., 2006, p. 7)

“Reading is not enough. The experience of sharing and collaborating [in the clinical and tutorial setting] was the clinching factor to improved relationships and appreciation of each other’s roles” (Jung et al., 2008, p. 47)

“If I were to straight out ask that question [are you an RN or an LPN], it would probably be more uncomfortable to the person who I’m asking it to. They might respond by saying, ‘oh, I’m just an LPN’, instead of saying, ‘yes, I am an LPN’. It’s almost like they’re not proud of their status” (Limgokes & Jagos, 2015, p. 1025)

SYNTHESIZED FINDING #4

*Engagement in intra-professional learning assists students to clarify roles and negotiate scopes of practice, however lack of role clarity, poor communication, differences in clinical and academic education, and exclusion of categories of students creates tension and frustrations in intra-professional learning:*

For diploma students, collaborative learning opportunities assisted them in understanding and articulating their own role, as well as those of their baccalaureate student partners. Both diploma and baccalaureate students found that working together helped to clarify misconceptions about the diploma students’ role and its potential impact on the practice of baccalaureate-prepared students. Baccalaureate students felt that having more
intra-professional learning experiences would assist in being able to negotiate and understand scopes of practice of the diploma students once in practice. Both groups of students noted that intra-professional learning helped them articulate role differences and similarities.

There were notable difficulties experienced with intra-professional learning. Lack of role clarity early in intra-professional experiences made learning frustrating, as did a lack of understanding of others’ roles and sharing preceptors. Students also felt that poor communication between groups, relating to a lack of respect and exclusion of diploma students as equal learning partners, created frustration. Students noted that lack of consistency in education and in provision of patient care did not provide learning experiences which would prepare them to work in teams. Both baccalaureate and diploma students experienced discomfort and resistance with baccalaureate students’ supervisory role element, possibly resulting from tensions in practice and the role stratification within the profession. Timing of intra-professional learning is significant, in that students felt that matching groups so they had similar academic and clinical experiences would decrease one student group feeling disadvantaged over the other.

The fourth synthesized finding was derived from two categories underpinned by a total of 18 findings. A summary of each of the two categories is provided below, together with a few key illustrations that support them. Full details of findings and illustrations are presented in Table IV.

**CATEGORY 4.1: Initiating and maintaining intra-professional learning relationships may be frustrating for students**

This category was developed from 12 findings with similar meaning. Students reflected upon past learning experiences and felt that they did not adequately prepare them to
work effectively on teams. Both student groups expressed frustration at a lack of understanding of their role by the other; by sharing a preceptor that led to feelings of compromised learning; that gaps in communication between professional groups was tied to lack of respect; and that diploma students were sometimes excluded from on-campus activities that were meant for both baccalaureate and diploma students which made them feel unwelcome. Learning about others’ roles was difficult due to lack of role clarity for both student groups, although this did improve over time. Apprehension and frustration were expressed for those graduating, over concern about knowing little about the other team members’ roles in practice.

Both baccalaureate and diploma students were uncomfortable and resisted the supervisory element of baccalaureate student practice, which students felt reflected real-life practice and the results of stratification of roles within the discipline. Frustrations were also noted by baccalaureate students, who felt disadvantaged when paired with diploma students who had already had previous clinical placements. It was noted how matching groups of students with similar amounts of clinical experience would have been more beneficial. Diploma students voiced frustrations with the limited clinical knowledge of baccalaureate students, while baccalaureate students voiced concerns about the over-confidence of the diploma students. Journal writing was found to be an area where students often voiced their frustrations regarding intra-professional learning. Lastly, in a critical analysis of enacted collaborative education discourses, it became evident that students attempted to reconcile tensions by activating boundary work by activating hegemonic positions of nursing categories.

Illustrations of the experience described by the findings in this category:
“Once we had established approximately where our professional boundaries overlapped and where they separated, we were able to accept what each other was doing” (Jung et al., 2002, p. 99)

“I had some issues on defining roles, delegating duties, providing constructive feedback, etc. I told [my preceptor] that I was uncomfortable supervising as a student to another student as I have not done that before” (Jung et al., 2002, p. 101)

“They [diploma students] have more [clinical] experience, they are more knowledgeable than we are and it’s kind of intimidating because they’re saying ‘this is a fact, I’ve been out there, I know’ and then I was like ‘OK, should I just take it for granted because you (ie, the PTA students) do have more knowledge? I mean, right now you know a lot more about it than I do” (Plack et al., 2006, p. 8)

“Some of them [diploma students] …were getting a little aggressive which automatically turns me off and makes me angry…I kind of got a negative view. They kind of came to us like ‘well, we’ve done all this, we know all this’” (Plack et al., 2006, p. 7)

“There’s just not enough interface in play for us to have any respect. You have to know somebody before you can respect them. And…there are several dental hygienists I’ve never seen before. And that’s sad. You can’t respect someone without working with them several times or at least knowing who they are” (Brame et al., 2015, p. 621)

“When I go into the hospital, I noticed that the bedside manner is missing from the RN. I see that the RN is so much in front of the computer…I don’t see that the RN is with the patient. And this makes little sense to me if they are supposed to be looking after the complex patients. Sometimes I think the RN is a glorified secretary. I’m very surprised at how little the RN wants to be at the bedside. People say that the BScN program is to learn to be an administrator” (Limoges & Jagos, 2015, p. 1026)

**CATEGORY 4.2: Intra-professional learning may help in clarifying misunderstandings of roles by other student groups**

This category was developed from 6 findings with similar meaning. Learning together
assisted both student groups to clarify misunderstandings and increase appreciation of the roles of each student. By working together, diploma students voiced how baccalaureate students voiced surprise at the capabilities of the diploma students, as well as how diploma students had some similar elements in their education/curricula (such as client-centeredness) as the baccalaureate programs.

Illustrations of the experience described by the findings in this category:

“The [diploma student] had increased opportunity to interact with the team and to experience various types/degrees of supervision…it opened my eyes to some of the misconceptions students and experienced therapists have about our evolving clinical roles. Unfortunately, many PT [baccalaureate] students have very limited knowledge about the roles/practice of PTAs [diploma students] and know even less about their academic preparation” (Mathews et al., 2010, p. 55)

“I am happy I went through that day. The PT [baccalaureate] students were very surprised at the training we had. It was great for them to realize who we are and what we are capable of doing” (Plack et al., 2006, p. 7)

“It was interesting to learn that they [diploma students] were familiar with concepts that are so widely used in the OT [baccalaureate] program (like client-centeredness) and that they have to know a lot of the same things that we learn about” (Jung et al., 2008, p. 47)

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<td>1.1 Various approaches to learning, such as role-playing, 2:2 clinical pairing, journal writing, and tutorials and fieldwork may facilitate intra-professional collaboration</td>
<td><strong>Synthesized finding 1:</strong> When various shared learning experiences (such as role-playing, orientation sessions, tutorials, journal writing, and shared clinical placements) are provided to students, students develop team-building, communication, leadership, and supervisory skills. Students value intra-professional</td>
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their roles in relation to student partners” (p. 46) (U)

Positive influence on professional identity: “In support of IPE, both groups were surprisingly closely aligned in their sense of professional identity” (p. 243) (U)

Process: Students described “how the authenticity of the experience and the opportunity to role play from the perspective of their future colleagues enhanced the learning process” (p. 7) (U)

Reactions: “both groups found the material equally important to their future roles. While PTA students commented on how issues of delegation and utilization are discussed in every course in their curriculum, this was not true for PT students” (p. 7) (U)

Relationship: “Building trust and respect were promoted early on starting with the pre-placement orientation sessions at which students were encouraged to begin to develop relationships with other peers, preceptors, and tutors. This initial step in the process was paramount in enhancing clinical service partnerships” (p. 46) (U)

Shared learning: “When students were asked if they felt the School of Dentistry had shared learning among dental, dental hygiene, and dental assisting students, the answer
was a unanimous no” (p. 619) (U)

Three findings: #1: “Developing the Relationship: the students identified the importance of developing their relationship through activities that required shared learning, communicating effectively, and building trust and respect” (p. 46) (U)

“A final year dental technology student not only recognizes his/her professional identity but relates this to problem-solving” (p. 243) (U)

“All of the participants indicated that the experience was beneficial and should be continued despite the challenges faced” (p. 56) (U)

“An additional concern that emerged from all three groups was that of time. Students were ultimately concerned that if shared learning was seen as an add-on to the current curriculum as opposed to a redesign of the pedagogical system it would overload their already busy schedules” (p. 619) (U)

“Both groups of students valued these [role-reversal] role play experiences as having helped to broaden their own perspectives on the roles, responsibilities, and potential attitudes of their future team mates” (p. 8) (U)

“For one student, supervision issues became much clearer after reviewing some of the
“Given this experience was so early in the curriculum, the PT students felt disadvantaged with respect to their level of knowledge” (p. 7) (U)

“Majority of dental technology respondents recognized involvement and inclusion, accompanied by common knowledge, as one way of learning how to collaborate...whereas a final-year dentistry student believed there is no need for IPE or involving clinical components in dental technology education” (p. 243) (U)

“PTA students focused more on how to extend the experience” (p. 8) (U)

“PTA students were particularly vocal and discussed how they had learned about issues from the affective domain that they had not previously addressed or thought about in class. They shared how they felt more confident and less intimidated. They recognized that it was their job to communicate their skills and abilities to future supervisors and that communication was critical for strong team-building” (p. 8) (U)

“Students also used the tutorials to discuss personal experiences that were uncomfortable” (p. 48) (U)
| “The 2:2 clinical experience enhanced collaboration and direction skills of students” (p. 54) (U) |
| “The process of writing [journals] appeared to help some students work through their thoughts and feelings about issues” (p. 98) (U) |
| “The shared experience and use of journals had some pitfalls. Two student OTs working together identified shared frustration with the student OTAs in their journals. The student OTs used the journals and each other to exclude the student OTAs as equal learning partners, and remained frustrated with the learning experience” (p. 99) (U) |
| “The students benefitted from presenting client cases for discussion” (p. 47) (U) |
| Segregated education impeded their ability to work together, attributing struggles in the workplace to the fact that they never study or share classes together” (p. 1025) (U) |
| Shared learning: “When students were asked if they felt the School of Dentistry had shared learning among dental, dental hygiene, and dental assisting students, the answer was a unanimous ‘no’” (p. 619) (U) |
| “When asked if they thought there is a need for this kind of shared learning, the responses |

1.2 Considering collaborative/shared learning models
were unanimously in favour of it” (p. 619) (C)

“An additional concern that emerged from all three groups was that of time. Students were ultimately concerned that if shared learning was seen as an add-on to the current curriculum – as opposed to a redesign of the pedagogical system – it would overload their already busy schedules” (p. 619). (U)

“Overall, the students overwhelmingly felt that shared learning would help prepare them for ‘the real world’ after completion of their respective programs” (p. 622) (U)

Collaborative learning:
“Learning together led to feelings of respect and trust about the different knowledge and skills each brought to the client situation as well as the different responsibilities each had in the care of the client” (p. 99) (U)

Communication and Respect:
“Students consistently discussed a gap in communication among these disciplines, with some suggesting the communication issues were having a negative impact on patient care. These issues seemed to be a major concern of these [dental hygiene] students, who also indicated that they felt ‘out of the loop’ or even unwelcome at events billed for the whole school but then seemed to be

| 2.1 Intra-professional student collaboration may improve team communication and care planning to provide improved patient care | Synthesized finding 2: When there is effective communication between professional groups in academic and clinical environments, trust and understanding of others’ roles develops and facilitates students’ perceptions of improved care planning and patient care |
geared toward dental students” (p. 621) (U)

Impact on client care and future practice: “there was a realization that an OT and OTA working together could provide better care than one or the other alone, thus improving the effectiveness and efficiency of OT services” (p. 100) (U)

Impact on patient care: “All students agreed that shared learning would have a positive impact on patient care” (p. 621) (U)

“Participants found the experience helpful in enhancing their collaboration and direction skills” (p. 55) (U)

“Responses to the question about participants’ expectations from the shared learning experience were very positive, mentioning professional growth, increased learning, and the opportunity to experience teamwork in the clinical setting” (p. 77) (U)

Understanding roles: “Through understanding each other’s roles and effective communication there emerged a sense of teamwork and genuine interest in collaborating on a very comprehensive client plan that ultimately complemented the delivery of OT services” (p. 47) (U)

2.2 Intra-professional student collaboration may enhance communication and teamwork to provide improved patient care
“PT participants wrote that the experience enhanced their ability to write a more comprehensive plan of care” (p. 55) (U)

“The 2:2 clinical experience enhanced the SPTs ability to write a comprehensive and effective plan of care that incorporated the PTA” (p. 54) (C)

“The 2:2 clinical experience provided insight into current clinical practices and processes” (p. 54) (U)

“Data show how students experience discomfort from the ways that the two types of nurse are discussed in public and in the clinical setting...students attempt to reconcile these tensions and disjunctures by activating limited and hegemonic positions...more often though, BScN and PN students reverted to ‘sameness talk’, suggesting that there was not real difference between the LPN and the RN except for the amount of money they made for the same work” (p. 1026) (U)

Perceived domination/lack of respect: “dental technology students reported they had a greater equality with dentistry students in the early years of the program and spoke of this diminishing into a hierarchical division over time. Dental students readily acknowledge a hierarchy within the workplace among students, with the dentist at the top of the pecking order. It was

| 3.1 External influences such as academic, clinical, workplace settings and interactions with others intersect to influence intra-professional learning | Synthesized finding 3: Educator and staff attitudes and enactment of educational discourses create hierarchical relationships which impede positive intra-professional learning for students. Despite its challenges, students find that intra-professional learning helps build trust and respect |
suggested that attitudes of academic staff reinforce these divisions. Dentistry students perceived there was little they could learn from dental technology students” (p. 243) (U)

“When asked if they thought there is a need for this kind of shared learning, the responses were unanimously in favour of it” (p. 619) (C)

“An additional concern that emerged from all three groups was that of time. Students were ultimately concerned that if shared learning was seen as an add-on to the current curriculum-as opposed to a redesign of the pedagogical system- it would overload their already busy schedules” (p. 619) (U)

“DH1 and DH2 groups agreed that intraprofessional experiences were minimal and did not provide true intraprofessional or team experiences” (p. 619) (C)

“How education is used to establish and convey expectations that form ruling relations: Students in both programs said they were routinely told that collaboration between nurses would promote patient safety and positive patient outcomes. [Students] questioned the motives for withholding this education, given the possible contributions from ‘working together’ …this disjuncture made them feel pressure to practice in a certain way and
uncomfortable because they did not know how to participate in collaborative care to achieve the stated outcomes” (p. 1025) (U)

“One student explicitly noted that the clinical environment, despite the available learning opportunities, plays a powerful role in supporting or hindering the building of relationships” (p. 47) (U)

“PT CI indicated that the experience provided insight into additional staff development needs” (p. 56) (U)

“PTA students found the experience satisfying not only because they felt they had learned from the experience, but also because they were able to educate future colleagues and dispel some misconceptions about their role. The collaborative session helped them define their role more clearly not only for themselves, but for the PT students” (p. 7) (U)

“Students reactions to and perceptions of the teaching strategy: PT and PTA students confirmed what was evident in the literature. Both PT and PTA students discussed the misconceptions of the role of the PTA present in practice, as well as concern regarding the role of the PTA and its potential impact on the practice of the PT” (p. 6) (C)
“The opposite perspective was also heard from a PT student” (p. 8 (U))

“The students were also immersed in the health care culture and experienced the real-life work dilemmas that challenged their notions of ideal practice. On the topic of workload, one student suggested that efficiency could be improved through better use of the services of an OTA” (p. 47) (U)

“This crisis [SARS outbreak during placements] might have helped the students see how much of a bond they had developed in a short period of time” (p. 49) (C)

#2—“Understanding roles: Defined OT and OTA roles in the clinical setting as well as role modelling by tutors in the educational setting, affected student collaborative learning. As students learned to work together, they began to understand their own roles better and then to describe their own roles in relation to student partners” (p. 46) (U)

Perceived domination/lack of mutual respect: “Dental technology students reported they had a greater equality with dentistry students in the early years of the program and spoke of this diminishing into a hierarchical division over time. Dental students readily acknowledged a hierarchy within the workplace among students, with the dentist at the top of the pecking order. It

3.2 Intra-professional learning may impact instructors’ roles and understanding of teaching collaboration
was suggested that attitudes of academic staff reinforce these divisions. Dentistry students perceived there was little they could learn from dental technology students” (p. 243) (U)

Reactions: “Both groups found the material equally important to their future roles. While PTA students commented on how issues of delegation and utilization are discussed in every course in their curriculum, this was not true for the PT students” (p. 7) (U)

Relationship: “Building trust and respect were promoted early on starting with the pre-placement orientation sessions at which students were encouraged to begin to develop relationships with other peers, preceptors, and tutors. This initial step in the process was paramount in enhancing clinical service partnerships” (p. 46) (U)

