Employing communities of practice to facilitate international culturally and linguistically diverse nursing students' identities as learners in Australia through immersive simulation.

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Abstract

In this qualitative research study, a method to develop the capability of international nursing students from culturally and linguistically diverse backgrounds (ICALD) to participate with members of an Australian community of nursing practice was explored. This was done by providing participants with an opportunity to participate in a specifically designed immersive simulation program.

In this research study, the situated learning perspective of communities of practice, based on Wenger's (1998) conceptual framework, is adopted. This perspective enabled the exploration of ICALD nursing students' participation with members of an Australian community of nursing practice, not only as involving the negotiation of social and cultural expectations of learning, but also their re-negotiation of identities as learners.

Two research questions were explored:

1. In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?
2. In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

A two-phase case study methodology was employed, drawing on data from ICALD students enrolled in a Bachelor of Nursing program at one Australian university.

In Phase One, five ICALD students described their experiences and perceptions of the first clinical placement in Australia. These findings were then interpreted through Wenger's (1998) lens of Communities of Practice to inform the design of three immersive simulations.

In Phase Two, a total of seven ICALD nursing students participated, and these findings are represented in two case studies. Their experiences and perceptions of the immersive simulation program were uncovered.

Whilst all Phase Two participants were located in the same physical context, the ways in which the participants perceived their social relations with members of an Australian community of nursing practice, and interacted with these members and each other during the immersive simulation program differed. These differences helped to illuminate understanding into ways of facilitating ICALD nursing students' participation with members of an Australian community of nursing practice.

The findings from this research support five propositions regarding the influence of Communities of Practice as a design *for* learning in the form of immersive simulation: (1) significant meaningful learning occurs from exploring participation and non-participation through simulations that replicate everyday nursing practice; (2) competence from a Communities of Practice perspective facilitates understanding of learning as an ongoing process of becoming; (3) mutual engagement *affords access* to the joint enterprise and shared repertoire; (4) negotiation of multimembership *must* explore cultural difference in relation to participation; and (5) simulation represents a boundary object, which facilitates connections between communities of practice.

Significantly, the research findings supported the development of *The Situated Learning Design Framework for Simulation*.

Gaps in the current literature are addressed in this thesis. This study represents a step forward in understanding healthcare simulation design. Importantly, this research illuminates ways in which to facilitate the development of ICALD nursing students' identities of participation within an Australian CoNP. It does this by proposing a more holistic application of Wenger's (1998) framework of CoP to nursing simulation.

Declaration

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university or equivalent institution and that, to the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text of the thesis.

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Chapter One: Introduction

1.1 Impetus for the Study

I conceived this research study in 2005 whilst working with international nursing students from culturally and linguistically diverse (ICALD) backgrounds; initially as a clinical facilitator supervising nursing students during the clinical placement, and later as an academic designing and implementing pre-registration nursing curriculum. Both experiences provided insight into the challenges experienced by ICALD nursing students studying in Australia. Feedback from the clinical environment regarding these students included concerns of poor communication, lack of initiative and little self-direction with learning. In particular, ICALD nursing students were described by clinical nurses as reluctant to participate, preferring to stand back and observe rather than *doing* nursing work. Informal conversations with these students throughout many hours of clinical placement revealed a mismatch between ICALD nursing students' and clinical nurses' expectations of learners and learning during the clinical placement. This created the impetus for this research study.

As my engagement with the literature informing this research evolved, so too did my understanding of the disconnection between classroom and workplace pedagogy in pre-registration nursing education. As well as this was the relative absence of strategies to prepare nursing students for participation during the clinical placement. My introduction to perspectives of situated learning and communities of practice provided by the seminal work of Lave and Wenger (1991) and Wenger (1998a) enabled me to conceptualise in greater depth the difficulties experienced by ICALD nursing students when negotiating the pedagogical expectations of participation in a workplace culture.

At the same time, my role as an academic afforded me opportunities to explore simulation-based learning as an emerging learning and teaching method in healthcare

education. As my academic career and this research study progressed, I began to see the potential that simulation-based learning offered as a strategy to facilitate the introduction of ICALD nursing students to their first clinical placement in Australia. However, at the time, existing literature and research relating to simulation-based learning did not provide insight as to what such simulation might look like.

The original aim of this research study was to provide first-year ICALD nursing students studying in Australia with simulation-based learning experiences prior to their first clinical placement. The intent of these simulation experiences was to develop these students' understanding of their role as learners during the initial clinical placement in Australia. Whilst interrogating the literature relating to nursing education, international students, workplace pedagogy and simulation-based learning, it became apparent that this very broad research aim could be refined to one of strengthening ICALD nursing students' awareness of their roles as learners during the clinical placement, by aligning pedagogies of the classroom and the workplace through simulation-based learning. Whilst Lave and Wenger's (1991) and Wenger's (1998a) conceptualisations of communities of practice reflected processes of learning, identity and belonging in terms of the clinical placement, it was clear communities of practice had not been used to inform simulation design as a strategy for preparing ICALD nursing students as learners in nursing practice. Further, there appeared a paucity of literature illustrating how to operationalise this theoretical perspective.

1.2 Research Questions

This qualitative research study was designed as a two-phase case study guided by the following research questions:

1. In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?
2. In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

In addressing these two research questions, this study aimed to explore the potential to design immersive simulation experiences for supporting ICALD nursing students to learn how to learn as legitimate participants in the social practice of nursing.

1.3 Background

Three key factors informed the background to this research study: the rapid and significant increase of international nursing student enrolments in Australian pre-registration nursing programs; unreconciled and largely unacknowledged differences in pedagogical assumptions between ICALD student learning, university learning and workplace learning in the context of the clinical placement; and the significant and largely unquestioned adoption of simulation-based learning as a learning and teaching method by pre-registration nursing programs.

It is important to clarify the following terms. For the purpose of this thesis:

- ICALD nursing students refers to international nursing students for whom English is not the primary language. ICALD students require a student visa in order to study nursing in Australia.
- OQNs refers to ICALD nursing students who possess a nursing qualification from their country of origin. OQNs require a student visa in order to study nursing in Australia.
- International nursing students is used as a generic term to refer to international students who require a student visa in order to study nursing in Australia.

1.3.1 International nursing students in Australian higher education.

There has been a dramatic and rapid increase in the enrolment of international students in Australian nursing programs in the past two decades. There is also a chronic shortage of qualified nurses in Australia, and this has resulted in mass recruitment of international nursing students to sustain the Australian nursing workforce (Konno, 2006; Preston, 2009). Australian government agencies and tertiary education providers have engaged in aggressive marketing and recruitment strategies to attract international nursing students from increasingly diverse ethnic and cultural markets such as Africa, China, India, Nepal, Sri Lanka, Korea and Japan.

For many international nursing students, nursing as a profession in Australia is perceived as providing improved education, career opportunities, working conditions, and quality of life. However, the literature exploring the experiences of ICALD nursing students studying in Australia suggests these students experience significant feelings of inadequacy with the English language, feelings of social isolation, and difficulties understanding what is expected of them as learners (Adnams, 2012; Gilligan & Outram, 2012; He, Lopez, & Leigh,

2012; Seibold, Rolls, & Campbell, 2007; Shakya & Horsfall, 2000; Starr, 2007; Woodward-Kron, Hamilton, & Rischin, 2007).

1.3.2 Where worlds collide: The clinical placement and learning.

Pre-registration nursing programs in Australia comprise two distinct learning environments: the university; and the clinical placement. Through brief and intermittent periods of immersion in the practices and culture of the nursing profession, the clinical placement is assumed to provide nursing students with opportunities to develop: a beginning level of practical knowledge; development and enhancement of skill; and maturation of attributes relating to becoming a healthcare professional (Chesser-Smyth, 2005; Newton, Jolly, Ockerby, & Cross, 2010; Tiwari, Lam, Yuen, Chan, & Fung, 2005). Whilst the first clinical placement has been identified as confirming for many nursing students their choice of nursing as a career (Yong, 1996), the first clinical placement is of particular importance for ICALD nursing students as it presents for the first time, a realised opportunity to engage with the language, tools, processes and culture of Australian nursing practice.

Research exploring the experiences of the first clinical placement in Australia by ICALD nursing students illustrates overwhelming feelings of anxiety, fear, loneliness and social isolation as these students attempt to negotiate the tensions between cultures of university, workplace and their own cultural heritage (Brown, 2005; Dickson, 2013). Contributing factors include a lack of proficiency in the English language (Gilligan & Outram, 2012; Rogan, San Miguel, Brown, & Kilstoff, 2006). However, an additional and significant contributing factor is a mismatch between perceived and actual roles and expectations as learners in the clinical environment (Gilligan & Outram, 2012; Jeong et al., 2011). ICALD nursing students experience difficulties negotiating complex interpersonal relationships with nurses (Brown, 2005; Woodward-Kron et al., 2007) as well as feelings of acculturative stress and cultural dissonance relating to being immersed in completely

unfamiliar Australian and workplace cultures (Brown, 2005; He et al., 2012). Whilst feelings of alienation, exclusion and isolation during the clinical placement are not confined to ICALD students as exemplified by many researchers (for example, see: Bradbury-Jones, Sambrook, & Irvine, 2011; Chapman & Pyvis, 2006; Grealish & Ranse, 2009; Levett-Jones, Lathlean, Higgins, & McMillan, 2009; Levett-Jones, Lathlean, McMillan, & Higgins, 2007; Thrysoe, Hounsgaard, Dohn, & Wagner, 2012), the heightened potential for exclusion and discrimination based upon physical, cultural and linguistic difference make ICALD nursing students a particularly vulnerable population (Dickson, 2013; Jeong et al., 2011).