“Students in each program suggested that the status quo is held in place when the tensions and disjunctures within nurses’ working relationships are not addressed...students felt they were not guided by their clinical teachers or faculty to address the boundaries and differences in professional responsibilities including how to provide effective consultation in practice” (p. 1025) (U)

Three findings: #1: “developing the relationship: The students
identified the importance of developing their relationship through activities that required shared learning, communicating effectively, and building trust and respect” (p. 46) (U)

Understanding roles: “In support of the student comments on understanding the roles, the OT tutor stated how the experience of sharing and collaborating ... improved relationships and appreciation of each other’s roles” (p. 47) (U)

“Issue of consistency in clinical education and patient care: all groups agreed that the current team learning experiences were insignificant and did not provide valuable experiences preparing them to work as a dental team” (p. 619) (U)

“PT CI indicated that the experience provided insight into additional staff development needs” (p. 56) (U)

“The collaborative learning concept included the preceptor as learner by one of the students in a situation where the preceptor had never supervised a student OTA before... there appeared to be an authentic understanding of the collaboration involved in teamwork from the fieldwork experience” (p. 100) (U)

“The OT and OTA students who were paired exchanged more information and
interacted more closely during these tutorials than with their own respective classmates at school” (p. 47) (U)

“The scenarios brought up in the student discussions evoked in this OTA tutor a personal and powerful reaction based on her own past experiences” (p. 47) (U)

“The tutor played an important role in the learning process” (p. 47) (U)

“The 2:2 clinical experience provided insight into current clinical practices and processes” (p. 54) (U)

Collaborative learning: “Learning together led to feelings of respect and trust about the different knowledge and skills each brought to the client situation as well as the different responsibilities each had in the care of the client” (p. 99) (U)

Relationship: “Building trust and respect were promoted early on starting with the pre-placement orientation sessions at which students were encouraged to begin to develop relationships with other peers, preceptors, and tutors. This initial step in the process was paramount in enhancing clinical service partnerships” (p. 46) (U)

Three findings: #1: “Developing the relationship: The students identified the importance of developing their relationship through activities that required shared learning,

3.3 Learning and communication may lead to increased trust, appreciation and respect among intra-professional student groups
communicating effectively, and building trust and respect” (p. 46) (U)

Understanding roles: “Through understanding each other’s roles and effective communication there emerged a sense of teamwork and genuine interest in collaborating on a very comprehensive client plan that ultimately complemented the delivery of OT services” (p. 47) (U)

“All 3 respondents indicated that the experience provided them an opportunity to observe interactions between PTs and PTAs, which they found beneficial” (p. 54) (U)

“Participants noted an improvement in communication skills, increased confidence in assigning tasks, and more effective intradisciplinary consultation, which students attributed to an improved knowledge of educational background and a better understanding of roles” (p. 78) (U)

“The OT and OTA students who were paired exchanged more information and interacted more closely during these tutorials than with their own respective classmates at school” (p. 47) (U)

“While both experienced frustration, both also suggested that this collaborative model be continued since they felt they
had developed a greater appreciation for the PT-PTA preferred relationship” (p. 7) (U)

Communication and Respect: “Students consistently discussed a gap in communication among these disciplines, with some suggesting the communication issues were having a negative impact on patient care. These issues seemed to be a major concern of these [dental hygiene] students, who also indicated that they felt ‘out of the loop’ or even unwelcome at events billed for the whole school but then seemed to be geared toward dental students” (p. 621) (U)

Learning about each other’s roles: “Most of the students identified the value of learning about each other’s roles. However, this did not seem to be an easy process as roles were not always clear. Early on, students struggled with trying to understand and accept each other’s roles in context to their own, however, for most the clarity did eventually come by the end of the placement” (p. 99) (U)

Relationship: “Communication is key among all team members and the OT and OTA need to be on the same page for all clients to be able to chart their progress and report at team meetings” (p. 46) (U)

Resistance to roles: “For some, the supervisory element that the student OTs were asked to include was met with

| 4.1 Initiating and maintaining intra-professional learning relationships may be frustrating for students | Synthesized finding 4: Engagement in intra-professional learning assists students to clarify roles and negotiate the scope of practice; however, lack of role clarity, poor communication differences in clinical and academic education, and exclusion of categories of students creates tension and frustrations in intra-professional learning |
discomfort and resistance from both the student OTs and student OTAs. Although this was only one component of the learning experience, some students found it may have compromised their learning...this reflects the challenges of real life practice and some of the tensions apparent in the stratification of roles within the profession” (p. 100) (U)

Understanding of roles: “All groups acknowledged a lack of understanding of the roles of the other members of the oral health care team, with some expressing apprehension and frustration for those who were graduating” (p. 621) (C)

“Both groups felt that the process was important and should be continued...each offered suggestions...feeling at a disadvantage, because it was so early in their educational process and they had not yet had any clinical experiences, whereas the PTAs had already completed 2 clinical experiences, the PT students talked most about matching the groups of students so they had similar academic and clinical experiences” (p. 8) (U)

“Frustration and at times anger, was evident in both focus groups. While the PTA students were disturbed by the limited knowledge of the PT students, the PT students were distressed by their perception that some of the PTA students were too aggressive in defending their
roles as valuable members of the health care team” (p. 7) (U)

“Issue of inconsistency in clinical education and patient care: All groups agreed that the current team learning experiences were insignificant and did not provide valuable experiences preparing them to work as a dental team” (p. 619) (U)

“The collaborative learning approach also posed a challenge with some of the students. The sharing of a preceptor with another student seemed difficult. There was a feeling of compromised learning at times that somehow one might lose out because of the lack of one-to-one relationship with one’s preceptor” (p. 100) (U)

“The shared experience and use of journals had some pitfalls. Two student OTs working together identified shared frustration with the student OTAs in their journals. The student OTs used the journals and each other to exclude the student OTAs as equal learning partners, and remained frustrated with the learning experience” (p. 99) (U)

“The students evolved from struggling to explore and understand roles to eventually developing an awareness of the roles and responsibilities” (p. 99) (U)
“This lack of communication was also intimately tied, in the student’s view, to a perceived lack of respect among the three groups” (p. 621) (U)

“The 2:2 clinical experience provided insight into current clinical practices and processes” (p. 54) (U)

“Members of the DDS4 group focused more on roles in order for them to run a private dental practice and reported feeling that they needed more interaction during school to better prepare them...such as legal implications, such as if a dentist unknowingly asks the dental assistant or hygienist to perform duties not in their scopes of practice” (p. 621) (U)

“Examples of participants’ perceptions of the changes in students’ intradisciplinary collaborative competencies” (p. 77) (U)

“PTA students found the experience satisfying not only because they felt they had learned from the experience, but also because they were able to educate future colleagues and dispel some misconceptions about their role. The collaborative session also helped them define their role more clearly not only for themselves, but for the PT students” (p. 7) (U)

“Students’ reactions to and perceptions of the efficacy of the teaching strategy: PT and PTA students confirmed what was evident in the literature.
Both PT and PTA students discussed the misconceptions of the role of the PTA present in practice, as well as concern regarding the role of the PTA and its potential impact on the practice of the PT” (p. 6) (C)

“Students were able to articulate the differences and the similarities in their respective roles. Many expressed some surprise at the other’s knowledge and skills” (p. 47) (U)

Discussion

This review identified and included 8 qualitative studies of moderate methodological quality, that have addressed the question of pre-licensure students and their educators’ experiences of learning to work on intra-professional teams. The included studies together provided a body of evidence that was then analyzed and synthesized to address the question. More specifically, a total of 67 findings about intra-professional experiences were extracted from the studies, which were organized into nine categories based on similarity of meaning and then subsequently aggregated into four synthesized findings, each describing a different key feature or element of the multi-dimensional and complex experience that emerged from the existing qualitative studies. Directly below is a summary of the essence of the experience captured in each of the four synthesized findings.

i) When various shared learning experiences (such as role-playing, orientation sessions, tutorials, journal writing, and shared clinical placements) are provided to students, students develop team-building, communication, leadership, and supervision skills. Students value intra-professional learning activities for learning others’ roles, preparing them for the workplace, and developing their professional identity
The evidence revealed that students felt that having opportunities to learn intra-professionally would help them learn about each other’s roles, help prepare them for the workplace, and assist them in developing professional identities. Various shared learning processes (such as role playing, orientation sessions, tutorials, journaling, tutor role modelling, and shared clinical placements) were significant in providing various ways of engaging intra-professionally. However, adding on shared experiences, without consideration to the larger pedagogical landscape, was a concern for students, as they felt that this would overload their already heavy programs. The timing of intra-professional experiences was important to students, as some groups felt disadvantaged if they had experienced less clinical experience than the students they were paired with for intra-professional experiences.

Students noted their segregated learning experiences, which they felt interfered with future working relationships, and a discursive analysis (Limoges & Jagos, 2015) noted the use of the term ‘segregated’ by some students due to its historical ties to oppression and repression. Despite the difficulties experienced with intra-professional learning, students felt that shared learning experiences were worthwhile.

**ii) When there is effective communication between professional groups in academic and clinical environments, trust and understanding of others’ roles develops and facilitates students’ perceptions of improved care planning and patient care**

The purposes of intra-professional learning included assisting with clarifying roles, developing trust and respect, and improving communication and teamwork. Evidence reveals that these positive shared learning experiences in clinical environments ultimately assisted students in developing comprehensive care plans and perceptions of providing more efficient and effective patient care. However, in academic environments, students noted poor intra-
professional communication among groups and diploma students felt excluded by baccalaureate students with respect to on-campus activities that were to be for both groups. Diploma students felt that this experience could have a negative impact on patient care.

iii) Educator and staff attitudes and enactment of educational discourses create hierarchical relationships which impede positive intra-professional learning for students. Despite its challenges, students found that intra-professional learning helps build trust and respect.

According to the evidence, various processes for intra-professional learning (tutorials, orientation sessions with tutors, shared clinical placements, role playing, and journal writing) facilitated collaborative relationships and assisted students to understand and appreciate each other’s roles. Feelings of trust and respect for the contributions of each student evolved from intra-professional consultative communication. Instructors found this learning beneficial for preparing students for working in teams after graduating, and also in considering future staff development activities. However, students also questioned why they were not exposed to intra-professional learning experiences, despite being taught that collaboration improved patient safety and patient outcomes. Power inequities were revealed as students activated hierarchical and categorical ‘talk’ to describe nursing categories, or utilized ‘sameness’ talk, both of which undermined the development of collaborative relationships.

iv) Engagement in intra-professional learning assists students to clarify roles and negotiate scopes of practice, however lack of role clarity, poor communication, differences in clinical and academic education, and exclusion of categories of students creates tension and frustrations in intra-professional learning.
Evidence revealed that lack of role clarity early in intra-professional learning experiences, lack of understanding of each other’s roles, and sharing preceptors were frustrating for students. Diploma students felt that communication with them by baccalaureate students was often poor, due to lack of respect and acceptance as equal learning partners which increased diploma students’ frustration. Inconsistent shared learning experiences within varied programs and clinical contexts negatively impacted students’ experiences learning teamwork. Tensions in practice and role stratification within professions created resistance and discomfort with baccalaureate students’ learning to supervise diploma students as part of their role. To reconcile the tensions, students activated limiting, hegemonic positions regarding the other categories of nurses.

Evidence reveals that both diploma and baccalaureate students found that shared learning experiences helped them to better articulate similarities and differences among their roles. Baccalaureate students found that having more shared learning experiences helped them better understand scopes of practice of diploma students which would better prepare them for practice. The evidence also revealed that both groups of students found shared learning experiences clarified misconceptions of the diploma student role and its potential impact on the baccalaureate student role.

Interesting for the reviewers, was the critical, discursive paper (Limoges & Jagos, 2015) which offered a view of intra-professional learning experiences from a slightly different lens. This more interpretive perspective, revealing how discursively constructed social processes within education are enacted by students to reveal power inequities and division, helps to disrupt the normalizing discourses of teaching and learning intra-professional collaboration. Thus, the primary reviewer, in addition to a secondary and
associate reviewer, discussed how this paper fit or not fit with this systematic review. Clear findings were noted (identified as social processes, somewhat consistent with the underlying philosophical perspective of the paper) that related to learning intra-professional collaboration.

The authors’ analysis of reflective journal entries and interview data sought to reveal how student experiences were organized via enacted educational texts and/or discourses. Included in this analysis were findings that did reflect intra-professional student experiences; it was these findings that were extracted (with supporting illustrations) for this systematic review. However, it is worth noting that it is the analytic lens that provided a means by which the authors were able to disrupt the everyday ‘talk’ or work of being a student and expectations for learning to collaborate. This particular approach enables understandings on another dimension of experience – one of how the everyday activation of educational texts and conversations/discourses organized or framed students’ intra-professional experiences. Thus, it is through this analytic lens that the authors revealed how students activated boundary talk, which revealed power relations and created division (instead of collaboration) among categories of students. So, since students did talk about their experiences of intra-professional collaboration (and there were clear findings), it was felt that this paper met our inclusion criteria for this systematic review.

Limitations

The English language limitation means that studies published in other languages (of which there were nine) were excluded. Our preliminary literature search (as described above) did include initial full-text reviews of the articles without a search date limitation, to subsequently establish a search date to increase specificity in further searches. Thus, there
remains the possibility that some relevant articles may have been overlooked. The understanding of pre-licensure student and educator experiences of learning to work on intra-professional teams generated by this review is based on qualitative evidence from a relatively narrow range of countries. While the intention of this review was to draw evidence from countries with similar contexts to Canada (including the USA, Australia, Great Britain, New Zealand, Denmark, Finland, Sweden, Iceland, and Norway), only studies from three countries, namely Canada, Australia, and the United States (US), were identified. Of the 8 studies, 6 were conducted in metropolitan and urban areas with one study only identifying a Southern US state and another not specifying a particular city in a Canadian province. This suggests that the findings are therefore more transferable to the urban setting and metropolitan areas than rural settings. It therefore cannot be assumed that the findings of this synthesis apply to all other countries where cultural and health care contexts may differ. Therefore, it is important to be aware of the differing contexts.

The findings of the review are based on an adequate number of studies (8) of moderate quality, therefore they appear to offer a reliable perspective of student and educator experiences of learning intra-professional teamwork. Although the impetus for this review originally came from an interest of the primary reviewer to pursue understandings of intra-professional learning experiences of nursing students, there were few papers available on this topic within nursing, and some that were available did not meet the inclusion criteria due to not having identifiable findings and supportive illustrations.

One gap of this systematic review is that included papers pertained to experiences of students and/or educators only within the disciplines of nursing, dental health, physiotherapy, and occupational therapy. It is also worth noting that each discipline may have varying
understandings, cultures, and historical norms surrounding intra-professional collaboration. A second gap in the literature relates to data and/or findings pertaining to educator experiences. The majority of findings for this review related to student experiences, with much less attention given to the experiences or attitudes of educators, preceptors, and tutors. The critical analysis paper (Limoges & Jagos, 2015) raises further questions regarding the role of educators and educational discourses or conversations, which require further exploration for their role in introducing or sustaining conversations that may influence the development of collaborative relationships between categories of students.

A third gap relates to the availability and quality of literature for this review. While reiterating the earlier discussion regarding the unresolved issues surrounding quality appraisal of qualitative research, it is also worth noting that only one of the papers included in this review had explicit, clearly stated philosophical underpinnings. Thus, questions arise as to whether there are implicit, unstated assumptions of the authors, or whether authors have addressed these underpinnings as part of their research planning and execution. Studies were sometimes identified as mixed methods or qualitative; others did not state a specific methodology but rather described the study in terms of surveys and focus groups, or program evaluations. Also relating to unstated or implicit epistemological underpinnings, was how some authors (Brame et al., 2015; Evans et al., 2012; Plack et al., 2006) utilized homogeneous groups of students for focus group data.

This review did not include patient and/or family experiences of working with student care teams in various contexts. This remains a significant area for future research in light of current shifts in some acute care areas where new care models have been introduced and unregulated health care workers are joining care teams.
Conclusion

The synthesized findings regarding students and educators learning to work on intra-professional teams reveal that despite its challenges, students found that shared learning experiences assisted them in understanding each other’s roles, develop communication and collaborative competencies, develop comprehensive care plans, provide more efficient care, and helped prepare them for their future roles as health care professionals. Various contextual elements could either hinder (hierarchies in practice, academic staff attitudes, inconsistent shared learning activities, lack of understanding or respect of roles, timing of shared experiences) or facilitate (tutor role modelling, clinical/classroom pairings, role playing) shared learning experiences. This review raises possibilities for directions for future research, in addition to supporting certain recommendations for practice. We did not find research for this review from Great Britain, New Zealand, or Nordic countries, so exploration of the significance of this review in these contexts would be beneficial.