At a time when there are calls for programs to better prepare ICALD nursing students for the clinical placement (for example, see: Brown, 2005; Dickson, 2013; Gilligan & Outram, 2012), there is a paucity of designed learning experiences that are underpinned by a theoretical perspective of situated learning theory. This identified gap in the literature provided the impetus for this research study.

1.3.3 Situated learning: Communities of Practice.

Discourse within the contemporary education literature reveals a monumental shift from the understanding of learning as the acquisition of knowledge, to the understanding of knowledge as situated in the authentic contexts where it exists (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991). According to this perspective, knowledge is perceived as an outcome of participation in a social practice (Billett, 2006; Eraut, 2007; Hager, 2011; Lave & Wenger, 1991; Sfard, 1998). Lave and Wenger's (1991) notion of communities of practice has been recognised as the catalyst of this shift by conceptualising learning as an outcome of social participation in a community of practice, as distinct to the dominant psychological, individual approaches of the time (Hager, 2011). Conceptualisation of communities of practice as articulated by Lave and Wenger (1991) and more specifically Wenger (1998a) underpins this research study. Communities of practice is adopted as the theoretical lens

through which to explore this research problem. More specifically, this research sought to operationalise Wenger's (1998a) theoretical conceptualisation by developing a design framework for immersive simulation based upon the central concepts of Communities of Practice.

1.3.4 Healthcare simulation and learning.

The rapid and enthusiastic adoption of simulation-based learning across pre-registration nursing programs internationally over the past three decades has been largely uncritical, with the focus of inquiry into simulation-based learning dominated by simulator technology rather than theoretical perspectives of learning. Factors driving the increasing use of simulation in Australian pre-registration nursing programs include: a landscape of large pre-registration student numbers resulting in a highly competitive clinical placement market; a concern for patient safety and quality patient care; increasing acuity of patients; and an expectation from employers of graduates who are work ready (Brown et al., 2012; Department of Human Services, 2007; McKenna, French, Newton, Cross, & Carbonnel, 2007).

Despite a proliferation of research seeking to demonstrate the effectiveness of simulation as a learning and teaching method in healthcare education, much of the contemporary evidence has been criticised as descriptive, piecemeal and lacking external validity (Rourke, Schmidt, & Garga, 2010). Kaakinen and Arwood (2009) and Rourke et al. (2010) have related this situation to a lack of theoretical grounding in both simulation design and research. This lack of theoretical grounding impacts on the quality of healthcare simulation research, and there have been calls for sound theoretical frameworks to underpin this research area (Berragan, 2011; Bligh & Bleakley, 2006; Bradley & Postlethwaite, 2003; Schiavenato, 2009). This research study will examine in detail and challenge fundamental

assumptions of healthcare simulation and present clarity in relation to the research questions that underpin this study.

The nursing simulation literature provides ample examples of preparing pre-registration nursing students for the role as a registered nurse (for example, see: Alinier, Hunt, & Gordon, 2004; Burke, 2010; Kelly, 2014; Mole & McLafferty, 2004; Warland, 2011; White, 2010). However, there is a dearth of designed immersive simulations that accurately represent student roles as learners, be they ICALD or domestic nursing students, when participating with members of a community of nursing practice. This research study explores the ways in which Communities of Practice, as conceptualised by Wenger (1998a), informed immersive simulation design as a means to develop the capability of ICALD nursing students to participate in the processes of workplace learning during their first clinical placement in Australia.

1.4 Structure of the Thesis

This thesis is organised in the following manner.

Chapter Two is the first of three literature review chapters. In this chapter, a description of ICALD nursing students studying in Australia as a vulnerable population of learners in the Australian higher education system is presented. In this chapter, four main focal points are highlighted. Firstly, the social, cultural, political and economic factors that have contributed to the rapid and significant increase in international student enrolments in Australian pre-registration nursing programs are explored. Secondly, the challenges confronting ICALD nursing students as learners in Australian higher education are presented. Thirdly, challenges of learning in the workplace in the context of the clinical placement are identified and explored. Fourthly, an analysis of existing strategies to prepare ICALD nursing students for the clinical placement is provided and highlights the deficits of such approaches from the perspective of this research study.

Chapter Three is the second literature review chapter. In this chapter, learning from the perspectives of communities of practice and workplace learning theory are explored. Specifically, there is a focus on Communities of Practice (Wenger, 1998a) as a theoretical lens through which to align perspectives of learning during immersive simulation and the clinical placement. A critique of Wenger's (1998a) notion of communities of practice is provided, revealing the complexity of this framework. Finally a rationale is given as to support the perspective that communities of practice is a suitable theoretical framework through which to explore the research problem.

Chapter Four is the third literature review chapter. In this chapter, the contemporary healthcare simulation literature is examined, highlighting and challenging fundamental assumptions that underpin contemporary healthcare simulation practice. Existing conceptual frameworks and best practice guidelines are presented and critiqued. This in-depth exploration includes literature from the areas of healthcare simulation, as well as fields of education and instructional design, to better understand the characteristics of immersive simulation that appear to contribute to learning.

In Chapter Five, the methodology and methods for this research study are presented. A qualitative multiple-case study approach to inquiry is described, and justification is given for the selection of this research methodology. The design of this research study, including context, methods, sampling, data collection and analysis is presented. Challenges to qualitative research are discussed and quality measures undertaken to enhance the trustworthiness of this research study are described.

In Chapter Six, the findings from Phase One of this two-phase study are presented. Within this chapter, an analysis of the perceptions and experiences of the first clinical placement in Australia from the perspectives of five OQNs studying nursing at one Australian university is provided. Thematic analysis of the focus group interview data through a lens of Wenger's (1998a) Communities of Practice, and a subsequent synthesis with situated learning, workplace learning, and healthcare simulation literature culminates in eight propositions, presented as eight design elements for immersive simulation. In the final section of Chapter Six, the eight design elements are proposed as a preliminary framework for the design of the immersive simulation program for Phase Two of this research study.

In Chapter Seven, the first of two case studies that form Phase Two of this research is presented. Perceptions and experiences of the immersive simulation program from the perspectives of four international nursing students (two OQNs and two ICALD nursing students) are explored. Thematic analysis of the Case Study One data inform recommendations for the refinement of the eight design elements for immersive simulation proposed in Phase One.

In Chapter Eight, the second of two case studies that form Phase Two of this research is presented. Perceptions and expectations of the immersive simulation program from the perspectives of three ICALD nursing students are explored. As with Case Study One, thematic analysis of data was undertaken. Whilst the focus in this chapter is on Case Study Two, where Case Study Two converges and diverges with Case Study One is also highlighted. Recommendations are made for the further refinement of the eight design elements for immersive simulation proposed in Phase One.

The Situated Learning Design Framework for Simulation conceptualised as a result of this research, and the seven design elements of the framework are presented in the final chapter. The design framework represents an amalgam of Wenger's (1998a) Communities of Practice, his conceptual learning architecture, pedagogical practices of healthcare simulation, and the eight design elements proposed and refined as a part of this research study.

Informing the entire theoretical basis and epistemological philosophy of The Situated Learning Design Framework for Simulation is Wenger's (1998a) Communities of Practice. Accordingly, the use of the design framework could inform immersive simulation design that reflects an epistemology of practice (Raelin, 2007; Wenger, 1998a) by engaging fundamental issues of meaning, time, space and power by focusing on ICALD nursing students, and their participation, learning, identity and belonging within the context of Australian communities of nursing practice.

Chapter Two: International Culturally and Linguistically Diverse Nursing Students in Australia

The review of literature is addressed in chapters two, three and four and provide the background and justification for this research study. The impact of Australian higher education on international culturally and linguistically diverse (ICALD) nursing students is explored in this chapter. Firstly, the context within which this research was situated is described. The context includes the global nursing shortage, and the strategies of intensive recruitment of overseas qualified nurses (OQNs) and ICALD nursing students in order to address this shortage. This is then followed by an exploration of the challenges that confront ICALD nursing students in western higher education, specifically in Australia, with a particular focus on pedagogical difference. Following this, the challenges of learning for ICALD nursing students when entering the workplace during the clinical placement will be explored. Finally a critique of the existing programs intended to facilitate the adjustment of ICALD nursing students to the clinical placement in Australia is offered.

2.1 The Business of Nursing Education in Australia

The prediction of an eminent shortage of nurses as a significant concern locally and globally has been heralded for the past two decades (Health Workforce Australia [HWA], 2012; Oulton, 2006; World Health Organization [WHO], 2006), and nursing recruitment and retention strategies have become an international priority. Contributors to this global nursing shortage relate to: factors pertaining to the recruitment of new nurses; and factors pertaining to the retention of existing nurses in the workforce.