Implications for practice/education

The timing of this review is significant, as changes to care models and team configurations are occurring in some health care contexts (MacKinnon et al., 2015a; 2015b; forthcoming). As care models and teams continue to shift, it becomes significant to consider how students, as well as educators, can be best prepared to work within these shifting team contexts, in addition to understanding how changing health care teams impact patient care. Recommendations are outlined below for assisting to prepare students and educators. The findings in this review suggest that:

▪ Educators introduce pre-licensure intra-professional shared learning activities (such as role-playing, pre-placement orientation sessions, tutorials, journal writing, and
shared clinical placements) as part of larger pedagogical and curricular re-design, to assist the development of collaborative working relationships for practice (Grade B)

- Educators consider the appropriateness and significance of educational levels/clinical experience of each student group prior to the introduction of intra-professional learning activities (Grade B)

- Clinical and academic educators further explore contextual, cultural, attitudinal, discursive, and/or institutional elements which may hinder/support the development of collaborative intra-professional student relationships (such as clinical hierarchies; educational silos and discourses; poor communication between student/educator groups; tutors as role models; intra-professional learning as valuable to students; assisting role and scope of practice clarification/understanding; increasing trust and respect; and perceptions of improved care planning, teamwork, and care provision) (Grade B)

- Clinical and academic educators consider the development of student practice models which could assist in the development of intra-professional collaborative competencies (Grade B)

Some examples of ways to possibly apply the above recommendations include: faculty of degree and diploma programs (within/between institutions) beginning to converse with each other about collaborative learning; students of various programs being able to share clinical practica assignments; or instructors teaching both categories of students in a clinical rotation or simulation lab. Certain courses could be co-taught by instructors of differing programs with students of both programs attending common core disciplinary courses. Curricular planning could include developing collaborative competencies for students to meet as they learn in their programs; faculty and instructors could begin to communicate within
academic institutions to develop collaborative learning projects for students in baccalaureate and diploma programs within a specific discipline.

**Implications for research**

The motivation for this systematic review was to understand the diverse experiences of pre-licensure health professional students and their educators learning to work on intra-professional teams. There is a need for further qualitative studies to develop a clearer understanding of not only pre-licensure students’ experiences, but also the experiences and attitudes towards intra-professional learning among educators of baccalaureate and diploma health care programs. Application of the above recommendations could be evaluated with further educational evaluation studies. Further primary research is required to understand the experiences of both students and educators, in addition to research exploring patient and family experiences with collaborative care teams, including student care teams.

Undertaking further primary research into the economic and cultural feasibility, appropriateness, and meaningfulness of intra-professional learning may be beneficial, including within the larger landscape of inter-professional collaboration. This may identify economic and social benefits and/or challenges related to intra-professional learning. Further interpretive research (such as critical analyses) is also needed, in order to assist with disrupting normalizing or predominating discourses and/or assumptions that could be creating or contributing to power inequities among student groups and educators. Enhancing awareness and understanding of how everyday work of teaching and learning is influenced by what is said within constructed frames of reference can assist in revealing impacts on the feasibility of both students and educators engaging in intra-professional learning. Lastly, a mixed methods systematic review could be undertaken to build on the findings of this review.
Conflict of Interest

The authors declare no conflict of interest in relation to this work.

Acknowledgements

The primary reviewer received a New Researcher Grant from the Sigma Theta Tau International (STTI) Honor Society of Nursing to support the completion of this review. The authors acknowledge the contributions of Janina Esquivel who assisted the secondary reviewer in screening literature for this review.
Chapter 3


The impetus for this research evolved out of tensions that arose from the primary author’s experiences teaching in a practical nurse program while in graduate school. Feelings of unsettledness and chafing occurred within the teaching context, related to expectations to teach from a content-driven, skills-based curriculum, focused on expediting job-ready nurses into the workforce. Utilizing Dorothy Smith’s (1987, 1996, 2005, 2006) Institutional Ethnography (IE) as a lens, this chafing was interpreted as a disjuncture- created out of two competing or contradictory experiences of reality. How could one reconcile teaching with the awareness that various pedagogical approaches, philosophical underpinnings, and/or theories from nursing literature did not prevail within the practical nurse educational realm? Further, how did practical nursing education align with nursing disciplinary knowledge and values?

This disjuncture further evolved as questions arose about practical nurse education and educational silos among baccalaureate and diploma (practical) nurse programs. How might expectations for collaboration and teamwork in practice influence expectations for teaching future students to support professional practice? Reflecting on experiences of teaching in two practical nurse programs, there appeared to be little communication between instructors of PN and RN programs; nor could instructors simultaneously teach in both programs (even when both programs were offered within a single institution). What
assumptions, questions, or concerns might there be among each group of nurses toward the other? Worth noting, was that leaders of both programs sought RNs to teach in their programs and students were not provided with any clinical experiences with students of other programs.

**Background and Significance**

Shifts in global healthcare landscapes have occurred in relation to widespread health professional shortages, economic constraints, calls for greater efficiencies, and expectations for inter-professional practice, which have stimulated the development of new care models for the delivery of nursing care (MacKinnon, Butcher, & Bruce, forthcoming). With these shifts to team-based care models, registered nurses (RNs) and licensed practical nurses (LPNs) report increasing overlapping scopes of practice, which creates ambiguity and confusion about their roles.

Intersecting discourses of inter-professional collaboration, teamwork, lean thinking, efficiency, task shifting, and cost, all stress that we must work towards blurring roles and overlapping scopes of practice to collaboratively provide high quality (sustainable) patient care (CRNBC, 2012; Joosten, Bongers, & Janssen, 2009; Health Professions Council, 2001; Province of British Columbia, 2016a; 2016b; 2016c; WHO, 2008). Thus, while nurses themselves have expressed concern about role ambiguity negatively affecting their ability to care for patients (Butcher, MacKinnon, Bruce, Gordon, & Koning, 2017), this blurriness of

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1 Through legislation, nurses in Canada are categorized as either registered nurses (RNs), registered psychiatric nurses (RPNs), or practical or vocational nurses (LPNs). Registered psychiatric nurses only exist in the western provinces of BC, Alberta, Saskatchewan, and Manitoba. In Ontario, LPNs are referred to as Registered Practical Nurses (RPNs). In this paper, the term nurse refers to both practical and registered nurses unless differentiated.
roles coupled with increasingly shared practice scopes is very much the intention across numerous contexts.

The government of British Columbia (Health Professions Council, 2001), in their scope of practice reform initiatives, suggest that “a regulatory framework of overlapping scopes of practice and narrowly defined [restricted activities] creates a system which offers greater choice and accessibility to health care services at lower costs” (p. 32). One goal outlined in the BC health policy domain is to decrease exclusivity of professional regulatory groups and encourage “the addition or substitution of various mixes of skills for the services of the professional practitioner” (Health Professions Council, 2001, p. 34) by utilizing teams for the provision of health care.

What is less clear, is how disciplinary knowledge intersects with the reassignment or sharing of various tasks, skills, or roles among professions or disciplines. The redistribution of tasks and creation of flexible workers is echoed at a global level, where WHO (2008) leaders suggest that one response to the shortage of healthcare workers is to re-allocate various tasks. This task-shifting occurs as “specific tasks are moved, where appropriate, from highly qualified health care workers to health care workers with less training and fewer qualifications in order to make more efficient use of the available human resources” (WHO, 2008, p. 2).

A focus on tasks or skills also raises questions regarding whether the development of professional nursing practice is supported when students transition into the work environment. In an evolutionary concept analysis of nursing professional practice, Fraser (2011) outlines a definition of nursing professional practice as including: 1) a collection of traits (including self-regulation, autonomy, ethics, continuing competence, and disciplinary
knowledge); 2) a way of being (including service, collaboration, leadership, and innovation) and; 3) a label for the practice environment, which supports the previous two points.

Significantly, Fraser suggests that

these environments are characterized by interprofessional collaboration, a nursing care delivery model based on research related to the context of practice, the nurses’ ability to practice autonomously according to professional standards and ethics, access to nurses in leadership positions, opportunities for continuing competence development… (p. 42)

Thus, organizations are expected to develop professional practice environments that encourage lifelong learning and continued development of the individual nurse. Professional care models that rely on registered nurses to provide significant amounts of nursing care (who also have considerable discretion in carrying out their work) requires organizations to recognize that nursing practice requires a certain level of education and to provide on-going organizational support, leadership, and recognition of nurses’ work (Dubois et al., 2012). In contrast, functional care models view nursing as tasks that can be subdivided among various types of workers, focus on utilizing workers in flexible ways, and “draw more significantly on LPNs and assistant staff to deliver nursing services” (Dubois et al., 2012, p. 11). Fraser (2011) notes how nurse well-being is related to on-going structural and organizational support for professional practice, which includes organizational identification of professional nursing as a distinct service with institutional value.

Researchers have provided some insights into patient care team structure and outcomes. Studies have shown that care models with more educated and experienced nurses (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; McGillis Hall, Doran, & Pink, 2004), more
RN care hours (Lankshear, Sheldon, & Maynard, 2005), and less fatigued or burdened nurses (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Rogers, Hwang, Scott, Aiken, & Dinges, 2004) are associated with positive outcomes and enhanced patient safety. Two systematic reviews exploring relationships between nurse staffing and patient outcomes demonstrate how increased RN staffing is associated with lower inpatient mortality and adverse patient events, including failure to rescue, cardiac arrest, and unplanned extubation (Kane, Shamlayan, Mueller, Duval, & Wilt, 2007; Lang, Hodge, Olson, Romano, & Kravitz, 2004), as well as shortened length of hospital stay (Lang et al., 2004). Given the relationship between increased numbers of baccalaureate-prepared nurses and improved patient outcomes, nurse leaders and educators in Canada worked to ensure that all nurses were prepared at the baccalaureate level for practice entry. This change was accomplished gradually through the closure of diploma programs or by establishing collaborative arrangements with baccalaureate programs (Wood, 2011).

**Reintroducing Nurse Diploma Education.** Despite disciplinary goals for baccalaureate education for entry into nursing practice, legislative changes in British Columbia re-introduced the diploma nurse category under regulatory reform initiatives (Health Professions Council, 2001; Province of British Columbia, 2016d). Practical nurse curricula subsequently expanded in British Columbia (from a one-year certificate to a two-year diploma), in parallel with shifting scopes of practice and expanding roles for LPNs (Johansen & Styles, 2011; MacKinnon, Butcher, & Bruce, forthcoming). The *Practical Nursing Education Project* (funded by the Ministry of Advanced Education) focused on aligning practical nurse education with the changing competencies and expanded scope of practice as outlined by the College of Practical Nurses of British Columbia (Johansen & Styles, 2011).
A critical analysis of PN education in Canada (Butcher & MacKinnon, 2015) revealed continued hierarchies and siloed nursing educational programs, lack of collaboration among professional, educational, and regulatory groups, and shifting scopes of practice framed as “differences in technical skills and not as differences in disciplinary knowledge or clinical reasoning” (p. 8). Further, skilled worker discourses and employer needs have also helped to sustain diploma nurse preparation (now situated as practical nursing). Questions arose as to how the practical nursing curriculum was being expanded in relation to the discipline of nursing. How was practical nurse education situated in relationship to nursing disciplinary knowledge? And, how were legislative and educational shifts impacting how nurses learned to work together?

**Purpose**

The purpose of this research was to utilize an Institutional Ethnographic (IE) lens to reveal how various institutional (regulatory, educational, union, governmental, or health authority) texts and resources organize post-licensure baccalaureate (RN) and diploma (vocational or practical) nurses’ experiences of learning to practice on acute care teams. This analytic thread evolved from a larger research study that sought to explore registered nurses’ (RNs) and licensed practical nurses’ (LPNs) day-to-day experiences of changing work relationships in acute care hospitals. Previous analytic foci within the larger study provided an entry point into this current analysis. For this study, *intraprofessional* referred to categories of nurses (RNs and LPNs) under one nursing disciplinary umbrella.

**Methods**

**IE as a Framework.** Institutional ethnography (Smith, 1987, 1990, 2005, 2006) was utilized as a lens for approaching RNs and LPNs in acute care, to explore their everyday
work experiences. Dorothy Smith’s approach begins in the material work of people, as researchers talk with individuals (such as RNs and LPNs), who are considered the experts of their experience. Beginning from the standpoint of front-line workers provides an entry-point into understanding how institutional priorities organize the everyday work of people. More specifically, in our observations and interviews we looked for ways in which textually mediated work processes (such as regulatory, governmental, health authority, and educational documents) and other conceptual resources influence nurses’ understandings of nursing education and professional practice. Various texts and resources, activated in the everyday work of people (Campbell & Gregor, 2008; Smith, 1990, 2005), “shape and coordinate people’s doings” (Smith & Turner, 2014, p. 5). An IE investigation traces the activation of textually mediated discourses and institutional work processes to show the “organization of power as the concerting of people’s activities” (Smith, 1990, p. 83). Smith’s (2005, 2006) approach to recruitment, data collection and analysis is emergent as informants share their knowledge about their everyday work, suggesting lines of investigation that help to uncover the social organization of their experiences.

**Recruitment.** Ten RNs and 10 LPNs were recruited from two small community hospitals chosen by the health authority (MacKinnon et al., forthcoming). An institutional ethnography is not concerned with obtaining a representative sample with assumptions that findings can be generalized. In contrast, we focused on tracing how the participant’s varied experiences were linked to discourse and organizational processes – thus allowing us to map social relations (Smith, 1987; 2006). Sample size decisions were influenced by what was needed to show how textually mediated work processes operate in various work contexts.
Data collection. Observations of post-licensure nurses at work and in-depth interviews were conducted between September and November 2014. Limited observation included tours of the hospital sites and attendance at two interdisciplinary structured team report meetings on two different nursing units. Twenty interviews ranging from 60 to 90 minutes were conducted. I personally conducted and/or assisted with 19 of the interviews. Questions began with asking participants to describe a typical shift and their experiences working with other team members. Post-graduate nurses were asked to reflect upon their pre-licensure educational experiences. Participants were asked to describe differences and similarities in RN and LPN practice, roles, and education, to reveal possible educational-related concepts and textual resources that informed their work for this analysis. All interviews were conducted at each hospital site in a private room. All interviews were audio-recorded and transcribed verbatim.

Subsequent questions built upon the previous conversation and iteratively provided information and questions for further interviews. It is in this way that institutional talk can be identified and then traced, offering more insights into the selection of other potential participants who may be helpful in informing understanding of how things work in a local setting. Thus, interviews were emergent, and we used each conversation to “expand understanding of the terrain” (Smith, 2006, p. 33).

Analytic methods. In Smith’s (2005, 2006) institutional ethnographic approach, the focus of the analytic work is to show how nurses’ work is socially organized, by linking the local, everyday practice of nurses into the generalizing, standardizing institutional processes that reach beyond the nurses’ local context, and yet organize their everyday experience. Textual analysis is a highly iterative process of repeatedly listening to audio-recorded interviews, plus reading transcripts, reviewing relevant documents, writing field notes, and
writing on-going reflective notes. After uploading and cleaning interview data, I listened and read for traces of social organization as reflected in nurses’ talk or texts to reveal how they understood, differentiated, and negotiated work between each other and reflected upon their pre-licensure learning experiences. I looked for those moments in the talk of various nurses that linked to forms, documents, texts, or concepts which were rooted elsewhere – outside of their direct experience - but that linked in some way to speaking about their educational experiences and their learning to work in collaborative teams. I utilized NVivo© for data management, to organize threads of educational talk that were evident in the interviews. Relevant documents identified from nurses’ talk were obtained and analyzed. These texts included educational, governmental, regulatory, union, and health authority documents.

Ethical Considerations

Ethical approval for the study was obtained from the health authority and the University of Victoria. Informed consent was obtained from all participants who volunteered to participate and they were free to withdraw at any time. This study was funded by a University of Victoria Internal Research Grant.

Context and Participants

This research project involved participants (n=20) working in two acute care hospitals in small communities in British Columbia (MacKinnon et al., 2015a; 2015b). Table five below summarizes participant demographic information. Each hospital serves a geographic area with a population of 40,000-50,000 people. The number of people greater than 75 years of age is expected to double by 2033 (Island Health, 2013a, 2013b). Five RNs and five LPNs who had experience working on inpatient medical or surgical units were interviewed at each hospital. RN-LPN-HCA teams worked together on medical units; RN-
LPN teams worked together on surgical units. Each hospital also had overflow units, which functioned as long-term or ‘holding’ beds for stable patients who were awaiting transfer to a residential care bed in the community. These units were staffed primarily by LPNs.

Table 5. Nurse Participant Characteristics (n=20)

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<tr>
<th>SITE</th>
<th>Participants</th>
<th># years employed as RN/LPN</th>
<th># years working at current site</th>
<th># years on current unit</th>
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<td>Site A</td>
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<td>Roles:</td>
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<td>15+ years (2)</td>
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*RN who previously worked as LPN included in RN group
**Currently completing RN degree

Learning to Work on Functionally-orientated Nursing Teams

Both groups of nurses (LPNs and RNs) stated that they did not have an opportunity to work with other categories of nurses in their pre-registration education programs. Reflecting on her pre-licensure educational experiences, one RN noted: “even as an RN coming in, I think that it comes down to a lack of knowledge as to what LPNs do and what RNs do because I was really naive when I got in here to the hospital about what LPNs did.” [RN participant]. LPNs also reiterated that RNs did not often understand their roles or scopes of
practice, nor did LPNs always understand unregulated health care aide (HCA) roles. “I really feel that a lot of RNs don't know LPNs scope of practice but, as an LPN, I don't fully understand the [HCAs] scope of practice. That's not something that we're taught in school, right . . . Yeah there are a lot of RNs that don't understand the LPN's scope of practice.”