The factors cited as contributing to recruitment of insufficient numbers of new nurses include: high university fees for nursing degrees (Drury, Francis, & Chapman, 2009); alternative career prospects for women who have traditionally formed the foundation of the

nursing workforce (Hawthorne, 2001; Janiszewski Goodin, 2003); and a poor image of nursing as a profession (Gerrish & Griffith, 2004; Hawthorne, 2001; Janiszewski Goodin, 2003). Factors which are cited as affecting retention of nurses in the workforce include: increased career opportunities for nurses in western countries in non-acute care settings (Oulton, 2006); low morale, job dissatisfaction and burnout (Cowin & Jacobsson, 2003; Erickson & Grove, 2008; Janiszewski Goodin, 2003; Price, 2009); poor human resource planning and management (Fitzgerald, 2007; Kingma, 2006; Oulton, 2006); and the changing priorities of the nursing workforce, from a generation seeking job security and consistency, to a new generation seeking flexibility, job portability and independence (Cowin & Jacobsson, 2003; Duchscher, Judy, & Cowin, 2004; National Health Workforce Taskforce [NHWT], 2009). Overarching factors for both recruitment and retention is an increasingly ageing nursing workforce that is approaching retirement (HWA, 2012; Janiszewski Goodin, 2003; Oulton, 2006). In the Australian context, these factors culminate in a projected shortfall of 109,000 nurses by 2025 (HWA, 2012).

In Australia, as in the United States of America and the United Kingdom, strategies for addressing domestic nursing shortages have largely focussed on two approaches; firstly re-engaging non-practising nurses and secondly, increasing the number of newly registering nurses. Since the late 1990s, Australian state and federal governments have implemented return to work initiatives aimed at enticing non-practising nurses back into the nursing workforce, improving retention, and decreasing attrition rates amongst practising nurses (Mason, 2013). At the same time, strategies for increasing numbers of newly registering nurses have focussed on recruitment of OQNs from increasingly diverse source countries (Jeon & Chenoweth, 2007; Kline, 2003), and increasing the capacity for tertiary nursing programs to admit greater numbers of domestic and international students (Australian Health Ministers' Conference 2004; Mason, 2013; NHWT, 2009; Preston, 2009). Significant and rapid recruitment of OQNs and ICALD nursing students from increasingly culturally diverse

source countries has resulted in a compelling body of literature highlighting the challenges for this population relating to learning in Australia. In this literature, the suggestion is that ICALD nursing students face challenges including: misunderstanding roles and expectations as learners within the context of Australian higher education; the need for accessible, relevant support in order to improve academic success in Australia; and the clinical placement where ICALD nursing students are identified as *different* leaving them devoid of a sense of belonging.

2.2 ICALD Nursing Students and Australian Higher Education

Recently, enrolments into Australian pre-registration nursing programs have increased as a strategy to lessen the impact of the aforementioned predicted nursing shortage. Indeed nursing education was identified by the Australian Government as a "national priority", resulting in low student fees for pre-registration nursing programs (Department of Education and Training [DET], 2011; Mason, 2013). Accordingly, Australian schools of nursing modified entry requirements in order to increase this intake into pre-registration nursing programs. At the same time, Australian government agencies and higher education providers engaged in aggressive marketing and recruitment strategies to attract international nursing students from diverse ethnic and cultural markets including Africa, China, India, Nepal, Sri Lanka, Korea and Japan. Further, inducements were offered to attract international nursing students to Australia. These included the potential for employment in Australia post-registration (Jeong et al., 2011; Oulton, 2006; Preston, 2009), and Temporary Graduate visas as a stepping-stone for permanent residency (Department of Immigration and Border Protection, 2015).

In 2007 when this research study was conceived, Australia was identified as one of the three major players in the international student market (Verbik & Lasanowski, 2007). At that time, the majority of international students studying in Australia were from China, India and

Malaysia (Verbik & Lasanowski, 2007). The international student market has evolved to become an essential contributor to the economy of the entire Australian higher education sector, representing 25% of all higher education enrolments (DET, 2013). In Australia, the numbers of international nursing students are significant.

In 2007, approximately 18% of the 14,657 students enrolled in Australian nursing degree programs were identified as international students (Council of Deans of Nursing & Midwifery [CDNM], 2009). In the same year, whilst 18% of all student enrolments at the university where this research was situated were categorised as international students (Statistical Digest, 2008), 35% of total enrolments in the Bachelor of Nursing program were international students. During the period of 2009 to 2011 when data collection took place, approximately 39% of students enrolled in the university's Bachelor of Nursing program were categorised as international students (Statistical Digest, 2012).

An increasing body of literature exploring ICALD nursing students' experiences of studying in Australian universities has revealed challenges relating to: English language proficiency; communication; and cultural difference, including different epistemological and pedagogical philosophies of education. The complexity of these challenges is augmented by the two distinct milieu within which pre-registration nursing education is situated; the formal learning environment of the classroom, and the healthcare workplace. Understanding these challenges provided the context and justification for this research study and they are explored in the following sections.

2.2.1 "Australian English".

Proficiency with the English language features prominently in the literature as a significant barrier to learning for ICALD nursing students in Australian higher education (Gilligan & Outram, 2012; Hillege, Catterall, Beale, & Stewart, 2014; Jeong et al., 2011; Shakya & Horsfall, 2000; Starr, 2007). Findings of studies exploring language as a barrier for

these students are presented in two ways: firstly, the technical aspects of English language; and secondly, context-specific requirements of academic and nursing language.

ICALD nursing students invariably study English in their country of origin prior to commencing studies in Australia. An overall English proficiency level of least 6.5 (Academic) in the International English Literacy Testing System[1] (IELTS) is required in order for international students to enrol in Australian nursing programs. However, in the research the suggestion is made that IELTS does not reflect the higher levels of English language proficiency required for discipline-specific verbal and written language in academic nursing programs (Hillege et al., 2014; Jeong et al., 2011; Shakya & Horsfall, 2000; Starr, 2007). For example, ICALD nursing students report feeling unprepared for the complexity of English language required for studying nursing (Hillege et al., 2014; Jeong et al., 2011; Starr, 2007). Adding to this complexity is "Australian English" (Gilligan & Outram, 2012, p. 43) characterised by accents, idiom, vernacular, and fast pace of speech that makes understanding and being understood difficult for these students (Dickson, 2013; Gilligan & Outram, 2012). Further, complex discipline-specific terminology and abbreviations relating to nursing, the bio-sciences and social sciences impede ICALD nursing students' ability to make meaning of course content (Hillege et al., 2014; Shakya & Horsfall, 2000).

Specific challenges of understanding and being understood have been documented about ICALD nursing students in terms of: comprehension of lecture and tutorial content; interpretation of the meaning and purpose of assignment and examination questions; and the subsequent construction and presentation of appropriate responses to assessment tasks (Hillege et al., 2014; Shakya & Horsfall, 2000). These issues highlight that the significant challenge facing ICALD nursing students learning in Australian academic settings is one of misunderstanding rather than not understanding. This misunderstanding presents a significant challenge to both academics and ICALD students as the subtleness of misunderstanding may

[1] The International English Literacy Testing System is represented by a scale of 1 to 9.

not be recognised until poor academic outcomes result. Salamonson, Everett, Koch, Andrew, and Davidson (2008) found a direct correlation between lack of understanding relating to the cultural elements of language and poor academic outcomes in ICALD nursing students, particularly in the early years of study.

The hallmarks of academic success in Australian universities include academic conventions of writing, oral presentation, referencing, and critical thinking and analysis. Research suggests that ICALD nursing students are not familiar with nor prepared for such conventions (Adnams, 2012; Omeri, Malcolm, Ahern, & Wellington, 2003; Starr, 2007). These issues are explored in the sections that follow.

2.2.2 Culture and pedagogical difference.

Understanding and misunderstanding not only relate to language and communication, but the fundamental culturally-based assumptions and expectations that underpin education systems. Culture has been defined as knowledge, values, beliefs, identities and customs that are acquired from and shared among members of a cultural group (Broesch & Hadley, 2012). In relation to this current discussion, nursing education, including the philosophical and epistemological foundations of knowledge and learning, reflects a particular culture. In Australian university programs, value is placed on (although not necessarily always employed) approaches to learning based upon a Socratic philosophy whereby knowledge is shared, developed and extended through questioning, critical analysis and independent inquiry (Ballard, 1987). A Socratic philosophy values questioning the beliefs of others and the formation of one's own opinions (Tweed & Lehman, 2002). In contrast, many ICALD nursing students, particularly students from south-east Asian countries have experienced an education system based upon a Confucian philosophy. A Confucian philosophy of knowledge and learning values respectful and pragmatic attainment of knowledge (Tweed & Lehman, 2002). Knowledge is not open to challenge; questioning, critical analysis and

theorising do not play a part in learning (Ballard, 1987). Interdependency is valued over independence, with harmony a desired outcome when confronted with opposing opinions rather than competition and critical analysis (Ballard, 1987).

In an analysis of Asian students' adjustment to Australian universities, Ballard (1987) argued the fundamental challenge facing these students as differences in relationships between the student and the "teacher", and the cultural expectations, obligations and assumptions that underpin such relationships. Ballard (1987) posited that within Asian cultures, teachers are held in great respect and are perceived as a repository of knowledge; knowledge is fixed and is to be transmitted from teacher to student. Teachers have an obligation to present all materials and knowledge necessary for students to be successful in their studies. Ballard (1987) highlighted an expectation held by Asian students to receive good grades if they worked diligently, studied the materials provided, and followed the teacher's explanations. Whilst some may challenge Ballard's (1987) work as representing little more than cultural stereotypes (for example, see: Kember, 2000; Zhou, Jindal-Snape, Topping, & Todman, 2008), this perspective of cultural difference contributing to misunderstanding and a mismatch of pedagogical expectations is echoed by contemporary inquiry into nursing education.