[LPN participant]

Both groups described differences in their practice as differences in what each category of nurse was “allowed to do”, with a focus on tasks and skills:

They [RNs] do the IV meds. They do a lot of the blood, we don't hang the blood, they do a bit more of the consents for surgery, that kind of stuff, prepping...pulling out drains; they do flush-drains; they do more - like any wounds that have undermining, or need wound vacs. [LPN participant]

In addition, the discourse of “stable and predictable” was used by LPNs to identify situations where a transfer to an RN was required (MacKinnon et al., forthcoming). Notably, there were also tensions as to whether body work or personal care was nursing care, and whether RNs and/or LPNs learned this care as part of their education. This is analyzed further in another paper (MacKinnon et al., forthcoming).

Nurses in our study noted how those who had graduated under the previous, shorter (51 week) LPN curriculum were offered additional training; however, some of the older LPNs were hesitant to learn new skills or responsibilities: “the LPNs that had worked for 20+ years on the floor were very reluctant to be more responsible, they just wanted to do those tasky things” (RN participant). This additional training was focused on developing full scope LPN practice, as hiring expectations (as noted in job descriptions for LPNs) required full scope practice.

Both groups of nurses struggled in their attempts to make sense of similarities and differences in their work which resulted in their different patient care assignments.
Frequently mentioned was the obvious difference in the length of their educational programs (one or two years vs. four):

*Well definitely the difference [in education] would be the length of time. RNs go to school for four years. LPNs, at one point, were only one year and have now expanded to two years and then the in-depth knowledge that RNs have, [with] regards to pathophysiology and the rationale behind. What I find is that LPNs just sort of have the superficial understanding but when it comes down to I don’t know - like I guess the depth of knowledge, the RNs just have a deeper pool because they’ve gone to school for so much longer and similarities - wise- like again the basics - not the basics but the foundations of nursing - so the critical thinking, the sterile technique and carrying out a safe nursing practice in general. (RN participant)*

*They [RNs] have three more years than me. When I took the [LPN] program it was one year, it was packed one year . . . with the body systems and everything - they [RNs] go a lot more in-depth. Yeah, three years, three years more education - that's why they're in charge. (LPN participant)*

The depth of the knowledge base for RNs (with a longer educational program) was not framed as disciplinary knowledge, but reflected as biomedical knowledge nurses draw upon in acute care situations. Learning to think like a nurse - particularly complex thinking and clinical reasoning skills - were affected by the length of educational programming. However, both RNs and LPNs were expected to be ‘job ready’ upon graduating from their programs. Organizational expectations to assist with new graduate transitioning, or support for on-going educational opportunities (beyond occasional inservices regarding new equipment or treatments) were found to be very limited.

**Findings**

Beginning with participants’ quotes, I identified textual and conceptual resources that nurses drew upon in their talk to reveal the social organization of their experience. As Smith (1990) suggests, these texts can be traced upwards to various documents (such as regulatory,
governmental, health authority, or educational) that serve to discursively objectify experience across contexts and obscure the nurse’s embodied, actual, and local experience (Smith, 1990). These authoritative, boss texts (Bisaillon, 2012; Griffith & Smith, 2014) are hierarchically situated; serving to organize how nurses work across various contexts and subordinating bodily knowing to text-based knowing (Campbell, 1998).

The social organization of nurses’ understandings of their work was revealed in talk about functional nursing roles and expectations for being practice-ready (to perform various skills and tasks). In addition, the absence of talk of the specialty status of acute care nursing encouraged worker flexibility as nurses (especially new graduates) were expected to float to various nursing units. Talk of how nurses learned and developed professional practice remained unarticulated. Nurses struggled to express how educational differences translated into knowledge or thinking differences. Significantly, there were no conversations of the nursing knowledge required to do their work.

**The functional nurse.** Nurses’ talk centered around the functional roles of each category of nurse – that is, what each nurse would be doing. This functional care orientation channeled each nurse’s focus, with RNs focused on team lead roles (in addition to caring for the most ill patients), LPNs focused on task performance, and HCAs focused on tasks and communicating changes in patient status to nurses, as traced to a health authority care model document (Island Health, 2014a):

*The Patient Care Model is a collaborative team approach to providing patient care. It creates teams of Registered Nurses working with Licensed Practical Nurses and Health Care Assistants (care aides) to provide the right type of care to patients at the right time by the most appropriate caregiver . . .

**RNs will provide a care coordination function** within collaborative and interprofessional teams as they have been educated to do in their basic education. RNs
carry out patient assessment and care planning, deliver patient education and discuss care goals and the plan for a return home with patients and their families . . .

**LPNs can care for patients who have a written plan of care that outlines what tasks are required** to support their return or stabilization of health. The assignment of patients to LPNs...includes decision making around what are the care needs of individual patients, what care provider has the knowledge and competencies to safely provide this care, and an understanding of all employer determined policies and guidelines around specific tasks and activities that patients may require. LPNs working on units that have undergone the implementation of the Patient Care Model will provide care in a team nursing approach . . .

**HCAs will work as part of a collaborative nursing team. This includes receiving instructions and assignments from other members of the care team (LPNs and RNs or other professional staff), gathering information on patient’s unique needs from care plans, participating in standard communication practices, and reporting abnormal or unexpected behaviors that they observe.** HCAs are educated to assist patients with mobility, self care, toileting, and hydration/eating” (Care Model Implementation FAQs sheet, health authority)

Nurses’ work was organized in ways that supported the functional roles as noted above.

Nurses describe how roles have changed since the introduction of health care aides, and how RN work is organized to take them further from the bedside:

I think the LPNs are knowledgeable. I think that...unpredictable patients are something we all need to be aware of. I think LPNs are very good, they spend a lot more time with the patient doing the dressings, those kinds of things. A good LPN’s doing a really good assessment while they’re getting somebody washed while they’re getting them up in the morning. That doesn't mean an RN can't - shouldn't be able to do that too but the RN's role is moving...seems like more of away from the actual touching of and the bedside of the patient to developing the care plan and doing the med reconciliation . . . (RN participant)

[A] care aide works with the nurse from [one team] primarily in the morning and takes care of the patient care - so washes the patients up. And then when all those four patients are done then the care aide expands out to the rest of the floor and the care aide basically just goes around and - in the morning the care aide gets report with us so finds out, you know, who's a one person, two- person overhead lift and such and then they just kind of seem to go around and do their thing . . . you go in to wash a patient up and the care aide's already done it. They just kind of float like butterflies and do their thing (LPN participant)
Several of the nurses also were in float positions (or had been as new graduates) which required them to be flexible in adjusting to unit-specific team orientations, which varied depending on the needs of each unit.

**Absence of talk about nursing-specific knowledge.** This finding was not surprising, considering the re-organization of nursing practice as noted above. In the interviews, we asked nurses to articulate similarities and differences in their educational experiences and in their work, roles, and practice. Here, nurses often had more difficulty choosing words to describe their experiences. When asked about differences in the work of RNs and LPNs, an LPN participant responded:

> Critically thinking I think that...they [RNs] do have more of a background with that kind of - not really critical thinking - more, more, what's the word I'm looking for...just like a deeper background as to different health concerns or whatever it is...they get more education and pathology classes and they go to school for longer so they should. (LPN participant)

This LPN mentions the words *critical thinking*, a term that is well-utilized by educators, students, and nurses alike, to describe the thinking work that they learn to do and practice as nurses. This nurse struggles to find a word or phrase that would be a better fit than critical thinking for describing the *thinking* differences between RNs and LPNs.

The critical thinking that nursing students learn and practice, while not fully articulated, becomes a significant difference when it comes to which patients each group of nurse cares for—with the more unstable or acutely ill patients being assigned to RNs. An LPN (currently completing her BSN degree) goes on to describe this difference:

> The LPN [program] I found to be a very condensed crash course (laughs) umm that prepared me to deal with, stable patients with predictable outcomes- that means limited intervention in an acute care setting. When I went to be an RN I spent a lot
more time, my education is so much more in-depth because I learned everything and I now have the ability to intervene and make decisions in patients whose status is changing rather quickly on me. (LPN/RN student participant)

The silent discourse of nursing knowledge was subsumed under not fully articulated differences in critical thinking, in-depth knowledge, length of education, or pathophysiology – areas that nurses struggle with as they do not seem to capture what they learn to do as nurses.

**Being practice-ready (skills/task proficient).** There were also expectations that differences in the education of RNs and LPNs meant that RNs come into practice ‘already knowing everything’, or that all graduates are practice ready, which contrasts with how professional development unfolds and the needs of new graduate nurses:

*We [LPNs] don't necessarily know everything when we first come out of school. We don't have as much background as they[RNs] do. And really, they [RNs] take the really acute patients so that's their role on the floor. We take patients you know that aren't acute anymore and that's the big difference and of course if you're working in Emerg. or ICU or something like that, that's where you see a huge difference in tasks.* (LPN participant)

In contrast to being practice ready, some of the nurses talked about the significant stresses when transitioning to practice as new graduates. For one LPN, this meant attempting to focus on remaining calm to effectively do her work:

*I've had to learn to be able to prioritize and to always try to remain calm because when I was first nursing I just remember I would feel overwhelmed and panicky and I wanted to do everything and that's a quick trip to insanity-land.* [LPN participant].

What was disturbing, was how the amount of overwhelming stress for a new RN graduate created a wish to have a minor car crash to avoid coming to work and facing her challenging work environment:

*I've talked to a lot of new grads and I'd just like to tell them that it's very hard and it's stressful and you're just kind of going through the motions for quite a while. At least*
six months that you’re kind of, you’re driving to work and you just kind of pray that you get in a mini fender-bender so you don’t have to go to work that day. So, you’re not hurt but rear-ended. Just enough, right? And that’s what is true. That’s exactly what it’s like. And it is hard and it is challenging [RN participant]

An experienced LPN participant, currently completing her RN degree, noted how she would expect on-going support learning her new role and responsibilities as an RN:

*I am expecting that [support]. I anticipate that. I can see how it would be very frustrating if I don’t have that and I wouldn’t be very happy so I hope to have that . . . you should have lots of support when you’re a new grad because there’s a lot that you don’t know.* [LPN/RN student]

Some graduate nurses did have transition support through the health authority (New Graduate Transition Program), where nurses obtain full-time hours on one unit for one year, in addition to having a mentor. However, due to chronic staff shortages, the mentor could not always be assigned as an extra staff member which impeded ongoing learning support for the new graduate and created significant stress:

*I started in a new grad full-time job . . . the new grad transition program, so I had full-time work for a year on one unit . . . I had a mentor - we went to classes together before I even started working. We had a whole weekend workshop. We had that put on by [the health authority] and then I had a number of shifts with her and then she was extra. But as it stands, not always extra because that’s life - we’re always short - somebody’s always calling in sick… vacation … So that’s what I came out of and I’m still traumatized from my first year of nursing. I remember it very, very clearly and how hard it was and my husband told me that the spirit had been sucked out of me about eight months into nursing. [RN participant]*

Importantly, both RNs and LPNs described significant challenges (and differing responsibilities) as they transitioned into to the work environment. It was noted how discourses of scope, tasks, and skills were orienting nurses to describe their work in divisive and categorical ways, while less prevalent were discussions regarding differences in knowledge or thinking skills between RNs and LPNs. Ultimately, there were organizational
expectations that both groups of nurses be ‘finished products’ at graduation, be job-ready to step into jobs, and perform necessary tasks and skills. This expectation also negates the necessity of workplaces to provide on-going professional development to support nurses in multi-specialist acute care areas.

Responsibilities related to the above categorized roles did not allow for new graduate transition support for new nurses and created significant stress for new graduates as they were expected to immediately accept significant responsibility in their designated roles. RNs ‘expanded’ scope of practice was being increasingly focused on administrative work, as analyzed in another article (MacKinnon et al., forthcoming). Learning about and trusting each other was also impeded by new graduates being hired in float and/or casual positions, which prevented them from establishing relationships (and gaining confidence) with a unit or team (however provided employer-sanctioned interchangeable workers).

**The non-specialist, flexible worker.** Another unarticulated or silent discourse relates to the specialist, generalist-specialist or multi-specialist nature of medical-surgical nursing work. Although not identified by nurses in the study as multi-specialist knowledge, the nurses talked about needing knowledge of multiple areas that could be situated among specialty practice domains, such as cardiovascular, medical-surgical, gerontological, psychiatric/mental health and hospice/palliative care. One RN, in discussing a typical day on her medical unit, outlined how she had *cared for one palliative patient who passed*, admitted a patient who was a *transfer from the surgical end [who’s] 19- day post-op with acute chest pains*, and patients admitted with dementia where *they can’t give you the information so you have to wait for the family or phone the family to try to dig [for] information*. 
There are currently 20 certifications offered to nurses as part of professional development, including a medical-surgical certification (Canadian Nurses Association, 2017). Interestingly, none of the nurses we interviewed talked about these courses, identified their practice as a specialty, or how the knowledge needed for their practice intersected with numerous specialty strands. There were noted tensions around baccalaureate education, and preparing students for specialty areas, which assumed exclusion of medical-surgical areas. One RN, reflecting on changes in the baccalaureate program where third year students can begin specialty courses, notes her concerns:

*I worked with a third-year student down on [medical unit], I was pulled down there one night and I worked with [her]- she’s already starting her OR courses... because she wasn’t going to work on the wards. I feel like that’s what they’re gearing the nursing program towards – more theory, more paperwork, more care planning – more specialty practice - which is all good and fine but you still need RNs, in my opinion you still need RNs here. I couldn’t do with any less RNs. Sometimes they pull an RN and fill it with an LPN. It happens more on nights than days. I start to panic. I’m like – we have 22 patients. I have five already. If one of these LPN patients is going sour or heaven forbid, more than one, I’m going to be taking those patients on.*

(RN participant)

There are concerns about the significant increasing responsibilities for RNs who must accept care for increasingly unstable patients who are not appropriate to be cared for by LPNs. By focusing RNs on specialty practice during pre-licensure education, there will be fewer RNs available to work on general acute care units where they are very much needed. However, socially organizing medical-surgical nurses as *non-specialty* provides an additional means for producing flexible nurses. This raises questions as to how specialty nursing knowledge is defined (and by whom – nurses, physicians, or employers), and how specialty nursing education might be positioned for nurses in the future.
Discussion
Nurse Flexibility and Neglect of Professional Development - Implications for Education

The social organization of nurses’ learning to work together in the workplace occurs via textually-mediated practices which sustain nurse categorization, interchangeability, role ambiguity, and expectations for job readiness. Textually-mediated shifts towards functionally-orientated nursing teams (with a focus on tasks and skills) and flexible workers (manageable employees) creates significant implications for nursing education. RNs and LPNs did not specifically talk about nursing knowledge or higher-level thinking skills. Since the knowledge required for professional practice (such as relational inquiry, clinical reasoning, and advanced nursing assessment) remains unarticulated, demarcation among nurse categories is instead sustained via task, role, and skill division talk. Workplace documents (such as job descriptions for RNs and LPNs) were less apt to describe nursing as requiring nursing knowledge. Rather, job descriptions list skills, tasks, duties, and responsibilities for nurses within functional contexts:

*The RN provides nursing care by performing nursing functions such as: direct nursing care to patients, explaining care plan to patient and family; conducting planned nursing interventions; initiating measures to relieve emergent situations; and teaching self/home care skills to patients and/or family members. (RN Staff Nurse job description for various health authority sites)*

While nurse participants acknowledged educational and knowledge differences between RNs and LPNs (framed as hesitant talk about critical thinking or biomedical knowledge), nurses had difficulty fully articulating those differences. DeVault (1990) notes the significance for IE work in noticing the “halting, hesitant, tentative talk” (p. 103) that
characterizes a search for words to describe often-unacknowledged experiences. Here, DeVault argues, people often resort to using institutional concepts, which often do not completely fit what the person is wanting to say.

Further, unrecognized nursing knowledge leaves the door open to textually mediate ‘sameness’ among nurses, as well as in skilled worker, care model, efficiency, interprofessional, and safety conversations, which re-align nurses’ work and suggest interchangeability of nurses (Thorne, 2014, 2015). Our finding of this silent discourse echoes Voldbjerg, Grønkjær, Wiechula, and Sørensen (2016) who completed an ethnographic analysis of knowledge sources utilized by new BSN graduates. These authors found that “using knowledge from undergraduate education was mostly covert, difficult to locate through observations and challenging for the informants to articulate” (p. 1321). This suggests that the inability to articulate nursing knowledge may indicate that it is “seldom articulated and questioned” (Voldbjerg et al., 2016, p. 1323). While some student nurses may be learning what professional practice entails, it is not supported within workplace contexts. Notably, evidence related to patient safety and baccalaureate-prepared RN staffing ratios (Lankshear, Sheldon, & Maynard, 2005), and increased nurse satisfaction in professional practice models (Aiken, et al, 2002; Rogers et al., 2004) remains silent, which raises questions as to whose voices are being heard (and whose are being silenced) in care model conversations (MacKinnon, Butcher, & Bruce, forthcoming).

Interestingly, both RNs and LPNs are expected to enter the workplace fully ready to perform their roles; however, their roles are significantly impacted by workplace conceptualizations of these roles. Educational programs for each nursing category are siloed (Appendix K) which significantly limits opportunities for professional career growth (and
higher salaries), sustaining nurses on narrow paths within the “pink collar ghetto” (Bernhagen & Gravett, 2017; Brown, 1995). Pink-collar workers are in jobs traditionally occupied by women; jobs characterized by low wages, lack of career path, little hope for career advancement (Kleiman, 2006), and are “highly monitored with little authority to make decisions” (Hulme, 2006, p. 145). For example, LPN programs are frequently ‘dead end’ programs, as many do not offer ongoing professional development. While educational programming for LPNs explicitly supports practice-readiness, baccalaureate programming recognizes the significance of practice transitioning and development of professional competence (Appendix K).

While there are assumptions that a professional nursing practice model is desirable (such as in educational, union, and regulatory documents), nurses’ work on the ground is organized very differently. Upon entering the workplace, both groups of nurses actively engage with and enact the institutional discourses of task and skill delineation that serve to override the professional practice orientation of RN education; simultaneously reinforcing the task orientation of LPN practice. The nurses’ union (of which both RNs and LPNs are members) acknowledges how nursing “has its own educational programs and generates its own body of research that supports nursing excellence” (BCNU, 2015, p. 3). However, union support of blurred nursing categories and siloed education is counterintuitive to much of nursing’s disciplinary evidence. How might educators within RN and LPN programs reconcile expectations for teaching professional practice with job-readiness? And, in what contexts (such as acute care, community health) are employers’ needs for these workers most urgent?

Tracing textual and conceptual resources from nurses’ talk revealed how at the highest levels (the boss texts as outlined in Appendix L), RN and LPNs scopes are
significantly blurred, which suggests that there are assumptions that little differentiation exists between RNs and LPNs. Nursing union documents frequently refer to nurses or the nursing profession, leaving RN or LPN categories undifferentiated (BCNU, 2015a, 2015b). Further, blurring of regulatory boundaries as part of regulatory reform (Health Professions Council, 2001) including creating restricted activities (tasks formerly known as reserved acts) suggests that tasks are easily transferable between professions and unregulated providers. This approach does not attend to the cognitive elements rooted in disciplinary knowledge and practices that inform the performance of a task during patient care. Ultimately, these shifts assist healthcare institutions in utilizing workers in flexible ways.

Functional orientations towards nursing care help sustain nurse categories and “view nursing as a broad set of tasks that can be done by a variety of workers, and the focus of health care organizations is to subdivide work among many workers, use them flexibly, and control their activities” (Dubois et al., 2012, p.11). These models utilize LPNs and other healthcare workers in response to economic and labour constraints, and focus on managing nursing resources in a flexible way (Dubois). Further, functional approaches to nursing care undermine the development of professional practice and perpetuate ambiguity, as nurses struggle to delineate difference in their roles (Dubois et al. 2012).

The notion of less complex and stable patients being cared for by LPNs (while RNs are fully responsible for the most complex and ill) somewhat mirrors novice to expert and new graduate transition theorizing – but with a unique twist. The development of competent practice is disrupted by institutional expectations of job-readiness, and counterintuitive narrowing of RN scopes (with a focus on care co-ordination) with simultaneous widening of LPN scopes (with a focus on skills and tasks). Influenced by cost-saving, ‘lean’ approaches to health care administration (Joosten, Bongers, & Janssen, 2009; Kitson, Athlin, & Conroy,
2014; Rankin & Campbell, 2006), the complexities of nursing practice become standardized and simplified, and “this reduced complexity might make it possible for these jobs to be executed by less highly trained professionals” (Joosten et al. 2009, p. 343). Consequently, this shift reorients nursing professionals to focus on only the most complex patients.

Registered nurses develop professional competence (along the novice to expert continuum) by supportive workplace environments that allow for nurse leaders to consider each nurse’s ability to care for patients of varying complexity. This professional practice orientation is acknowledged in the CCRNR (2012) document outlining the significance of a supportive workplace for new BSN graduate practice and role acquisition (however is not noted in the CCPNR document for LPNs):

Research demonstrates that during the first 12 months of employment, entry-level registered nurses experience a complex but relatively predictable array of emotional, intellectual, physical, sociocultural, and developmental issues . . . role acquisition occurs in part by observing other registered nurses in practice and within the social network of their workplace. Time is required to establish professional relationships, learn practice norms, and consolidate nursing practice knowledge and judgment. As confidence develops in their new role, entry-level registered nurses assume higher levels of responsibility and manage increasingly complex clinical situations. Their proficiency and efficiency with respect to workload management and technical skills will improve with support and experience. (p. 6)

There remain questions as to whether findings from research examining RN role acquisition is applicable in LPN educational or practice contexts. Further, none of the nurses in our study mentioned the significance of educators’ calls for the baccalaureate degree as entry into nursing practice. New nurses are also currently under significant stress as they are expected to immediately function as if they are experienced nurses. Further, the added burden of acting as mentors for students added significant stress and workload. Questions thus arise (and further research is warranted) to investigate how practice-readiness expectations (and expectations for RNs to be team leaders and discharge planners) interfere with the
development of competent and expert practice (MacKinnon et al., forthcoming).

Limoges and Jagos (2015) noted in their exploration of intra-professional learning experiences among RN and PN students, how both groups of students engaged in “sameness talk, suggesting that there was no real difference between the [LPN] and RN except for the amount of money they made for the same work” (p. 1026). This sameness talk suggests that student nurses are not understanding the knowledge differences that are supported with longer RN programs and reveals students’ active participation in interchangeability discourses which undermines their own professional development. What is most fascinating and troubling, is that nurses on the ground are calling for increasing role clarity and delineation, while the grand scheme at various institutional levels is to purposefully blur lines of demarcation to facilitate efficient, interchangeable, and more sustainable (economical) nurses.

**Conclusion**

The findings of our study cannot be generalized, as our participants’ experiences were embedded in a specific context, and participants were recruited in a purposive manner. Transferability of the findings to other contexts will need to be determined by readers of this research. However, institutional ethnography provides an entry point into understanding how the everyday work of nurses is textually coordinated across time and space. The texts and conceptual resources that are well beyond nurses’ local work context, and yet have organizing and generalizing effects, may have relevance for readers in other contexts. This research is significant in offering a portal for further exploration of discourses and processes that organize educator, nurse, and health care aide work, both within and beyond acute care. Further, this research can assist in making nurses and educators more aware of the political nature of their work, and how predominating discursive resources from afar impact their
everyday work of nursing.

This analysis has focused on how RNs and LPNs learn to work on re-designed nursing teams and traces the textually mediated discourses that are organizing this learning in the context of recent changes to LPN education and nursing teams. Our findings highlight unarticulated nursing knowledge/thinking, and the textual insertion of functional, skilled and flexible worker discourses, which blur practice between RN and LPNs making them [potentially] interchangeable in complex acute care contexts. This study, situated as one analysis among others (MacKinnon et al., forthcoming) shows the invisibility of nursing disciplinary and professional goals and knowledge in nurses’ talk, as RNs and LPNs re-learn and sustain nursing practice in ways that fulfill other institutional and organizational goals.

This re-alignment has significant implications for educators in nursing programs, who participate in teaching within educational silos. This research has shown that the absence of clarity in functional roles (perpetuating role confusion and ambiguity) is purposeful, with the goal of creating flexible workers. This raises questions as to whether all facets of professional nursing practice are being attended to within clinical, regulatory, union, and academic organizations?

Interestingly, LPN-RN access or bridging programs are not currently available in our local context (Appendix L). Perhaps this too, speaks to the assumptions of worker flexibility. It is intriguing that there is little talk in providing a transition from LPN to RN education (and from a practice-ready or functional model to a professional practice model of education), despite the BC government listing registered nursing (specialty) and registered nursing (general) as number one and three respectively on their list of high opportunity health professions in labour market outlook predictions (Province of British Columbia, 2016).

Future research should examine how re-introducing nurses within functional roles
might maintain traditional (inter- and intra-professional) educational hierarchies and silos. How might functional, task-oriented care models within tightly regulated nursing categories interfere with the professional goals of our discipline? Since one goal of having the baccalaureate degree as entry to nursing practice was to ‘level the playing field’ among various health care professionals, an IE analysis of the everyday work of inter-professional teams (RNs working with dieticians, occupational therapists, social workers, physicians, and physiotherapists, for example) would be fruitful in examining the experiences of inter-professional teams. Further research is also needed comparing the quality of private BSN and LPN college programs with government-funded programs. Nursing educators are often situated on the line of fault between professional nursing education and the realities of practice, and so this research offers a means for educators to ‘see’, reflect upon, and push back against the impact of institutional texts on not only teaching and learning, but how RNs and LPNs view each other and their practice.
Afterword

So how can one make sense of the findings of both a JBI qualitative systematic review and an IE-based inquiry? What questions and challenges arise in the context of conducting a methodologically plural research project? Here, I will discuss the significance and challenges of undertaking a methodologically plural approach to research, as well as the knowledge generated from such an endeavor. For me, what has become a long period of growth, expanded awareness and critical inquiry, has created the strong desire to immerse myself into areas of competing understandings about intra-professional learning. Being in this plural space has allowed for reflection upon the tensions between scientific/empirical and philosophical inquiry, and the significance of exploring or holding this tension in the context of intra-professional learning.

Here, I consider the debate entitled *Hawking vs. Philosophy: Has Science Killed Philosophy?* (Institute of Art & Ideas, 2012) where a journalist, humanist biologist, and postmodern sociologist dispute contested areas surrounding science and the role of philosophy. In this debate, three panel members (in addition to a moderator) argue over how philosophy informs science (or whether it should inform science); the differing purposes of philosophy and science (to clarify or understand versus to explain); and how philosophical discussion can deconstruct or reveal the ethical implications of scientific knowledge and the implicit assumptions inherent in science. Further, the debate generates a sense of how science and philosophy are complementary; the former offering explanation (supported by taken-for-granted assumptions about reality and truth) and the latter offering meaning, understanding, and clarity to scientific endeavors. So, it is in this space of complementarity, yet contested knowledges, the uncovering of assumptions, and raising new questions that I see this plural
work, in terms of reflecting upon the findings and processes of conducting two research strands exploring how RNs and LPNs are learning to work together within re-designed nursing teams.

**Experiences of Conducting a Methodologically Plural Project**

At the end of my initial year of PhD studies (June 2014), I was generously offered funding to support attendance at JBI training in San Francisco. Since the University of Victoria School of Nursing was developing their own JBI centre, there was interest in having core faculty and students become familiar with the JBI methodology to support knowledge synthesis within the School of Nursing. It was during my week in San Francisco that I developed my tentative systematic review question and began preliminary literature searching in the context of the training exercises.

As I progressed through PhD studies, questions arose as to how a JBI systematic review might fit within a dissertation. I subsequently developed guidelines for graduate students with support of faculty (in the context of my role as a student representative on the PhD committee) which outlined how a JBI review could be situated within the requirements for a dissertation. The PhD group decided that with support of their supervisor (who would be familiar with the systematic review methodology in question), students could include a JBI review as part of the PhD dissertation (such as for a literature review or Chapter 1), with expectations to also include primary research and analysis as part of the larger project. So, in addition to completing a JBI review, I began to work with my supervisor in developing a primary research project involving RNs and LPNs.

Gathering my graduate learnings and understandings of various philosophical perspectives, I reflected upon my own feelings of *walking on unstable ground* as I felt the
discomfort of unknowing what I had thought to be true and real. What evolved in my project was this awareness of how science could be understood as a “dialectic of resistance and accommodation” (Cayley, 2010) where one balances walking on the established paths along with veering off to create different paths utilizing various ways to think about reality and knowledge (Cayley, 2010; Wackerhausen, 2009). Further, thinking of knowledge as a web or quilt allowed one to “make connections and bridge differences” (Risjord, 2010, p.139) among varied ways to understand a phenomenon. So, I began to think about how my two research realms might be able to inform each other to deepen understandings of intra-professional learning. Here, I also began to see RNs and LPNs experiences of learning to work together as also unstable, as the two approaches to examining this phenomenon foregrounded different interpretations of their experiences.

As a learner who had never completed a systematic review before, I appreciated the structure and related tools provided by the JBI. The tools (in addition to various training resources) provided very valuable road maps as I moved forward with the project. The JBI software made the project seem a little less daunting, as it assisted me in tracking both the quality appraisal of articles and the work of aggregating findings. A clear process, including templates available for writing both the protocol and systematic review, provided helpful signposts for me. Having a secondary reviewer (my supervisor) who was also familiar with the JBI methodology was crucial for having conversations throughout the long process. In addition, being a member of the JBI Committee provided a place where several faculty and students could meet regularly and discuss their challenges and successes in completing JBI protocols and reviews.
However, my experience of learning the JBI methodology for completing systematic reviews also began a process of understanding the persistent (and often assumed) post-positivist orientation towards research, as the processes of performing a JBI review rely on highly protocol-driven, standardized methods for conducting and writing up both a protocol and a review. The taken-for-granted notion that this was perhaps the ‘best’ and most efficient way to conduct a review was embedded within discussions about providing the most comprehensive and current evidence for practitioners at the point of care. (Interestingly, there was also little attention given to philosophical underpinnings in the primary research reports for my JBI review; most appeared to align with post-positivist assumptions). My JBI aggregative synthesis (Butcher et al., 2017) was focused on synthesizing findings about how pre-licensure students and educators were learning to work together, which served to provide evidence for recommendations about the need for structures and processes to support intra-professional learning and collaboration. Paradoxically, I also realized (from completing my IE-related work) that the synthesized findings presented in the JBI review, while situated as recommendations for education and practice, provided a somewhat partial or incomplete perspective.

My systematic review revealed that health professional students found various shared learning experiences (such as role-playing, shared orientation sessions, tutorials, journal writing, or shared clinical placements) valuable for helping to develop communication, leadership, and team-building skills. Trust, role clarity, and perceptions of improved care planning and patient care were developed when there was effective communication between professional groups in academic and clinical settings. However, educator and staff attitudes which created hierarchical relationships, lack of role clarity, poor communication, and exclusion of categories of students created frustration and tension, impeding intra-
professional learning. While challenging, students found intra-professional learning experiences valuable for learning others’ roles, increasing trust and respect, and preparing for the workplace.

What the systematic review did not reveal, question, challenge, or critique, was the taken-for-granted notion of why there might be reasons for supporting intra-professional learning at all. That is, how did it come to be that categories of health care students under a single disciplinary domain (such as nursing/practical nursing students; occupational therapist/OT assistant students, or physiotherapy/PT assistant students) would be faced with questions, conversations, and/or experiences with intra-professional learning? Below, I consider the findings of both realms of research and reflect upon the knowledge generated and its significance for educators, researchers, and policy-makers.

**Significance of the Knowledge Generated from the Project**

To assist with considering the findings of both research perspectives together, I have placed the findings from the JBI review and the IE-based analysis in the chart below (Table 6), while revisiting my over-arching research question of How are registered and practical nurses’ experiences of learning to work together being organized by educational and work contexts?

The gaze by which the JBI review was completed was underpinned by assumptions of the taken-for-granted – that is, it does seem to make sense that if categories of nurses are to be working together in the workforce, they should probably begin to interact with each other within their educational programs in some way. That is, the final product (if unchallenged or not critically reflected upon) confirms processes of standardization, external realities, and generalization – sustaining the dominant views of evidence that are perpetuated globally
For example, one finding from this review was how participating in intra-professional learning experiences helped students negotiate scopes of practice and clarify roles (Butcher et al., 2017). When looking from above or outside of the assumptions of the JBI methodology, one sees how this finding uncritically supports predominating discourses such as *scope of practice* and *role clarity*. Similarly, in re-reading the findings of the JBI review above, there are several discourses that are revealed, including *workplace preparation, professional identity, nurse hierarchy, care planning, and exclusion of nurses*. Completing the interpretive work of the IE analysis, I could see how the JBI processes held me in the place of sustaining the generalizing discourses and texts, rather than challenging them. Most profound, was how the IE analysis revealed how nurses’ work was organized in such a way as to promote role blurriness, not clarity, despite calls for clarity within the aggregated findings of the JBI review!