In her Masters dissertation, Adnams (2012) interviewed 22 OQNs studying nursing in Australia to explore the approaches to learning and teaching that were characteristic of these students' nursing studies in their countries of origin; China, Korea and India. Thematic analysis of focus group interview data led to the identification of three main themes: a reliance and expectation that the teacher would ensure student success; an educational experience characterised by an absence of discussion, group-work and debate; and a perception that students would be told what to do both in the classroom as well as during their clinical placement. Participants in Adnams's (2012) study voiced an expectation that teachers would tell students precisely what they needed to know in class and for their examinations. In

other words, student outcomes were perceived as the responsibility of the teacher. Here, reading and taking notes from textbooks and lectures were emphasised as primary modes of learning, with perceptions that knowledge was absolute, complete and not to be questioned. Learning strategies including independent research or evaluation of the quality of information sourced were completely alien. All participants in Adnams's (2012) study commented that in their country of origin, teachers would never ask students to engage in group-work or to provide an oral presentation to the class.

2.2.3 Participatory approaches to learning.

Adnams's (2012) findings in relation to ICALD nursing students' experiences of participatory modes of learning is very significant to this research study. Whilst interaction and collaboration between students, lecturers and nurse clinicians are fundamental expectations of Australian nursing education (Gilligan & Outram, 2012; Jeong et al., 2011; Shakya & Horsfall, 2000), all participants in Adnams's (2012) study reported such interaction was virtually non-existent during tutorials, practical classes or even during clinical placements in their counties of origin. The findings of Adnams (2012) support previous suggestions that ICALD nursing students are unprepared for participatory modes of learning including oral presentations (Shakya & Horsfall, 2000), group-work (Gilligan & Outram, 2012; Shakya & Horsfall, 2000), or approaches that require inquiry and independent research (Gilligan & Outram, 2012; Starr, 2007).

Gilligan and Outram (2012) found that ICALD students are reluctant to participate in tutorial discussions "due to a discomfort with the style of participation" (p.44). Shakya and Horsfall (2000) and Seibold et al. (2007) suggested that the source of such discomfort with participatory approaches of learning relates to limited classroom interaction with their domestic student peers thus, leaving ICALD nursing students questioning their ability to be understood. Difficulties communicating meaning effectively, and the need for persistent

clarification from others have been reported by ICALD nursing as contributing to feelings of discrimination, rejection and even bullying from domestic students within the classroom (Jeong et al., 2011). These feelings have been shown to contribute to social isolation (Jeong et al., 2011), embarrassment and frustration (Shakya & Horsfall, 2000), and lack of confidence (Adnams, 2012). Indeed a consistent finding throughout the nursing education literature is that these experiences and feelings manifest as a reluctance of ICALD nursing students to engage with domestic students and participate in classroom activities despite a desire to do so (Brown, 2009; Gilligan & Outram, 2012; Jeong et al., 2011; Omeri et al., 2003; Peacock & Harrison, 2009; Shakya & Horsfall, 2000). Furthermore, fear of not understanding what is being said, what is being asked, and of not being understood, contributes to a reluctance to engage in asking questions even of the lecturers (Jalili-Grenier & Chase, 1997; Jeong et al., 2011).

A significant contributor to reluctance to engage with participatory approaches to learning is a lack of understanding of what is expected as learners by ICALD nursing students (Gilligan & Outram, 2012). This has been described in the education literature as a mismatch of cultural expectations (Chapman & Pyvis, 2006; Zhou et al., 2008) and provides insight into the substantial role culture plays in the challenges confronting ICALD students studying nursing in the Australian context. Issues of cultural difference and pedagogical expectations are explored in the section below.

2.2.4 Culture synergy and pedagogical adaptation.

Zhou et al. (2008) explored the affective, behavioural and cognitive aspects of adaptation processes in Chinese students as they commenced university studies in the United Kingdom. Zhou et al. (2008) concurred with other researchers previously cited, and framed the challenges confronting international student learning as a mismatch of pedagogical expectations between students and lecturers. These authors asserted that this mismatch is

based on cultural differences. However, Zhou et al. (2008) proposed a strategy to overcome this mismatch, suggesting a process of cultural synergy and pedagogical adaptation, whereby a mutual understanding about the pedagogy of education in the host country is negotiated between lecturers and international students. On the surface, the strategy put forward by Zhou et al. (2008) appears to simply reflect professional development for lecturers in the areas of cultural difference. However, the process of negotiation between lecturer and student as advocated by these authors requires more than a superficial acknowledgement and acceptance of difference; superficial approaches which risk a profound threat to the cultural identity of ICALD students. Rather, the negotiation these authors described appears to facilitate a deep understanding of how mismatches of pedagogical understanding appear and how they can be reconciled. The work of Zhou et al. (2008) highlights the need to align and integrate such strategies into pre-registration nursing curriculum. In relation to this research study, I propose simulation-based learning as a way to align and integrate strategies to facilitate negotiation of cultural difference and pedagogical expectations between lecturer and student. Simulation-based learning will be explored in detail in Chapter Four.

2.2.5 The gap in supporting ICALD nursing students.

Many Australian universities provide student support services to facilitate academic success, by enhancing the understanding and development of academic literacy and numeracy skills in students (Arkoudis, Baik, Bexley, & Doughney, 2014; Hillege et al., 2014; Salamonson, Koch, Weaver, Everett, & Jackson, 2010). There are indications that Australian universities are acknowledging and responding to the particular needs of the increasing ICALD student population by tailoring existing supports designed for domestic students in the areas of interpreting assessment task questions, academic writing, grammar and referencing (Arkoudis et al., 2014; Glew et al., 2015).

Recommendations for supporting ICALD nursing students in Australian higher education focus on: developing proficiency with conversational and technical language (Adnams, 2012; Shakya & Horsfall, 2000; Starr, 2007; Y. Zhang & Mi, 2010); the provision of extra-curricular supports to assist ICALD students to understand the cultural expectations of learners and of learning in Australia (Adnams, 2012; Dickson, 2013; Gilligan & Outram, 2012; Jeong et al., 2011; Wang, Singh, Bird, & Ives, 2008); the development of student *buddy* programs[2] (Gilligan & Outram, 2012; Omeri et al., 2003); and professional development of academic staff to promote understanding of ICALD nursing students' needs (Gilligan & Outram, 2012; Omeri et al., 2003). It is important to highlight that such programs appear to focus on facilitating adjustment of ICALD nursing students to academic approaches to learning, rather than strategies to enhance behavioural competencies and social skills required for workplace learning (Dickson, 2013; Ward & Kennedy, 1999). Examples include, asking good questions of nurses, accessing unstructured learning opportunities, and managing interpersonal relationships (Eraut, 2004b; Hager, 2011; Lave & Wenger, 1991; Ward & Kennedy, 1999; Wenger, 1998a). The literature reviewed for this research study found comparatively little attention paid to strategies focussing on negotiating cultural synergy and pedagogical adaptation for ICALD nursing students in terms of sociocultural adjustment as learners within an Australian CoNP during the clinical placement. This research sought to enhance sociocultural adjustment in ICALD nursing students by using immersive simulation as a learning space for negotiation of cultural and pedagogical difference.

At this time it is important to acknowledge the ethnocentric Anglo-Saxon perspective through which this research problem is framed. Ethnocentrism has been raised as a concern, albeit rarely, within the nursing education literature when discussing issues pertaining to ICALD nursing student socialisation, adaptation and adjustment to Australian higher

[2] Within the nursing education literature, the term *buddy* represents an informal strategy of introducing newcomers to a new, often dominant culture. Such a strategy appears in the nursing education literature in the context of higher education, and the workplace during the clinical placement.

education and workplaces (for example, see: Dickson, 2013; Shakya & Horsfall, 2000). In this research study, ethnocentric perspectives are not challenged. Rather, in this research, ways in which the learning and teaching method of immersive simulation helped to develop capacity in ICALD nursing students, which in turn facilitated their capability to participate within an Australian CoNP, are explored. Therefore, this research, situated in the Australian education and healthcare contexts, reflects the values, beliefs, attitudes and practices of learning in the dominant Anglo-Saxon mainstream of Australian society (Joy & Kolb, 2009).

It is clear that ICALD nursing students experience significant challenges when commencing studies in Australia. Underpinning such challenges is a misunderstanding or a lack of understanding of pedagogical expectations including the fundamental processes of learning in Australian higher education. Whilst university-based support services exist, these have been identified as focusing mainly on academic learning rather than workplace learning. Perspectives of sociocultural adaptation that focus on culture learning and behavioural competence proposed by Ward and Kennedy (1999), and the process of mutual negotiation of pedagogical expectations proposed by Zhou et al. (2008), have provided insight into what a more culturally appropriate approach to the support of ICALD nursing students may look like by considering social and cultural factors pertaining to participation in practice, rather than simply focusing on language and communication.

As indicated in the introduction to this chapter, pre-registration nursing education in Australia comprises learning in the formal environment of the university classroom, and learning in the unstructured frequently opportunistic milieu of the workplace during the clinical placement; a learning environment that comprises yet another different culture. The focus in this chapter now turns to the clinical placement as the second milieu of pre-registration nursing education.

2.3 The Clinical Placement

In order to apply for registration as a Registered Nurse in Australia, nursing students must complete a minimum of 800 hours (approximately 22 weeks) of clinical placement in a variety of healthcare contexts (Australian Nursing and Midwifery Accreditation Council [ANMAC], 2012). These hours are commonly dispersed throughout a three-year Bachelor program in two-week blocks, with a four to five week block placement in the final year which is designed to facilitate the transition from student to registered nurse. During the clinical placement, nursing students are considered supernumerary. In Australia, the clinical placement for nursing students is based upon a quasi-apprenticeship model that relies on the support and guidance from qualified registered nurses in three ways. The first is the clinical facilitator, a registered nurse employed by the university or healthcare agency for the duration of the clinical placement at a ratio of one nurse to eight nursing students (Newton, Billett, Jolly, & Ockerby, 2011). The second is the buddy or preceptor nurse to whom nursing students are partnered, ideally for the duration of the placement. The third, a less than ideal situation but most common, is the "pot-luck system" (Zilembo & Monterosso, 2008a, p. 195) of supervision where students are buddied with nurses who may or may not have the knowledge, skill or desire to accept the role as a facilitator of student learning.

The clinical placement is perceived to be the bridge between the academic and the practice dimensions of nursing education, providing students with opportunities for professional socialisation with the purpose of developing knowledge and skills required for becoming a member of a CoNP (Chesser-Smyth, 2005; Department of Human Services, 2007; Newton et al., 2010; White, 2010). Clinical placements have been identified by nursing students as the most influential element of a nursing program (Chesser-Smyth, 2005), with the experience of the first clinical placement serving as the point of confirmation of nursing as a career (Leducq, Walsh, Hinsliff-Smith, & McGarry, 2012; Yong, 1996). Yet, Spouse (1998) indicated that professional socialisation, learning and identity construction may be impeded

during the clinical placement, particularly for first-year nursing students, due to an assumption that nursing students have an understanding of and capability to participate as learners in nursing practice.

Professional socialisation has been discussed extensively in the nursing education literature as the primary purpose of the clinical placement, with nursing students' development of a professional identity a nurse a central focus (for example, see: Andrew, McGuinness, Reid, & Corcoran, 2009; Chesser-Smyth, 2005; Leducq et al., 2012; Nolan, 1998; Stockhausen & Sturt, 2005). Goldenberg and Iwasiw (1993) defined professional socialisation as:

> ...a complex interactive process by which the content of the professional role (skills, knowledge, behaviour) is learned and the values, attitudes and goals integral to the profession and sense of occupational identity which are characteristic of a member of that profession are internalised. (p.4)

Goldenberg and Iwasiw's (1993) definition highlights two very important aspects of professional socialisation: the tacit attributes that characterise the professional role; and the emphasis of interaction as the primary process of learning. Each of these raise important considerations for this research study.

In Australian pre-registration nursing programs, personal and professional attributes including skills, knowledge and behaviour are evaluated against national competency standards for the registered nurse (Nursing and Midwifery Board of Australia [NMBA], 2006). In order to evaluate the professional role of nursing students, these standards of practice are commonly operationalised in the form of competency-based assessment (Cant, McKenna, & Cooper, 2013; Wu, Enskär, Lee, & Wang, 2015), with student competence frequently defined according to Benner's (1984) spectrum of novice to expert. However, it must be emphasised that the tacit and internalised qualities that characterise these standards are highly subjective and difficult to evaluate.

Additionally and more importantly, an assumption exists that nursing students understand the need for and possess the capability to participate within a CoNP. Whilst the nursing education literature relating to socialisation during the clinical placement focuses on nursing students developing an identity as a registered nurse, comparatively little attention is paid to the importance of identities as nursing students during the clinical placement, and skills for negotiating such identities through participation with members of a CoNP (Andrew et al., 2009; Dickson, 2013; Spouse, 2001). Rather, there appears to be an assumption that nursing students possess the knowledge and skill required to negotiate what are often complex social interactions to access opportunities to participate in nursing practice (Grealish & Trevitt, 2005). Such assumptions are problematic for two reasons. Firstly is the essential nature of social interactions between students and experienced practitioners with the aim of facilitating workplace learning (Eraut, 2007; Hager, 2011; Lave & Wenger, 1991; Svensson, Ellstrom, & Aberg, 2004; Wenger, 1998a). Secondly, such interactions inform experienced practitioners' perceptions of student competence in terms of their capability to engage in the skills, knowledge, language and tools of practice (Eraut, 2004b, 2007; Wenger, 1998a).

2.3.1 Learning in the workplace: Fitting in and negotiation of social relationships.

Although sociocultural and pedagogical adaptation have been discussed in terms of ICALD nursing students studying in Australian higher education, a further but largely unacknowledged requirement for such adaptation relates to the first clinical placement. Underpinning this need for adaptation is the fundamental difference between the primary function of the workplace in contrast to the university, where the priority is the provision of health care rather than education. Whilst this distinction is an obvious one, in the following section it will be argued that ICALD nursing students are not prepared for participation in the completely different social and cultural realm of clinical practice.

Workplaces are contested learning spaces. In the context of the clinical placement, nursing students are largely dependent upon the invitations afforded to them by members of a CoNP. Newton, Billett, and Ockerby (2009) in their study, emphasised the invitational qualities of workplaces and the nurses they worked alongside as essential enablers of knowledge consolidation and practical skill development In their study they interviewed six second and third-year pre-registration nursing students enrolled at one Australian university, to explore their experiences of learning during the clinical placement. These researchers found that workplace cliques and attitudes can and do negatively impact on student learning experiences, simply by controlling student nurses' ability to participate in nursing practice. They interviewed the same students over a two year period, and found that the ability of students to negotiate access to learning opportunities increased as they progressed through their nursing program (Newton et al., 2009). Whilst this study highlighted a correlation between the number of clinical placements, greater access to learning opportunities, and feelings of fitting in, it also emphasised the importance of positive social relationships between nurse and student in affording access to nursing practice.

The desire of nursing students' to fit in with and belong to a CoNP during the clinical placement has been the focus of considerable inquiry (for example, see: Chesser-Smyth, 2005; Cooke, 1996; Levett-Jones, Lathlean, Maguire, & McMillan, 2007; Levett-Jones, Lathlean, McMillan, et al., 2007; Zilembo & Monterosso, 2008b). Underpinning feelings of belonging are positive relationships between members of a CoNP and the student. Cooke's (1996) investigation into nursing students' perceptions of challenging clinical situations found that students' feelings of fitting in with and being valued by the nurses they work alongside during the clinical placement were pivotal to their coping with challenging situations. Through an analysis of qualitative data collected from 135 first-year nursing students, Cooke (1996) found that positive nurse-student relationships facilitated learning across a range of practice-based concerns including: technical skills; interpersonal communication; and

negotiating expectations of the clinical placement. Despite the age of Cooke's 1996 research, this is one of very few studies that tell the story of student nurses proactively seeking support and guidance from registered nurses to overcome uncertainty in relation to negotiating interpersonal relationships including: communicating with other students; dealing with unhelpful staff; and coping with negative attitudes from staff towards university students. However, it must be noted that Cooke's (1996) study focussed on negotiation between the student and the clinical facilitator. Therefore, a gap in the literature exists in terms of preparing nursing students with strategies for managing interpersonal relationships with ward nurses and negotiating access to learning opportunities, as it is ward nurses who are the gatekeepers to learning opportunities during the clinical placement (Brammer, 2006).

Negotiation of trusting student-nurse relationships during the clinical placement cannot be underestimated. Zilembo and Monterosso (2008a) explored the association between constructive student/nurse relationships and the success of the clinical placement as perceived by student nurses, as well as their perception of the nursing profession as a whole. In this mixed-method study involving 23 pre-registration nursing studying at Australian universities, it was found that positive, encouraging and supportive relationships with members of a CoNP is vital in developing confidence and competence in students participating in nursing practice. Conversely, absence of this support led to less positive perceptions of the clinical placement. Significantly, Zilembo and Monterosso (2008a) found that student nurses are not equipped to negotiate and resolve poor student/nurse relationships; a finding that echoed the work of Cooke (1996) some 12 years earlier. Clearly, despite a significant progression in time, challenges to the sense of belonging and fitting in during the clinical placement still persist.

2.3.2 Belongingness and the clinical placement.

Levett-Jones, Lathlean, McMillan, et al. (2007) used the concept of belongingness to frame their mixed-method research exploring the extent to which pre-registration nursing students' experience a sense of fitting in during the clinical placement (see also: Levett-Jones, Lathlean, Higgins, & McMillan, 2008; Levett-Jones et al., 2009; Levett-Jones, Lathlean, Maguire, et al., 2007). Levett-Jones, Lathlean, McMillan, et al. (2007) employed a psychological lens of belongingness, defined as "the need to be and perception of being involved with others at differing interpersonal levels...which contributes to one's sense of connectedness (being part of, feeling accepted, and fitting in), and self-esteem (being cared about, valued and respected by others)" (Somers, 1999, p. 16). Analysis of student experiences collected through semi-structured interviews, identified the need to feel a sense of connectedness, a "friendly, comfortable and cooperative working relationship" (Levett-Jones, Lathlean, McMillan, et al., 2007, p. 172) with members of the nursing profession as the key element for fitting in during the clinical placement. They argued that it is through a sense of fitting in and belonging that nursing students are empowered to negotiate their learning needs in the complex and at times hostile clinical environment in a confident and competent manner. Levett-Jones, Lathlean, McMillan, et al. (2007) and Newton et al. (2009) indicated that a diminished sense of belonging during the clinical placement may lead to feelings of alienation, isolation, and being unwelcome, leading to disempowerment, dissatisfaction and disengagement.