Considering the findings together, one can see how the discourses discussed within the IE project (notably silent discourses of nursing-specific knowledge and instead the focus of talk on skills and roles), were similar within the JBI work. That is, findings from the primary research studies (for the systematic review) focused on roles, scopes, readiness for practice and activities to support intra-professional learning. However, there were no findings (in the primary research studies) that referred to differences in nursing-specific knowledge and how this might have intersected with the intra-professional learning experiences. Thus, considering the findings together, threads of talk revealed in the IE analysis were also revealed within the JBI review, although the purposes of revealing the findings are differentiated.
When various shared learning experiences (such as role-playing, orientation sessions, tutorials, journal writing, and shared clinical placements) are provided to students, students develop team-building, communication, leadership, and supervision skills. Students value intra-professional learning activities for learning others’ roles, preparing them for the workplace, and developing their professional identity.

The functional nurse. Nurses’ talk centered around the functional roles of each category of nurse – that is, what each nurse would be doing. This functional care orientation channeled each nurse’s focus, with RNs focused on team lead roles (in addition to caring for the most ill patients), LPNs focused on task performance, and HCA on tasks and communicating changes in patient status to nurses.

When there is effective communication between professional groups in academic and clinical environments, trust and understanding of others’ roles develops and facilitates students’ perceptions of improved care planning and patient care.

Absence of talk about nursing-specific knowledge. Nurses had difficulty articulating similarities and differences in their educational experiences and in their work, roles, and practice. Nurses often struggled to choose words to describe their experiences. The silent discourse of nursing knowledge was subsumed under not fully articulated differences in critical thinking, in-depth knowledge, length of education, or pathophysiology – areas that nurses struggle with as they do not seem to capture what they learn to do as nurses.

Educator and staff attitudes and enactment of educational discourses create hierarchical relationships which impede positive intra-professional learning for students. Despite its challenges, students found that intra-professional learning helps build trust and respect.

Being practice-ready (skills/task proficient). Differences in the education of RNs and LPNs meant that RNs came into practice ‘already knowing everything’, or that all graduates were practice ready. Organizational expectations required both groups of nurses to be ‘finished products’ at graduation, be job-ready, and perform necessary tasks and skills. This expectation negated workplace responsibilities for on-going professional development to support nurses.

Engagement in intra-professional learning assists students to clarify roles and negotiate scopes of practice, however lack of role clarity, poor communication, differences in clinical and academic education, and exclusion of categories of students creates tensions and frustrations in intra-professional learning.

The non-specialist, flexible worker. The unarticulated or silent discourse of the specialist, generalist-specialist or multi-specialist nature of medical-surgical nursing work allowed for nurses to be utilized in flexible ways. None of the nurses identified his or her practice as a specialty, or how the knowledge needed for their practice intersected with numerous specialty strands. There were noted tensions around baccalaureate education, and preparing students for specialty areas, which assumed exclusion of medical-surgical areas.

**TABLE 6: Findings of Systematic Review and IE Analysis**
Within the context of the JBI review, the purpose of generating synthesized findings is to provide generalized recommendations for practice, education, and policy to support intra-professional teaching and learning. However, the purpose of the IE analysis is to reveal the generalizing effects of various institutional (such as educational, regulatory, or workplace) texts on nurses’ day-to-day work experiences. Herein lies the tension of the two realms of knowledge—while one is creating and sustaining generalizing discourses; the other is challenging and disrupting the very nature of the effects of this generalization across work contexts. The tensions surrounding role clarity noted above is one illustration of how the JBI work helped to sustain student expectations for role clarity, while the IE work revealed how regulatory and workplace texts were organizing role blurriness to facilitate worker flexibility.

In another example, the JBI review revealed how intra-professional learning experiences assisted students to become *workplace-ready* while the IE analysis revealed the functional orientation of practical nurse education to prepare *job-ready* graduates. The discourse of workplace readiness was viewed as a positive result of intra-professional education (within the JBI review). However, within the IE analysis, the job-readiness discourse was revealed to be an organizational (employer and educational) expectation which organized nurses’ work as they talked of their practice in terms of scopes, skills and functional roles. Both RNs and LPNs were expected to be ‘finished products’ as they entered the workplace, ready to perform the tasks and skills according to their designated scope of practice within team-orientated contexts.

It was not until I had completed my IE-based analysis that I could see how the JBI processes supported and reinforced dominant discourses within the literature within my systematic review. What was overshadowed within the realm of the systematic review, and
revealed within the IE analysis, was how grand narratives or texts are taken up in our local, everyday work as reality, and organize how we go about our work. This was a lightbulb moment; if I had only participated in the JBI systematic review for my dissertation, I might never have identified how I was ‘held’ within certain understandings about evidence, knowledge, and intra-professional learning within the research perspective of the JBI.

In contrasting the findings of these two methodological approaches, I was able to explicate how the findings of the systematic review contribute to encouraging or sustaining the expectations of students and educators to strive for clarity in education, roles, and scopes of practice, while various workforce and legislative texts (as revealed in the IE work) are organizing an opposing view – one of increasing blurriness of scopes and de-professionalized roles to facilitate worker interchangeability (Butcher, MacKinnon, & Bruce, forthcoming). Significantly, it is by completing research from two differing perspectives that has provided the opportunity to see beyond the reality of the JBI project itself, and see the ways in which we are held within, and participate in, the taken-for-granted realities that produce certain types of knowledge. However, one could include statements about what is not known or revealed within a systematic review, to balance recommendations or implications. For me, this relates to the timing of my work, as it was only through the recent completion of the IE analysis that I now more fully appreciate how one can only synthesize what is known. Thus, more interpretive primary research work could also inform future systematic reviews in bringing perspectives (such as those revealed in IE work) to the forefront.

As graduate students, educators, and faculty, it is significant to be made aware of our role in perhaps uncritically driving the dominant discourses by not only our research foci, but our contexts for teaching and learning. Further, reflecting simultaneously on these two
realms, new questions are raised. For instance, how might nursing education be conceptualized without hierarchy or silos? Even if the creation of the LPN category was a temporary response to nurse (RN) shortage, why has there been no long-term requirement or support for LPNs to move towards a nursing degree? And, are unregulated health care providers, such as health care aides (HCAs) becoming part of the nursing family, and if so, what are the implications for nursing education and practice delineation?

Immersing myself into two pools – the JBI pool (where post-positivist assumptions of standardization, generalization, and objectivity predominate and yet serve a legitimate problem-solving purpose); and a feminist, embodied, IE pool (with an interpretive view on the generalizing effect of texts) - allowed for the important consensus/dissensus work of being situated in one (or several) dominant discourses, while also deconstructing this work by being in a realm of critical inquiry. Further, Smith’s (2014) conceptualization of discourse as a “sphere of activity” (p. 225) where language actively coordinates action, highlights how discourses arise under certain circumstances and require thoughtful critique. Significantly, my intersecting of systematic review and institutional ethnography provided a means to reveal how discourses socially organize and thus encourage the production of certain kinds of knowledge, including systematic reviews. This understanding thus raises questions about the implications this research has for researchers, educators, and policy-makers.

Implications and Future Directions

What has come to light from this dissertation project is how competing forms of knowledge situate one in different ways. There are strong expectations to produce systematic reviews from primary research studies, with organizations such as the Joanna Briggs Institute (2016) sustaining this work across the globe. Despite concerns by some that producing these
reviews might overshadow the complexity, particularity, and interpretative nature of primary studies (most notably within the qualitative realm), the expectation to produce highly structured, protocol-driven aggregative systematic is prevalent (Bearman & Dawson, 2013; Butcher & MacKinnon, 2014; Hannes & Lockwood, 2012; Jutel, 2012; Paterson, 2012; Saini & Shlonsky, 2012; Sandelowski & Barroso, 2007, 2012). Thorne (2017) and Jutel (2012) outline several concerns about the rapid, non-critical uptake of systematic review methods that rely on methodological rigidity, minimal interpretation, and thematic summary, which are part of sweeping standardization processes across contexts. Thorne argues that the “final products of these exercises reflect very little by way of inductive analysis or interpretive examination” (p. 3). However, it is significant to note that the JBI aggregative review remains only one form of systematic review among many others. So, there is some caution in applying a broad brush and related assumptions to all types of systematic reviews. By balancing various research projects with varying degrees of interpretation, such as my plural research, one can allow for conversations to continue about contentious issues related to the production of evidence, and how best practice documents are taken up by those at the point of care. In addition, my work re-situates the dissertation literature review as research in and of itself, which offers opportunities for graduate students to reflect upon differing ways to approach the literature review in theses and dissertations.

Being aware of the tensions surrounding the production of systematic reviews has informed this plural analysis. For nurses and educators, it becomes crucial that evidence-informed care is provided, which includes situating evidence (such as findings created by systematic reviews) within the context of a specific therapeutic relationship. So, the evidence created from a JBI review (such as practice recommendations), in addition to the IE-based study, is incomplete- it still requires professional nurses at the bedside to consider, evaluate,
and situate that evidence in relation to preferences of the patient and specific context. That is, evidence needs to be situated in some way. This has significant implications for educators who are teaching nursing students and assisting them in utilizing evidence in practice and in becoming nurses.

It is worth noting that in the professional formation of nurses, this physically and intellectually challenging, complex work requires time, as well as skillful educators (Benner, Sutphen, Leonard, & Day, 2010) who understand their disciplinary roots and pedagogies for supporting this transformation. There is a pressing need for educational leaders to respond to the increasingly complex and diverse contexts in which nurses do their work, as nurses draw on knowledge from “a wide range of fields” (Benner et al., 2010, p. 4). This research also reveals the significance of considering various forms of knowledge for informing policy development relevant to nursing education and regulation. Having the opportunity to engage in this plural research project has revealed how this complex knowledge that nurses require remains unacknowledged and unarticulated; overshadowed by talk of roles (and the need for role clarity), job-readiness, scope of practice, and flexibility. Findings from this project provide insight into how differing perspectives on exploring student and educator experiences offer the opportunity for a conversation about what is foregrounded, as well as overshadowed, within each approach. For educators and policy-makers, it is significant to consider how approaches to teaching and regulating nursing may or may not contribute to sustaining certain understandings of nursing.

Future directions for educators, researchers, and policy-makers include recognizing how evidence is created within differing philosophical realms, and how nurses’ experiences are foregrounded in various ways. In my work, data were predominantly provided from
students. So, future research should also include educator experiences of intra-professional teaching and learning. Furthermore, research is needed which explores other acute care team members, including health care aides, as they increasingly become situated as the eyes and ears for nurses in acute care contexts (Island Health, 2014b).

Future scholarship should also include philosophical inquiries to explore global political discourses and their influence on how we come to know about nursing education. To this end, I will explore the overarching discourse of neoliberalism in a separate paper, identified as one dominant discourse which is shifting the purposes of teaching and learning in post-secondary contexts. In addition, researchers and policy-makers must become aware of the impact that texts and discourses have in shaping reality, and how the “mangle of practice” (Cayley, 2010) – the dialectic of scientific and philosophical inquiry, as described by the scholar Andrew Pickering - creates options for how we construct reality. Here, existing pathways can be sustained in addition to forging new pathways to further understandings about phenomena of interest to nurses and nursing.

Finally, my plural project can stimulate further inquiries into how this work might inform mixed method approaches to research. Although this project was not conceptualized as a mixed methods design from the outset, I do reflect now on how two qualitative approaches, each situated in specific philosophical realms, could be constructed as a mixed methods study- an area for future inquiry which could change how a literature review (when done in a rigorous way) is conceptualized within a dissertation.

Summary

For nurses, nurse educators and students, it is important to consistently be conscious of the complexity of knowledge needed for nursing practice. This involves integrating more
than scientific evidence (including nursing knowledge and philosophical frameworks), in addition to knowledge about patient wishes and the organizational context for care. We need particularized knowledge for both nursing practice and education. Interactions with and caring for vulnerable individuals, families, and communities calls for complex, situated understanding, and decades of work by nurse researchers and theorists have provided numerous inquiries integrating evidence with philosophical inquiry so that various nursing standpoints – and their significance for education, research, and practice – can be explicated. It is nurses’ abilities to elucidate this complexity that will be critical not only to sustaining effective educational programming for those entering the profession, but also for mentors who work to assist students in becoming nurses.

The chafing created by institutional expectations for practice-ready nurses (and reducing nursing practice to tasks, skills, or functions) can be reframed by iteratively traversing among empirical projects and philosophical deconstruction or analysis of those projects. Conducting this dissertation work has revealed that research evidence (such as created by systematic reviews and institutional ethnographic inquiries) is only part of the knowledge necessary for nurses to know and act. While creating best practice documents for practitioners is important and can address many questions that nurses have, attention must also be given to those for whom these documents are created – professionals who provide nursing care. The pressure to de-professionalize nursing and instead create skilled workers with generic, flexible skills overshadows the development of citizens who can traverse, reflect upon, utilize, and challenge the paths upon which evidence was created in the first place. The development of professional nurses who can traverse the complexities of practice and politics of evidence to provide nursing care remains as important as ever.
References


experiences of pre-licensure or pre-registration health professional students and their educators learning in working with intra-professional teams: A qualitative systematic review. *JBI Database of Systematic Reviews and Implementation Reports*, 15(4), 1-46.


Center for Interprofessional Education. (2014). *Interprofessional education curriculum* [Internet]. Toronto ON: University of Toronto. Available from


ISIH International Conference: Challenging Health Inequity: A Call to Action. June 1-12, 2015, Palma de Mallorca, Spain.


Martin Saarinen J. (2008). *Dominant discourses and ideologies that have shaped the education of registered nurses and licensed practical nurses in Canada.* [Master’s project]. Victoria, BC: University of Victoria.


National Center for Interprofessional Practice and Education. (2014). *Recent communications*


Appendix A

How are registered nurses’ and licensed practical nurses’ experiences of learning to work together being organized by educational and work contexts?

What are the experiences of pre-licensure health professional students and educators learning to work on intra-professional teams?

JBI Qualitative Systematic Review

How are institutional texts organizing post-licensure nurses’ experiences of learning to practice on intra-professional teams?

IE-informed Analysis of RN-LPN Interviews

Philosophical Inquiry via Methodological Plurality

“embracing critique, deconstruction, reflexivity, multiplicities, and blurred borders…” (Pence & White, 2011, p. 220)
Appendix B

Sample Interview Questions

Preliminary Demographic Questions: (to be asked at the start of the interview)

In order to get to know you a bit better, I have some preliminary questions to ask you at this time. Please note that we will be careful how we present this information in our findings and reports so that you will remain anonymous. I also ask that you speak about relationships or interactions with others, but to refrain from identifying specific individuals in order to also protect your co-workers’ anonymity. If, for any reason, a person’s name is inadvertently mentioned, it will be removed from the interview when the recording is transcribed.

1. Are you currently working as an
   - RN
   - LPN

2. How long have you worked as an RN/LPN?
   - < 5 years
   - 5-9 years
   - 10-14 years
   - 15+ years

3. How long have you worked at this particular hospital?
   - <5 years
   - 5-9 years
   - 10-14 years
   - 15+ years

4. How long have you worked on this particular unit in the hospital?
   - <5 years
   - 5-9 years
   - 10-14 years
   - 15+ years

Sample Interview Questions: I would now like to ask you some questions regarding your experiences in your current work environment:

5. Think back to the last time you worked with an LPN/RN. How did you interact/work with this RN/LPN? (if possible try to construct a chronological account)

6. What was working together like for you? (explore any benefits and/or tensions identified).
7. In what ways are the roles of nurses on the care team changing (RNs, LPNs, HCAs)? How do these changes impact your work?
8. How do you understand the similarities and differences between the work done by RNs and LPNs?
9. How do you understand the similarities and differences between the scope of practice of RNs and LPNs?
10. How do you understand the similarities and differences in the educational preparation needed for RNs and LPNs?
11. Is there anything we should know about the impact of your work environment?
12. Is there anything else that we should know about the changing work relationships between RNs and LPNs?

Participant Code Number: ____________
Appendix C

Ethics Exemption Letter for JBI Systematic Review

Date: October 1, 2015

Dear Diane Butcher,

Thank you for emails to our office received September 29, 2015.

You have clarified that there are no human participants for this study, and data collection will only involve document review from publicly available sources. Given this, research ethics approval is not required.

Please note that this decision does not release researchers from any other applicable legal obligations, ethical oversight, or conforming to professional or occupational codes of ethics.

Please note that this decision has been made without precedent and cannot be applied to other, seemingly similar, situations.

Please contact our office if you have any questions or concerns.