Clearly positive relationships between nurse and student are essential for a sense of belonging and in-turn, learning. However, whilst the psychological perspective of belonging and belongingness showed this need, the use of such a theoretical lens does not suggest ways to facilitate nursing students' sense of belonging. This research study utilised the sociocultural perspective of belonging proposed by Wenger (1998a) in his conceptualisation of Communities of Practice.

According to Wenger (1998a), belonging to a community of practice entails not only the demonstration of skills defined as pertinent by members of a community, but represents a trajectory of identity formation; an identity that is perceived by the individual and members of a specific community of practice as reflecting mutual engagement in a joint enterprise using a shared repertoire. According to Wenger's (1998a) sociocultural perspective, belonging is facilitated through processes of engagement, imagination and alignment. The psychological perspectives of belonging and belongingness adopted by Levett-Jones, Lathlean, McMillan, et al. (2007) illuminated the problematic nature of belonging and fitting in during the clinical placement. However, it was decided in this research study to extend issues of belonging highlighted by previous research by incorporating Wenger's (1998a) sociocultural conceptualisation of belonging into the design of immersive simulation activities. This was done with the purpose of contributing to a sense of belonging by developing the capability of ICALD nursing students to participate in nursing practice during the clinical placement. Wenger's (1998a) conceptualisation of belonging will be described in detail in Chapter Three.

In this section the importance of social relationships between the student nurse and members of a CoNP has been highlighted, as well as how these relationships can facilitate or impede not only learning, but feelings of belonging and fitting in during the clinical placement. The following section illustrates how, for some nursing students, an experience of the clinical placement may be characterised by uncertainty, humiliation, and at times, conflict.

2.3.3 Not fitting in: Flying underneath the radar.

As previously alluded to, healthcare workplaces are contested learning spaces due to a focus on health care service delivery rather than student learning (Levett-Jones, Lathlean, Maguire, et al., 2007; Siggins Miller Consultants, 2012). This occurs because of the dynamic and unpredictable nature of healthcare; challenging workloads; and high patient acuity (Zilembo & Monterosso, 2008a). Additionally, there is the fundamental challenge

confronting nursing students of negotiating complex interpersonal relationships in order to access and participate in the everyday work of nursing practice. An assumed capability of nursing students is that they are able to fulfil the role of negotiator of their own learning; an assumption that is problematic. This particularly true when considering the hegemony that could occur in the relationship between members of a CoNP and the student nurse.

Hoel, Giga, and Davidson (2007) conducted focus group interviews with 48 pre-registration nursing students in the United Kingdom to explore their perceptions of learning during clinical placements. These perceptions were often characterised by interpersonal conflict. This conflict between nurses inhibited effective nurse/student communication, and resulted in students experiencing attitudes of indifference, insensitivity and on occasion, humiliation. These themes are also reflected in research conducted by Curtis, Bowen, and Reid (2007). In addition to inhibiting learning, experiences of conflict during the clinical placement also appear to have a negative influence on student identity.

Myrick et al. (2006) explored conflict among student nurses, student teachers, student social workers and student doctors and their respective members of the professional community during the clinical placement. These researchers found that learning to become a professional was less about learning the discrete skills and tacit knowledge of others, and more about the questioning of identity, knowledge and practices, and this discovery often involved conflict between students and members of the profession. Myrick et al. (2006) found nursing students existed within a "culture of fear" (p. 8) during the clinical placement; a culture that prevented participation in any discussion with nurses or clinical facilitators that could have been construed as challenging or confrontational. Student nurses frequently felt the need to curb their line of inquiry for fear of "rocking the boat" (Myrick et al., 2006, p. 8) with members of the CoNP. Students identified a need to "pick their battles" (Myrick et al., 2006, p. 8) when conflict arose, for fear of ramifications during the placement as well as their future employment prospects. Levett-Jones, Lathlean, Maguire, et al. (2007) concurred with

these finding and also indicated that nursing students felt a need to “fly underneath the radar”, blending in and being a “chameleon” within the clinical environment (p. 215). This demonstrates the complex nature of learning in the workplace for these students. Whilst there does not appear to be a single solution to overcoming workplace conflict, a common theme throughout the recommendations of these studies is one of assisting student nurses to develop strategies for coping with such disharmony. These strategies focus on better preparation of pre-registration nursing students to understand the sociocultural issues that contribute to workplace cultures, with the intention of empowering nursing students to negotiate their learning and navigate their way despite such conflict.

Undeniably, differences in the social, cultural, and learning elements of healthcare workplaces impact on sense of belonging and capability of student nurses to participate during the clinical placement. This sense of fitting in and belonging has been identified as particularly important during the clinical placement, as it is argued such feelings enhance students' confidence and self-esteem which are personal attributes deemed to enhance participation and learning (Edgecombe, Jennings, & Bowden, 2013; Levett-Jones, Lathlean, McMillan, et al., 2007; Newton et al., 2009). The complexity of learning in the workplace is of particular concern for ICALD nursing students. This is due to the interplay between language, understanding and being understood, and negotiating potentially conflicting cultural values, beliefs, practices and expectations. These aspects relate to: respecting those in positions of seniority; understanding the process of learning; and understanding the expectations of their role as learners. Further, behaviours that manifest as a response to acculturative stress, and feelings of cultural isolation and loneliness experienced by this particular demographic of students present a significant impediment to feelings of belonging (He et al., 2012; Jeong et al., 2011; Mattila, Pitkäjärvi, & Eriksson, 2010). Whilst the comparatively limited literature exploring the experiences of ICALD nursing students focuses on learning in the classroom, there is even less known about the experience of these students

within the context of the clinical placement, or factors that facilitate their learning (Dickson, 2013; Rogan et al., 2006).

2.3.4 ICALD nursing students' experience of the clinical placement.

In one of the first substantial studies in this area, Brown (2005) in her doctoral dissertation sought to explore and describe the experiences of 40 ICALD nursing students from diverse cultural backgrounds studying nursing in Australia. This grounded theory study included interview data from 40 ICALD nursing students, 32 nursing facilitators and field observations. The significance of this study is that the researcher identified and explored contributing factors which led to ICALD nursing students not fitting in. Furthermore, this study explored the behaviours demonstrated by these students as a response to overcome challenging and confronting experiences.

Brown (2005), indicated that “sociocultural discord" (p. 261) existed when ICALD nursing students identified themselves as being different from domestic students, nurses and patients, resulting in feelings of not fitting in. Language featured prominently as one factor reported as contributing to sociocultural discord. Brown (2005) highlighted *wait-time*, the delay in communication resulting from translation of English to native language and back to English as a source of considerable embarrassment for these students. However, the research participants reported a lack of cultural identity through cultural disconnection; a self-enforced blocking of long-standing cultural ways and beliefs in an effort to fit in with the dominant culture. Poor self-esteem and feeling unvalued resulted from these students perceptions of an us-and-them culture that permeated the clinical placement experience and set them apart from the main student group. ICALD nursing students expressed feelings of invisibility when they were not invited to contribute to conversations, professional or social. This study by Brown (2005) has significant relevance to this current research study as it describes a reported lack of

understanding relating to the roles and expectations as a nursing student prior to and during their clinical placement.

In response to feelings of sociocultural discord, the research participants implemented a variety of strategies, often demonstrated as behaviours, in an attempt to reduce their discomfort and to save face; a process termed “seeking concord to get in the right track" (Brown, 2005, p. 261). Examples of these behaviours included clustering, and suppressing discord by being quiet. Clustering refers to the gathering together of ICALD nursing students of the same or similar cultural background in an effort to be less conspicuous, to avoid rejection, or to support each other when dealing with a range of problems including clarifying requests from nurses, formulating responses, and solving problems. Further, ICALD nursing students were noted to indicate understanding of a conversation or directive when in fact they had not. This so-called “yes syndrome” (Brown, 2005, p. 210) provided a means for these students to fit in, function, and save-face at that time by seeking understanding from another, more approachable source at a later time.

Overwhelmingly, Brown (2005) found the majority of ICALD nursing students suppressed discord by saying nothing and doing nothing. For these students, deep-seated values, beliefs and behaviours informed by their cultural heritage, inhibited responses to interpersonal conflict, or questioning authority for fear of demonstrating a lack of respect or loss of self-control. Whilst the intent of such strategies were to seek concord and save-face, they were frequently misinterpreted by Australian nurses as representing a lack of theoretical knowledge, a lack of initiative, or a preference to observe rather than participate in patient care (Brown, 2005). Understanding such behaviours provides insight into a mistaken perception that ICALD nursing students deliberately avoid interaction, when in fact they yearn for interaction and involvement (Brown, 2009; Peacock & Harrison, 2009; Rogan et al., 2006).

The findings of Brown (2005) informed this research study by providing significant insight into strategies employed by ICALD nursing students when seeking concord, and how these resultant behaviours can be misinterpreted by members of an Australian CoNP as not knowing or not wanting to participate. These insights interpreted through the sociocultural lens of Wenger's (1998a) Communities of Practice provided the preliminary foci for the immersive simulations designed for this research. It was the intent that such simulations would provide participants in this research with learning experiences that may reveal behavioural responses to sociocultural discord. These could then be explored and negotiated during the post-simulation debrief with the intent of establishing mutual understanding of pedagogical expectations relating to participation with members of an Australian CoNP.

The informality of social relationships in Australian healthcare workplaces has also been shown to contribute to ICALD students' sense of discord. Woodward-Kron et al. (2007) conducted qualitative research involving focus group interviews of 32 ICALD students studying nursing, medicine and physiotherapy in Australia and explored the perspectives of these students to barriers to communication and learning during the clinical placement. These participants described the informal use of use of small-talk by Australian healthcare professionals when interviewing patients as unusual. However, Woodward-Kron et al. (2007) found that by negotiating such differences with Australian healthcare practitioners, the research participants began to understand and appreciate the need for rapport, described as the "human relationship" (p. 37), as a valued characteristic of Australian culture. The relatively informal relationships between members of Australian healthcare teams also contributed to feelings of discomfort and uncertainty. Woodward-Kron et al. (2007) found that values and beliefs of the research participants, as informed by their cultural heritage, underpinned feelings of shock when expected to challenge what they perceived as unquestionable power relations defined by hierarchy and authority with one participant reporting "Back home we are frightened or very reluctant to say our opinion" (Woodward-Kron et al., 2007, p. 36). For

some research participants, initiating questions remained the responsibility of teachers and healthcare professionals rather than students.

Unlike previous studies, Dickson's (2013) qualitative research focused on the nature of ICALD nursing students' learning during the clinical placement. In her doctoral dissertation involving 16 ICALD nursing students enrolled at one Australian university, Dickson (2013) found this population of nursing students favoured learning through observation. Reasons for this preference were reported as: an opportunity for students to orientate themselves to the workplace; an opportunity to learn practical skills; and because nurses were too busy to facilitate participation. Dickson (2013) posited that observational learning was these students "preferred method of learning to nurse and was deliberate in nature" (p.223); a method of learning suggested by the researcher as useful for students whose verbal or technical skills are underdeveloped.

In relation to socialisation and identity formation, Dickson (2013) argued that these ICALD nursing students "were in no doubt as to the purpose of the clinical practice experience, their roles as students, and the role of the clinical teacher in their learning to be a registered nurse" (p.221). It is however pertinent to clarify that according to the majority of these research participants, the socially and culturally constructed identity of a registered nurse was defined by the tasks a nurse performs.

Recommendations from Dickson's (2013) study called for ways to engender an understanding of the issues confronting ICALD students studying nursing in Australia for the purposes of providing adequate support during the clinical placement. However, no insight was provided as to what such support may look like or aim to achieve. Furthermore, discussion about strategies to develop ICALD nursing students' capability to participate are absent. Therefore, these remain unresolved issues and further provide justification for this current research study.

2.3.5 Programs supporting ICALD nursing student adjustment to the clinical placement.

The literature reviewed in the previous section has repeatedly called for strategies to assist ICALD nursing students' adjustment to the clinical placement. There are however relatively few examples of such strategies in the published literature.

Hussin (1999) reported on a support program designed to facilitate ICALD nursing students' achievement of learning outcomes for the clinical placement. The program, titled *From Classroom to Clinic* was conducted at one Australian university and focused on enhancing ICALD nursing students' communication with patients, strategies for clarifying directives from nurses, initiating verbal communication, and clarity of verbal communication with an emphasis on medical terminology. *From Classroom to Clinic* comprised five levels of support: professional development of academic staff; two-hour workshops for first-year students prior to and following the clinical placement; individual consultations for second-year students; on-site supervision for students identified *at-risk*; and online learning materials. 15 ICALD nursing students participated in the first-year student workshops comprising role-play and case studies focussing on communication with patients and with staff. The post-clinical placement workshop took the form of a debriefing of the placement experience. The post-clinical workshop provided an opportunity for students, in pairs, to identify particular cultural issues that emerged during the clinical placement and explore these through a problem-solving approach. In addition, students were required to identify specific instances of communication breakdown, and by analysing the event, alternative approaches and choices of language were explored. The post-clinical placement workshop concluded with an discussion about assertiveness in the workplace.

Whilst little evaluation data was provided in relation to this program, anecdotal feedback was presented as positive. Hussin (1999) recommended further research in the areas of: greater explanation and understanding of implicitness and the expression of assertion in

workplace; and developing communication skills that enable students to negotiate social relations of power between nurses and students.

Although limited detail was provided in this paper about the role-play design, the use of role-play as a learning and teaching method is of particular relevance for this current research study in three ways. Firstly, Hussin (1999) found that participants reported role-play as an effective approach to learning and requested more experiences of this kind. This current study employed immersive simulation, which takes a similar pedagogical approach to role-play. Knowing that ICALD students found role-play useful for developing strategies to negotiate access to learning opportunities supported the use of immersive simulation for this current study. Secondly, although no theoretical framework was identified as informing this program, the sociocultural approach of *From Classroom to Clinic* affirmed the choice of Wenger's (1998a) Communities of Practice as the theoretical framework to underpin this current study. Third, by implementing a program prior to the clinical placement, *From Classroom to Clinic* alluded to a philosophy of developing ICALD nursing students' capability; a philosophy and approach adopted by this current research study.

Seibold et al. (2007) developed an extra-curricular program for OQNs enrolled in a 12 month accelerated Bachelor of Nursing program in one Australian university. This study comprised a mentorship program involving three academic staff and 20 ICALD nursing students (all OQNs) focusing on: English language including pronunciation, colloquial and medical terminology; reflective writing; refinement of clinical skills; resume and portfolio preparation; and interview skills over a period of two semesters. Whilst 14 students perceived the course as assisting their development of cognitive skill, written and oral communication, no detail of the program was provided to demonstrate how this was achieved. Furthermore, the relevance of the content and strategies employed by this program as preparation for the clinical placement are questionable, as six of the 20 students failed to progress from first to second semester, and of these, 25% failed the clinical placement (Seibold et al., 2007).

Perhaps in response to this, the authors recommended further research in the area of facilitating OQNs' socialisation to the Australian health care context, however no strategies were proposed. This paper provided limited value for this current research study. However it did provide context in relation to strategies that have been attempted to overcome challenges facing ICALD students studying nursing in Australia.

The development and implementation of a comprehensive oral communication program for first year ICALD nursing students has been the focus of inquiry for several years by one Australian university. The aim of the *Clinically Speaking* program (Rogan et al., 2006; San Miguel & Rogan, 2009; San Miguel, Rogan, Kilstoff, & Brown, 2006) has been to assist ICALD nursing students in the development of "linguistically appropriate communication skills for clinical practice" (San Miguel et al., 2006, p. 269) in their first year of study.

In their initial study, Rogan et al. (2006) conducted a focus group interview with 15 ICALD nursing students from China, Hong Kong, Korea and Vietnam. The purpose of the focus group was to explore these students' experiences of their first clinical placement in Australia. Through a process of descriptive interpretive analysis, the researchers identified three themes: "wanting to belong but feeling excluded"; "wanting to learn how to..."; and "you find yourself" (Rogan et al., 2006, p. 72). Within these themes, the researchers found that whilst the students were acutely aware of their learning needs, they did not know how to interact with nurses, patients and families, join in conversations or make small talk, interrupt politely, or how to ask questions of people in perceived positions of authority. This scoping research informed the *Clinically Speaking* program and formed the bases for future program evaluation.

The *Clinically Speaking* program comprised three components: firstly, identification of students at risk of failing by assessing students' interpersonal ability; secondly, five four-hour communication classes that included role-play as a substitute for a period of clinical

placement; and thirdly, a block of clinical placement. Similar to the program developed by Hussin (1999), the *Clinically Speaking* program aimed to improve the student experience of the clinical placement by increasing the awareness of ICALD nursing students, of the language and cultural practices used in the clinical environment by offering a forum where these students could explore and negotiate strategies to overcome difficulties they experienced during the clinical placement (San Miguel et al., 2006).

In a follow-up study, San Miguel and Rogan (2009) interviewed 10 ICALD nursing student from China, Hong Kong, Taiwan and Vietnam at the conclusion of their Bachelor program to evaluate the effectiveness of the *Clinically Speaking* program. These research participants reported that *Clinically Speaking* changed their perceptions of the clinical placement from "not knowing" to "knowing" (San Miguel & Rogan, 2009, p. 183) what to do and say particularly when interacting with patients. In addition, these participants identified an increased understanding of the roles of registered nurses and clinical facilitators in supporting their learning.

The relevance of these studies to this current research study was the simplicity of the situations enacted via role-play. The roles-plays appeared to be activities based upon everyday work; for example, engaging in small-talk with patients. *Clinically Speaking* provided a forum for ICALD nursing students to re-visit situations and negotiate challenges that were personally meaningful to them. In doing so, these research participants came to understand the cultural nuances of Australian communication, and appeared to contribute to a mutually negotiated repertoire of strategies as enablers of engagement in everyday social communication of work.

It is important to highlight the focus of *Clinically Speaking* was on interpersonal communication rather than developing ICALD nursing students' capability to participate within an Australian CoNP. Whilst it can be argued that effective interpersonal communication provides as a gateway to accessing learning opportunities in the workplace, an

exploration of the ways in which students perceive their role as learners, how learning occurs in the workplace, and the expectations the workplace hold of students as learners was not explored by these authors. Whilst there are some similarities between the *Clinically Speaking* program and the immersive simulation program that was designed for this current research study, it was the use of communities of practice as the theoretical framework to inform the conceptualisation, implementation and exploration of the immersive simulation program that extended the focus of this research study beyond communication, to exploring learning and identities of participation as nursing students.