Sincerely,

Dr. A. Andrea D'Arcy
Chair, Human Research Ethics Board
ehers@uvic.ca
# Appendix D

## Ethics Approval Letter for RN-LPN Study

**Certificate of Approval**

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR</th>
<th>Karen MacKinnon</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSITION</td>
<td>Faculty</td>
</tr>
<tr>
<td>DEPARTMENT</td>
<td>NURS</td>
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**ETHICS PROTOCOL NUMBER**: J2014-041

**ORIGINAL APPROVAL DATE**: 04-Jul-13

**APPROVED ON**: 04-Jul-13

**APPROVAL EXPIRY DATE**: 02-Jul-15

**PROJECT TITLE**: Working to Their Full Scope: Exploring Changing Work Relationships between RNs & LPNs

**RESEARCH TEAM MEMBERS**: UVI: Dr. Anne Bruce (Co-investigator), Blake Butcher (Research Assistant/PhD Student); VHA: Robert Cahan (Co-investigator), Christina Rosano (Collaborator), Dawn Nesi (Collaborator), Wendy Young (Collaborator)

**DECLARED PROJECT FUNDING**: University of Victoria Internal Research Grant

**CONDITIONS OF APPROVAL**

This Certificate of Approval is valid for the above term provided there is no change in the protocol. Extensions or minor amendments may be granted upon receipt of a Request for Annual Renewal or Modification form.

Amendments
To make any changes to the approved research procedures in your study, you must submit a “Request for Modification” form. You must receive ethics approval before proceeding with your modified protocol.

Extensions
Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a “Request for Annual Renewal” form before the expiry date on your certificate. You will be sent an email reminder prompting you to renew your protocol before your expiry date.

Project Closure
When you have completed all data collection activities and will have no further contact with participants, please notify the UVI/VHA Joint Research Ethics Sub-Committee by submitting a “Notice of Project Completion” form.

**Certification**

This certifies that the UVI/VHA Joint Research Ethics Sub-Committee has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations involving Human Participants and the Vancouver Island Health Authority Research Ethics office.

Dr. Rachel Sarchin  
Associate Vice-President Research Operations

Dr. Louise Castello  
Acting Co-Chair, Joint UVI/VHA Sub-committee

Certificate Issued On: 04-Jul-14
Appendix E

QARI appraisal instrument

**JBI QARI Critical Appraisal Checklist for Interpretive & Critical Research**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Unclear</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there congruity between the stated philosophical perspective and the research methodology?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. Is there congruity between the research methodology and the research question or objectives?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. Is there congruity between the research methodology and the methods used to collect data?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. Is there congruity between the research methodology and the representation and analysis of data?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. Is there congruity between the research methodology and the interpretation of results?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. Is there a statement locating the researcher culturally or theoretically?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. Is the influence of the researcher on the research, and vice-versa, addressed?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. Are participants, and their voices, adequately represented?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Overall appraisal:** ☐ Include ☐ Exclude ☐ Seek further info. ☐

**Comments (Including reason for exclusion):**

________________________________________________________________________
________________________________________________________________________
Appendix F

JBI QARI Data Extraction Form for Interpretive & Critical Research

Reviewer __________________________ Date ________________________

Author __________________________ Year _________________________

Journal __________________________ Record Number ______________________

Study Description
Methodology

________________________________________

Method

________________________________________

Phenomena of interest

________________________________________

Setting

________________________________________

Geographical

________________________________________

Cultural

________________________________________

Participants

________________________________________

Data analysis

________________________________________

Authors Conclusions

________________________________________

Comments

________________________________________

Complete ______ Yes ☐ No ☐
Appendix G: Search Strategy

Search strategy for CINAHL with full text; MEDLINE with full text; ERIC; Health source; Nursing Academic Edition; PsycINFO
http://www.uvic.ca/library/find/databases/index.php

S1: (MH “Intraprofessional relations”) or (MH “intraprofessional collaboration"")
S2: MH intraprofessional*
S3: MH intraprofessional* or intra-professional*
S4: MH “Students, Nursing, Diploma Programs”) or (MH “Students, Nursing, Baccalaureate+”) or (MH “Students, Pre-Nursing”) or (MH “Students, Nursing+”)
S5: student*
S6: (MH “Faculty, Nursing”)
S7: (faculty or instructor*)
S8: (MH “Curriculum+”) or (MH “Course Content”)
S9: (MH “Education, Nursing+”) or (MH “Education, Nursing, Baccalaureate+”) or (MH “Education, Diploma Programs+”)
S10: education
S11: S1 or S2 or S3
S12: S4 or S5 or S6 or S7
S13: S8 or S9 or S10
S14: S11 and S12 and S13
S15: S11 and S12 and S13 with limiters: published ≥January 1, 2001

New York Academy of Medicine(NYAM) Grey Literature Search:
http://nyam.org/library/
kw,wrdl: (interprofessional or kw,wrdl: interdisciplinary) and kw,wrdl: education
(limits- year 2000-2016)

TRIP
http://www.uvic.ca/library/find/databases/index.php
All words: intraprofessional; excluding interprofessional; anywords: intraprofessional, students, curricula

Web of Science
http://www.uvic.ca/library/find/databases/index.php
Intraprofessional* and student*

OCLC Papers First
https://www.oclc.org/en-CA/home.html?redirect=true
kw: intraprofessional and kw education and yr 2000-2016

Proquest Dissertations & Theses
http://www.uvic.ca/library/find/databases/index.php
Intra-professional AND intraprofessional AND (education or curricula) AND student AND faculty AND (pre-licensure OR pre-registration)
Limit: 2000-2016

Mednar
“Intraprofessional education”

Google Scholar
http://www.uvic.ca/library/find/databases/index.php
“Intraprofessional relationships” AND (student OR faculty)
Nursing Education Websites

AIPHE  
ANAs  
Australian College of Nursing  
CASN  
CNA  
Finnish Nurses Association  
N.Z. Nurses Organization  
Nursing & Midwifery Board of Australia  
Nursing in Scandinavia

Government Websites

Canadian Nursing Students Association  
Canadian Public Policy Collection  
Eurostat  
Government of Canada  
GPO (US Government Publications)  
WHOSIS (WHO Statistical Information)  
OECD  
World Bank Documents & Reports
**Appendix H: Excluded Studies (Screening Stage)**

<table>
<thead>
<tr>
<th>Study</th>
<th>Reason for Exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bainbridge, L., &amp; Nasmith, L. (2011). 17 Inter and Intra-Professional Collaborative Patient-Centred Care in Postgraduate Medical Education.</td>
<td>Different phenomenon (post-licensure physicians)</td>
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<tr>
<td>Barnes, D. V. (2005). <em>The school counseling psychology program: A qualitative study.</em> (317941 Ph.D.), Ann Arbor, MI: Brigham Young University. Retrieved from <a href="http://search.proquest.com.ezproxy.library.uvic.ca/docview/305029991?accountid=14846">http://search.proquest.com.ezproxy.library.uvic.ca/docview/305029991?accountid=14846</a> <a 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<td>Different phenomenon (interdisciplinary)</td>
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Different phenomenon (RN transition)


QN analysis of admissions, graduates, and enrollments of nursing schools across Canada.


Different phenomenon (inter--professional)


Different phenomenon (post--licensure PTAs)


Different phenomenon (new graduate transition)


Different phenomenon (workplace civility)


Different phenomenon (faculty development)
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<th>Author(s)</th>
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<th>Year</th>
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<th>Volume</th>
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<td>Costa, D., Molinsky, R., &amp; Sauerwald, C.</td>
<td>Collaborative Interprofessional education with occupational therapy and occupational therapy assistant students.</td>
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<td>Addressing Limited Clinical Experiences for Nursing Students.</td>
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<td>Different phenomenon (single nursing program)</td>
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<td>Faulkner, J.</td>
<td>New nursing graduates' relationships with experienced nurses in practice: An integrative literature review.</td>
<td>2015</td>
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<td>Fernandes, A. R., Palombella, A., Salfi, J., &amp; Wainman, B.</td>
<td>Dissecting through barriers: A mixed-methods study on the effect of interprofessional education in a dissection course with health care professional students.</td>
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<td>Freeman, J. R.</td>
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<td>Häggman-Laitila, A., Elina, E., Riitta, M., Kirs, S., &amp; Leena, R.</td>
<td>Nursing students in clinical practice: Developing a model for clinical supervision.</td>
<td>2007</td>
<td>Nurse Education in Practice</td>
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<td>Different phenomenon (clinical supervision)</td>
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<td>Different phenomenon (single ADN program)</td>
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<td>Different phenomenon (post-licensure)</td>
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<td>Lamontagne, C.</td>
<td>Relational Coordination: The Perception and Experiences of Student Nurses and Nursing Faculty in a Hospital Setting.</td>
<td>2014</td>
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<td>Different phenomenon (no intra-professional data or findings; focus is single program)</td>
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<td>Levetown M, L.</td>
<td>Communicating with children and families: From everyday interactions to skill in conveying distressing information. Pediatrics, 121(5), e1441-e1460.</td>
<td>2008</td>
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<td>Loversidge, J. M.</td>
<td>Faculty Perceptions of Preparation of Medical and Nursing Students for Interprofessional Collaboration. (3521037 Ph.D.), The Ohio State University, Ann Arbor. Retrieved from <a href="http://search.proquest.com.ezproxy.library.uvic.ca/docview/1036990456?accountid=14846">http://search.proquest.com.ezproxy.library.uvic.ca/docview/1036990456?accountid=14846</a></td>
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<td>Faculty Perceptions of Preparation of Medical and Nursing Students for Interprofessional Collaboration</td>
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Martin Saarinen, J. (2012). *Dominant discourses and ideologies that have shaped the education of registered nurses and licensed practical nurses in Canada*. (Master’s project). Victoria, BC: University of Victoria.


<table>
<thead>
<tr>
<th>Source</th>
<th>Different phenomenon</th>
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<tr>
<td>Martin Saarinen, J. (2012). <em>Dominant discourses and ideologies that have shaped the education of registered nurses and licensed practical nurses in Canada</em>. (Master’s project). Victoria, BC: University of Victoria.</td>
<td>Critical discursive review of literature</td>
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## Appendix I: Studies Excluded at Critical Appraisal Stage

<table>
<thead>
<tr>
<th>Study Appraised</th>
<th>Reason for Exclusion</th>
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<tbody>
<tr>
<td><strong>Evans, J.L., Henderson, A., &amp; Johnson, N.W. (2013).</strong> Traditional and interprofessional curricula for dental technology: Perceptions of students in two programs in Australia. <em>Journal of Dental Education, 77</em>(9), 1225-1236.</td>
<td>Three QN surveys with one survey with 5 open-ended questions; little QL data or identifiable findings</td>
</tr>
<tr>
<td><strong>Reeson, M. G., Walker-Gleaves, C., &amp; Ellis, I. (2015).</strong> Attitudes Towards Shared Learning of Trainee Dental Technicians and Undergraduate Dental Students. <em>J Dent Educ, 79</em>(1), 95-100.</td>
<td>Descriptive with little QL data and findings; predominantly QN analysis</td>
</tr>
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</table>
### Appendix J: Characteristics of Included Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Methodology &amp; Methods</th>
<th>Participants</th>
<th>Phenomena of Interest &amp; Intervention</th>
<th>Authors’ Conclusions</th>
<th>Reviewers’ Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brame, J.L., Mitchell, S.H., Wilder, R.S., &amp; Sams, L.D. (2015)&lt;sup&gt;38&lt;/sup&gt;</td>
<td>convergent parallel mixed methods design; survey (QN) and focus groups; (thematic analysis of focus group data)</td>
<td>total (n = 247); including senior dental students (n= 43); senior hygiene students (n=32); dental assist. students (n=19); Junior dental students (n=42); junior hygiene students (n=33). Chart included in paper shows demographics of each group (M/F; previous dental employment; previous dental education, age in years) For focus groups (n=17) - three separate groups (not intra-p): dental hygiene #1(n=6); hygiene #2 (n=5); dental student (n=6). 2 other groups cancelled (one DA group; one dental group due to issues around availability). Students who expressed interest in participating in focus groups were chosen at random. Focus groups conducted by two, independent third-party facilitators -university dental program introducing vertically integrated patient care clinics with a curricular revision in their dental program, bringing together dental assisting, dental hygiene, and dental students together in a team-based design</td>
<td>exploring students (dental, dental hygiene, and dental assistant students) attitudes/readiness for intra-professional education and assess attitudes/perceptions of intra-professional teamwork, communication, respect, and understanding of professional roles -facilitator utilized interview script (not included in paper) for focus groups</td>
<td>Three major themes identified (identified in the discussion section): need for increased communication among dental, dental hygiene, and dental assisting students; students' perceived that improved intra-professional communication would have a positive impact on consistency and quality of patient care; and students acknowledged that they have limited understanding of one another’s roles. “this study found that dental, dental hygiene, and dental assisting students supported a need for increased communication among dental disciplines and improved communication leading to a positive impact on the consistency and quality of patient care. They also agreed that they had limited understanding of one another’s roles. Cultural differences such as disciplinary stereotypes and barriers in communication must be resolved. Success cannot be achieved by foundational changes alone; students must be taught how to be team members and how to communicate effectively with other health care professionals.”</td>
<td>Adequate amount of participant quotes to support findings; includes comments in charts; found that words like ‘all,’ ‘unanimous’ become a little tricky- as providing one quote does not necessarily mean ‘all’? -addresses how collecting two forms of data contributes to a more comprehensive understanding -homogeneous focus groups based on educational program and level of learning</td>
</tr>
<tr>
<td>Study</td>
<td>Methodology &amp; Methods</td>
<td>Participants</td>
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<tr>
<td>Evans, J.L., Henderson, A., &amp; Johnson, N.W. (2012)</td>
<td>mixed methods design; case study</td>
<td>QL focus groups (3): group 1 - final-year dental technology students (n=8); group 2 - third-year dentistry students (n=2); and group 3 - final-year dentistry students (n=2)</td>
<td>To determine the impact of an IPE curriculum on knowledge and attitudes of dentistry and dental technology students participating in this curriculum</td>
<td>Knowledge and teamwork is fostered through our IP curriculum. Unfortunately, this has had limited influence on improving attitudes. More advocates and role models of IP practice, and longer experience of it, may prove more effective. IPE can positively influence dentistry and dental technology students' experiences of collaboration, but hierarchical issues remain. We fear that, until there is broader commitment to change across all facets of the oral health professions, and in particular amongst academia, the issues will continue. Four themes emerged from study: positive influence on professional identity; development of roles, enhanced communication, and perceived domination/lack of mutual respect between dentistry and dental technology students</td>
<td>-themes are identified in discussion section (not results), so not tied to participant quotes. There are numerous ideas/claims brought forth in discussion section, but these are not supported by quotes. Quotes are offered in the Focus Group Results section -word counts for each student focus group noted; discussion on the processes of coding, theming, or utilization of Leximancer software includes how coding frame in spreadsheet was used for a 4-step coding process (organizing, shaping, summarizing &amp; explaining themes and categorizations); Mentions that ‘data were triangulated to observe trends’ -not clear if triangulated data support identified themes -homogeneous focus groups by external facilitator to ‘limit researcher bias and minimize opportunities for evoked responses’</td>
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<tr>
<td>Study</td>
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<td>Jelley, W., Larocque, N., &amp; Patterson, S. (2010)&lt;sup&gt;38&lt;/sup&gt;</td>
<td>pilot study: QL descriptive study with thematic analysis; QL analysis with NVivo 8 to develop themes</td>
<td>Three pairs of PT and PTA students in concurrent paired placements incorporating 2:1 supervision and reciprocal peer coaching. Average age of participants was 21 years; Clinical Instructors (3 CIs) had minimum of 10 years’ clinical practice experience; all participants were female; CIs paired with a PTA (3 participants) who acted as mentors for students. Three third year students from the University of Ottawa PT program and three second year students from La Cite collegiale PTA program participated. PT students enrolled in 4-year baccalaureate program and had 7 weeks of prior clinical experience. PTA students were in their final year of a 2 year OTA/PTA college program and had 12 days’ previous clinical placement experience. Three PTs were recruited to act as CIs (clinical instructors); three PTAs who worked alongside the CIs acted as mentors for the student pairs.</td>
<td>To explore the perceived impact of a paired 5-week clinical placement on PT and PTA students’ skills Prior to start of clinical placements, CI/PTA pairs attended education session on reciprocal peer coaching (RPC); students attended a separate session (introduction to peer-assisted learning +PT regulatory guidelines) During clinical placement, students were given direct and indirect client-related tasks that emphasized cooperation, responsibility, communication, autonomy, coordination, and respect. Interview guide included pre- and post-placement questions such as: How would you define intra-disciplinary collaboration? What has your experience been with intra-disciplinary education? What made you decide to participate in this project? Were the expectations you expressed before the placement met in terms of what you expected for yourself? For other participants? Research budget was also used to allow CIs and PTAs release time to attend the educational session (prior to clinical placements) and to devote 4 half-days during the clinical placement to the orientation, instruction, and evaluation of the PT/PTA students.</td>
<td>pairing PT and PTA students utilizing a collaborative peer-coaching model results in improvements in students’ skills in communication, consultation, and task assignment</td>
<td>considering participant number (n=12), there were very few participant quotes to support the pre and post interview themes that were identified. Also included in the 12 participants were clinical instructors and PTA mentors, whose comments were not represented Provides detailed explanation of use of NVivo8 Three investigators participated in analysis of interviews and journals</td>
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<tr>
<td>Study</td>
<td>Methodology &amp; Methods</td>
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<td>Jung, B., Sainsbury, S., Gunn, R.M., Wilkins, S., &amp; Tryssenaar, J. (2002)</td>
<td>QL evaluation of collaborative fieldwork placement pilot project/model; collaborative fieldwork/partnership education model Method: student journal entries and post-placement questionnaire (open-ended) (retrospective content analysis (Patton))</td>
<td>OT students (n=8); OTA students (n=8); n=15 completed journals (one student left program/study); n=6 completed post-placement questionnaires University had second-degree OT bachelor’s program; separate college had OTA program; students were brought together for a shared fieldwork placement program/project. Six OT clinicians participated as preceptors for students Three sites utilized for placements- assessment unit in rehab center, acute orthopedic unit in a general hospital, and a long-term care(LTC) facility. Two sites were in Hamilton ON; one site was in St. Catherine’s ON Use of the LTC facility was discontinued after 1999 due to difficulties arising from limited on-site input and unclear role delineation (LTC previously had a full-time OT; however, no longer had one at the time of placements. Therefore, off-site preceptors were recruited)</td>
<td>experiences of OT and OTA students in fieldwork placement collaborative learning project OT clinicians (6) recruited to participate as preceptors (range of experience from 10-25 years &amp; involved in many student education activities) Student journals were reviewed independently by 3 authors and codes and themes were developed Open-ended questionnaire questions asked the students to comment on the following: ‘working together as a group or team; functioning collaboratively; participation within this collaborative model; identifying the perceived strengths and weaknesses for this model; and any future recommendations’.</td>
<td>Both benefits and challenges emerged from the study. It is essential that students are prepared within their respective programs prior to graduation, in order to have the knowledge, skills, and professional attitudes to enter into a partnership relationship. There is more work needed by educational programming, by professional associations to develop guidelines and position papers, and by individual practitioners in preparing students for practice. Author recommendations: -Ensure adequate educational preparation of students that includes understandings of collaborative learning, awareness of importance of teamwork, and respect for peer learning. -Develop clear objectives, roles and responsibilities, have senior students participate, and time placements to have student OTs begin earlier. -Refocus the priority of the learning experience to be one of partnership; eliminate language that reflects supervision. -Develop documents to guide practitioners and students that outline roles and responsibilities. -Develop strategies for equitable student teaching and learning time with preceptor.</td>
<td>provides ample quotes to support themes/findings; three authors independently read the journals and questionnaires and developed codes and themes</td>
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<td>Author(s) Conclusions</td>
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| Jung, B., Salvatori, P., & Martin, A. (2008) | QL descriptive study with retrospective content analysis | seven pairs of OT and OTA students; preceptors (experienced fieldwork educators- 1 OT and 1 OTA for preceptor for each student pair); 2 tutors (educators with tutoring experience- 1 OT and 1 OTA) – one affiliated with university OT program; the other with a college OTA program; chart outlines number/year of participants | To explore the impact of combined collaborative fieldwork placement and weekly tutorial as a teaching strategy for intra-professional education | -Combined collaborative placement and tutorial experience created positive learning outcomes for students  
-All students agreed that the small group tutorials added significant learning to their collaborative experience  
-Tutorials allowed students to continue to develop their relationships, gain new knowledge about their roles in various settings, discuss professional issues, and explore real-life clinical dilemmas  
-More research is needed to determine what impact each component has on student learning  
-Research is needed to determine if and how community settings could be used for intra-professional placements  
-They [students] gained new knowledge and developed new teamwork skills that have helped prepare them for collaborative practice in the future | overall, well supported by participant quotes (frequently supports theme with more than one quote); some findings do not have supporting quotes  
Authors noted the significance of including tutors’ and preceptors’ perspectives in study to add an important research perspective and create a more comprehensive picture of the student experience  
Builds upon work from previous study by Jung et al. (2002) |

Method: journaling and focus groups to collect data from students, tutors, and preceptors; questionnaire given to those who could not attend post-placement focus group.  
Tutors submitted reflective journals and had debriefing meetings with study investigators.  
Preceptors participated in post-placement focus group (preceptors did not journal)  
content analysis of journals and focus group discussions (students); codes and categories developed; tutor and preceptor data then reviewed to further refine categories derived from student data  
Two educational institutions participated- a university with an OT program; and a college with OTA and PTA programs in metropolitan area (major Canadian city). Initial 4 pairs of students’ study experience interrupted due to SARS outbreak, resulting in cancellation of placements and 2 tutorials.  
Students assigned to various in-patient fieldwork settings in Southern Ontario where OT and OTA roles had been established (adult physical health and adult mental health)  
Tutorials: 1 per week for 3 of 5 weeks in 2003 (2 cancelled due to SARS); 1 per week for 5 weeks in 2004
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<td>Limoges, J., &amp; Jagos, K. (2015)</td>
<td>Critical analysis of how educational discourses influence and construct intra-professional relations - utilized Smith’s approach of analyzing discourses as enacted in social contexts; utilized professionalization theories to aid discourse analysis</td>
<td>250 students: N=165 BScN and N=85 PN students participated in joint education event; participated in small group discussion, and wrote a reflective journal. Interviews: BScN (n=17) and PN (n=14) participants. 75% of BScN and 54% PN students between ages 16-22; 40% of BScN and 43% PN students had attended some prior post-secondary education prior to entering nursing. 11% of BScN students and 20% of PN students were male.</td>
<td>To explore how education constructs intra-professional relations. All students participated in joint education events in semesters one and four, and also participated in group discussions (combined PN and BScN students) and wrote reflective journals. 31 students also participated in interviews. Focus of semester one group discussion was developing awareness of similarities and differences between categories of nurse; focus of semester 4 group was on learning how to learn to work and make decisions together to accomplish a task. Semester 4 students also watched a webinar that outlined the roles of RN and LPN/RPN, and guidelines for working together.</td>
<td>This research is the first to consider the power relations and ruling discourses housed within intra-professional nursing education. The study revealed a number of social practices that interrupt student nurses’ abilities to understand their colleagues and their own contributions to patient care vis-a-vis the other type of nurse. Little education was provided to assist students to learn nurse to nurse collaboration or how to address the hierarchies that create and sustain power relations between the groups. Carefully considering how discursive elements about the other type of nurse are drawn into nursing education and how more helpful knowledge forms can be used in nursing education could contribute to improvements in intra-professional relations. Contesting social practices, including professional closure strategies, are important to ensure that the desired consequences of nursing education are achieved and advance both nursing and patient care goals.</td>
<td>- utilizes D. Smith’s approach in addition to discourse analysis to reveal ruling nursing education discourses enacted among students engaged in intra-professional groups; identifies findings as the key processes which structure and influence the boundary work between nursing groups and contribute to power relations and division instead of collaboration. - significant in terms of its critical analytic approach as it disturbs the normalized ideas surrounding collaboration.</td>
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<td>Mathews, H., Smith, S., Hussey, J., &amp; Plack, M.M. (2010)</td>
<td>case report: content validity of survey; descriptive exploration of student perceptions of shared 2:2 clinical ed. experience</td>
<td>2 physiotherapy (PT) students; 2 physiotherapy assistant (PTA) students (n=4 students) (1 PT and PTA student paired with 1 PT clinical instructor and 1 PTA tutor)</td>
<td>1) validate the content of survey items used to assess participant perceptions of the roles, practices, education, and preferred relationship of the PT and PTA; 2) assess the outcomes of a shared PT-PTA clinical education experience designed to enhance the preferred Pt-PTA relationship; 3) assess participants’ perceptions of the shared clinical education experience</td>
<td>this study provides insight into the continued lack of shared understanding of the roles, practices, and preferred relationship of the PT and PTA, including the need for open communication and shared responsibility for patient care. Development of a shared understanding on both national and local levels is warranted. The quality and efficiency of patient care are dependent on the optimal implementation of this relationship. Further study of the preferred relationship and methods to ensure optimal implementation of this relationship is warranted.</td>
<td>good use of supportive quotes to support findings; focused on QL analysis of summative student and instructor/tutor reflective essays (one PTA clinical instructor did not complete the essay) 2 researchers independently coded the essays using codes that were generated by one researcher, who had previously identified patterns of meaning, clustered statements and then coded statements.</td>
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<td>Plack, M.M., Williams, S., Miller, D., Malik, R., Sniffen, J., McKenna, R., &amp; Gilner, G. (2006)&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>Program evaluation: introduction and evaluation of an instructional model to educate PT students about the educational training and proper utilization of the PTA. The model fosters the development of the preferred relationship within the classroom setting. <strong>Method:</strong> mixed methods: pre/post-test questionnaire (QN) and summative focus group interviews; QL analysis (Vaughn et al. for focus group data analysis (8 semi-structured open-ended questions included)</td>
<td>first-year students from university-based PT program (n=34) and second-year PTA students from community-college based PTA program (n=21); second and third year PT students also completed questionnaire (“for comparison” n=46). 5 PT and 6 PTA participants joined the summative focus group interviews. The study took place during the 2003-04 academic year students were from separate programs from 2 different institutions in different cities in NY; the two institutions are 50 miles apart, so the focus groups were homogeneous (6 PTAs at one site; 5 PTs from other)</td>
<td>To determine the efficacy of an instructional model that brought both PT students and PTA students together to resolve issues of delegation, supervision, and communication as related to the role of the PTA. In addition, this model was designed to foster the development of the preferred relationship between PTs and PTAs in the classroom, before it was encountered or questioned in the clinical education setting. Summative focus group interview questions included the following: ‘What was your reaction to the combined PT/PTA class? In what ways did this course help or hinder your understanding of the appropriate relationship between PTs and PTAs? Would you recommend this class to other program directors-why or why not? What did you find most/least helpful in this classroom experience? What was the biggest thing you learned from this experience? If you were to redesign this class, what would you do differently? What piece of advice would you give to the course instructors involved in this course?’</td>
<td>outcome measures demonstrated that the first-year PT students not only developed the knowledge necessary for team-based decision-making, but also developed an appreciation for the skills and affective behaviors integral to the development of effective clinical relationships with PTAs. It is critical for PT students to be well-informed about the role and responsibility of the PT and PTA in delegation and supervision so that they can more accurately share this information with clinicians in practice.</td>
<td>-focus group data analyzed in terms of ‘reactions’ and ‘process’ -question whether all conclusions are supported by data -homogeneous focus groups due to student groups/programs being 50 km apart</td>
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Appendix K: Mapping RN and LPN Education within one University (VIU) (Butcher, 2017)

**LPN Program Pre-requisites**
High School (Diploma):
- C+ English 12; C Math 11 or 12; C in Biology 12
- Human Anatomy & Physiology VIU course as Prerequisite

**About the PRACTICAL NURSE Program**

2 year diploma program prepares graduates to provide nursing care in a diverse range of employment settings including: hospitals, nursing homes, extended care facilities, rehabilitation centres, doctors’ offices, clinics, companies, private homes, educational institutions, and community health centres.

The two-year, credit-based program prepares individuals with the theory and skills required to work as a practical nurse, with the potential for career advancement and job mobility.

Offered on two campuses (32 yearly in Nanaimo; 24 every other year at Cowichan-even # years)

Graduates of the program are eligible to write the Canadian Practical Nurse Registration Examination (CPNRE) to apply for licensure to become a Licensed Practical Nurse in British Columbia.

**COST:** $18,573.64  Total Credits: 75.5

(Private Program Comparison – Sprott-Shaw: $32,505.88)

**Faculty**
- Chair, *Instructors* (2), Lab Resource Nurse
- Prepared at Bachelor level for Nursing; Chair has MA

**Year 1**
- PRNU 101-106 +Consolidation (107)
- PRNU 111-115 +consolidation (116)
- PRNU 117 – Intersession
- **TOTAL CREDITS:** 36

**Year 2**
- PRNU 201-206 +Consolidation (207)
- PRNU 211-215 +consolidation (216)
- PRNU 217-Intersession
- PRNU 218-Transition to Preceptorship
- PRNU 219 – Preceptorship*
- **TOTAL CREDITS:** 39.5

**Graduate with PN Diploma; Successfully Complete Registration Exam (CPNRE)**

**TOTAL PRACTICE HOURS in PROGRAM:** 768 Hrs

*description of final preceptorship:
“An opportunity to demonstrate integration and consolidation of knowledge, skills, and abilities within the realities of the workplace and become practice ready”

(VIU, 2016) [https://hhs.viu.ca/practical-nursing](https://hhs.viu.ca/practical-nursing)

(Sprott-Shaw Community College, 2016) [https://sprottshaw.com/health/practical-nursing-program/](https://sprottshaw.com/health/practical-nursing-program/)
About the BScN Program September Admission (72 yearly)

The 4-year BSN program at Vancouver Island University is part of a 5-group consortium of nursing schools all sharing the same curriculum. Completion of the degree allows graduates to write the licensing examination leading to the title of Registered Nurse (RN) in the Province of British Columbia.

The Nursing curriculum was developed as a result of the recognized need for increased education for nurses, the changing directions in health care, and the recommendation made by the Canadian Nurses Association and the College of Registered Nurses of British Columbia (CRNBC) that the minimum requirement to enter the profession be a Bachelor of Science in Nursing degree.

The curriculum is based on the concepts of caring and health promotion, and has been developed in consultation with various government ministries and nursing theorists, practitioners and professional associations. Clinical experience is emphasized, as well as the need for thoughtful, reflective action as defined by the concept of praxis.

*progression requires 65% average in all courses; no grades lower than 60%

COST: $27,974.38 TOTAL CREDITS: 155.5

LPN Access to BSN Program (Year 2)
Requirements for year 1 bridge (6 courses):
- Currently licensed as LPN
- BIOL 156, 157 (Nursing: Anatomy & Physiology I and II)
- Nursing 170, 173 (Health & Healing Bridge; Professional Practice Bridge (both for LPNs only)
- Degree English Requirements - 2 courses listed on VIU Website

TOTAL CREDITS: 20
Two Letters of Reference
NOT CURRENTLY OFFERED

Post-RN Entry (RNs with RN diploma)
Transcript from RN Diploma Program
Verification of RN Registration (CRNBC)
Two Letters of Reference
NOT CURRENTLY OFFERED

Faculty
Chair, Professors (27), Sessional Instructors (10), Lab Resource Nurse (same person as LPN program)
Prepared at Master’s (MN or MPH) level in Nursing; 2 professors have PhDs (Nursing)

*description of final preceptorship:
"Using a leadership perspective, participants explore and critique emerging health care issues, ethics of nursing practice, and utilization of research evidence to inform nursing practice.

Graduate with BScN Degree; Successfully Complete Registration Exam (NCLEX)

Year 1
- NURS 101,103,104,110,111,113,114
- NURS175-Consolidated Practice Exp
- BIOL 156, 157 (Anatomy + Physiology)
- English Requirements (2 courses; 6 credits total)

TOTAL CREDITS: 47.5

Year 2
- NURS 200,201,202,204,208,210,211,214,218
- NURS275-Consolidated Practice Exp
- PHIL 331 (Ethics in Health Care)

TOTAL CREDITS: 41

Year 3
- NURS 300,301,302,304,310,313,314,318
- NURS375-Consolidated Practice Exp

Elective-General (3 credits)

TOTAL CREDITS: 39

Year 4
- NURS 400,403,404
- Approved NURSING Elective
- Approved Non-Nursing Elective
- NURS 475-Transition to Practice*

TOTAL CREDITS: 28

TOTAL PRACTICE HOURS in PROGRAM: 1835 Hrs

(VIU, 2016) https://calendar.viu.ca/health/bachelor-science-nursing
WHO (2008): effective HC system: “having enough people, with the right skills, in the right place” (p. 6)

Ministry of Health; HPA
Setting priorities for HC system; supports single regulatory body for RNs, LPNs, and HCAs
Support BC Jobs Plan

Ministry of Advanced Education
-ensuring skilled workers; mobility
-provides college & university accreditation

BC Government

BC Jobs Plan
Blueprint: Right skills for right job

Graduate with Practical Nurse Diploma; Complete Registration Exam (CPNRE)
‘practice ready’

LPN Regulators: CCPNR, CLPNBC

Health Care Workforce
-efficient, LEAN, safety; care team design
Skilled worker; flexibility
LPN-less acute, complex care; shifting scopes and policies
RN-complex, high acuity, care & discharge planning/flow; patient teaching; audits & reports
-job descriptions

RN Regulators: CCRNR, CRNBC
Interprofessional practice, blurring boundaries

Post-RN Entry (RNs with diplomas) NOT currently available

LPN to RN Access NOT currently available

Graduate with Baccalaureate Degree (Nursing); Complete Registration Exam (NCLEX)
‘Professional practice’

TOTAL credits: 155.5
TOTAL practice hours: 1835

DIPLOMA (PN) program
TOTAL credits: 75.5
TOTAL practice hours: 768

DEGREE (RN) program