2.4 Summary

The complex challenges confronting ICALD students studying nursing in Australia have been highlighted in this chapter. For ICALD nursing students, learning in a foreign culture requires an understanding of the socially defined values, beliefs, processes, accepted (and expected) behaviours and processes of the new culture; in other words, a negotiation of identity. These challenges are compounded when considering the two distinct cultures where learning is assumed to occur during pre-registration nursing education; the university classroom, and the healthcare workplace during the clinical placement. As such, ICALD nursing students are at significant risk of experiencing acculturative stress, social isolation, sociocultural discord, and feelings of not fitting in. Such risk presents a fundamental threat to the identity of ICALD nursing students as they find themselves in an in-between space; not fully belonging to the university, the workplace, Australian society or their country of origin.

The ways in which the clinical placement represents a contested learning space have been illustrated in this chapter. The manner in which nursing students are expected to negotiate, navigate and engage with a complex culture that permeates the practices of healthcare workplaces, expectations that require significantly different knowledge, skills and abilities to those of learning in the classroom, has also been articulated. There are a small

number of programs which exist that aim to enhance language and communication skills specifically for the clinical placement for ICALD nursing students. However, such programs do not appear to purposefully engage strategies to engender mutual understanding of the processes and expectations of learning, and in-turn, student roles and identities as learners during the clinical placement. Furthermore, programs identified through the literature reviewed in this chapter have been largely developed in a theoretical vacuum. The absence of program design informed by participatory perspectives of situated and workplace learning has been noted.

This research study used communities of practice as the lens through which to explore the sociocultural influences on learning in ICALD nursing students when participating with members of an Australian CoNP. Further, this research employed the situated learning perspective of communities of practice as the framework to inform the immersive simulation program designed for this study. The chapter that follows describes and discusses Lave and Wenger's (1991) perspective of situated learning, the subsequent emergence of workplace learning theory, and Wenger's (1998a) conceptualisation of communities of practice.

Chapter Three: Communities of Practice and Theories of Workplace Learning

The background and context for this research problem was presented in the previous chapter. The need to develop capability of ICALD nursing students to participate with members of an Australian CoNP prior to the first clinical placement has been highlighted. However, in the nursing education literature reviewed, a lack of theoretically-driven strategies to develop such capability has been identified.

In this chapter the focus is on theories that illuminate learning in the workplace. In particular, Wenger's (1998a) conceptualisation of Communities of Practice (CoP[3]) will be explored as the theoretical lens used to understand the process of learning through participation in nursing practice, as well as how such participation relates to the construction of identity. The review of literature associated with CoP, as well as a critique of this situated learning perspective, highlights the complexity of this framework. However, this chapter concludes that CoP is an appropriate framework for the focus of this research study. The role of CoP in this study is reflected in the research questions:

1. In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?
2. In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

3.1 Situated Learning: Learning as a Social Practice

A fundamental shift has occurred in the past two decades, in the ways in which knowledge is perceived to exist, and how learning occurs in the workplace. An epistemology

[3] Note: The acronym CoP is used from this point in this thesis as an abbreviation for both a singular community of practice and multiple communities of practice. To clarify, Communities of Practice is used in full when referring to Wenger's (1998) text.

of learning as an individual process, influenced largely by psychological theories, has been challenged by an alternative perspective of learning as sociocultural practice; an understanding of learning underpinned by sociology and social anthropology (Hager, 2011; Lave & Wenger, 1991; Raelin, 2007). In situated perspectives of learning, emphasis is placed on the value of learning opportunities that are *situated* in authentic contexts and involve authentic activities. In situated perspectives of learning, exposure to and engagement with the authentic culture, practices and tools of a discipline is important, and is supported by extended opportunities for meaningful social interactions with members of a CoP. In other words, situated learning focuses on the social and cultural dimensions of learning rather than simply learning tasks.

The term *situated learning* was first used by Brown et al. (1989) to illustrate the relationship between knowledge and the authentic practices within which knowledge exists. Thus, work is perceived as a social practice, with learning occurring through the social interactions resulting from participation in practice (Lave & Wenger, 1991).

3.1.1 Situated learning.

Situated learning was first conceptualised by Brown et al. (1989) in response to a perceived disconnection between abstract school-based teaching and real-world problem solving. Through the integration of actual problems to be solved in mathematics education, these authors argued for "cognitive apprenticeship" approaches that "try to enculturate students into authentic practices through activity and social interaction in a way similar to that [evident]...in craft apprenticeship" (Brown et al., 1989, p. 37).

Brown et al. (1989) focused on a concern that the separation of theory and practice, as is a convention of western education systems, diminishes the value, learning and robustness of practice-based knowledge. From this epistemological viewpoint, the situatedness of knowledge is embedded within the authentic culture, context and activities of practice.

Authentic activities are perceived as “the ordinary practices of the culture” (Brown et al., 1989, p. 34) within which they exist. Furthermore, learning is perceived as most effective when comprising authentic tasks, real problems and real solutions. Learning involves active exploration by trying things out whilst being able to access expert guidance when required (Herrington & Oliver, 2000; Oppermann & Specht, 2006).

A situated learning perspective also emphasises the importance of learning in authentic social environments, and it is described as "the chance to observe and practice *in situ* the behaviours of members of a culture, [to]…pick up relevant jargon, [and to] imitate behaviour, and [then] gradually start to act in accordance with its norms" (Brown et al., 1989, p. 34). Situated learning therefore reveals the tension that exists for professional vocational program such as nursing where "know what" knowledge of the classroom and the "know how" knowledge of practice are separated (Brown et al., 1989, p. 32).

A relevant case in point is provided in nursing education in Australia when exploring the implications of separating theory and practice through a lens of situated learning. To *teach* nursing, nursing practice is deconstructed into a series of abstract, de-contextualised topics, discussion points, assessment tasks, and skills. In vernacular terms, the walk and talk are separated (Brown & Duguid, 1996). As authentic practices are transferred from the workplace to the classroom, they become de-contextualised, “hybrid” classroom activities “implicitly framed by one culture, but explicitly attributed to another” (Brown et al., 1989, p. 34). The risk, according to this perspective, is that student nurses learn *about* nursing in a classroom. This is contrast to developing an understanding of the tacit knowledge, skills and attributes that constitute ways of *becoming* and *being* a nurse through participation in authentic practice. Such de-contextualisation of learning poses further problems in relation to the ways in which student nurses perceive strategies for making-meaning. Students may invariably view knowledge as the product of education rather than as a tool unique to the profession used in everyday problem solving (Brown et al., 1989; Herrington & Oliver,

2000). Furthermore, student nurses may misinterpret how experienced nurses use knowledge and in what situations they use it (Brown & Duguid, 1996; Raelin, 2007).

Early perspectives of situated learning focussed on learning as a cognitive process (Brown et al., 1989; Collins, Brown, & Holum, 1991) involving the acquisition, development, and use of cognitive tools when participating in practice. An alternate, potentially more radical view of situated learning was put forward by Lave and Wenger (1991) who proposed that learning, rather than emphasising the development of cognitive processes in individuals, involves processes of participation with members of a CoP in the social activities that constitute everyday authentic work (Hanks, 1991).

3.1.2 From situated learning to legitimate peripheral participation.

In Lave and Wenger's (1991) seminal work *Situated learning: Legitimate peripheral participation* they drew together "threads of earlier ideas into a more sustained conceptualization of 'situated learning' within 'communities of practice'" (Contu & Willmott, 2003, p. 284). In contrast to earlier perspectives of situated learning that emphasised learning as a cognitive process, Lave and Wenger (1991) conceptualised learning as process of *legitimate peripheral participation*. Therefore, "learning is not merely situated in practice – as if it were some independently reifiable process that just happened to be located somewhere" (Lave & Wenger, 1991, p. 35). Rather, learning forms "an integral part of generative social practice in the lived-in world" (Lave & Wenger, 1991, p. 35).

Lave and Wenger's (1991) conceptualisation of situated learning stemmed from their ethnographic studies exploring the practices of apprentice Yucatec midwives, tailors from Via and Goa, and U.S. Naval Quartermasters in an attempt to understand the ways in which apprentices learn the culture, language, skills, norms and behaviours of a practice. In doing so, these studies focused on "the structure of social practice rather than privileging the structure of pedagogy as the source of learning" (Lave & Wenger, 1991, p. 113). A

perspective of learning through legitimate peripheral participation emerged from their theorisation about the ways in which apprentices (newcomers) were afforded access to the legitimate yet peripheral knowledge and skills by experienced members of a CoP (old-timers) (Lave & Wenger, 1991). Thus, they suggested that legitimate peripheral participation represents a trajectory; a process of moving from peripheral to increasingly *full* access to the social and cultural practice of a community, governed by the affordances made by old-timers as knowledge and skill develop in newcomers. Therefore, newcomers learn not *from* talk, but learn *to* talk competently as they participate with experienced old-timers and contribute to the practices of a community (Lave & Wenger, 1991).

Conceptualising learning as a trajectory of peripheral to more full participation denotes the ways in which legitimate peripheral participation within a CoP leads to changes in identity. The consideration of participation, practice and identity as interrelated constructs highlights a more meaningful way to talk about learning and identity construction in nursing students during the clinical placement, than that of professional socialisation described in Chapter Two. The CoP perspective provides "a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities" (Wenger, 1998a, p. 5). Wenger's (1998a) conceptualisation of identity is discussed later in this chapter.

A central proposition argued by Lave and Wenger (1991) was that knowing, learning and meaning is an iterative process, engaging the use of prior knowledge and experience resulting in "comprehensive understanding involving the whole person" (p.3). Such a perspective emphasises the relationship between activity, social community, and through participation, becoming a certain "kind of person" (Lave & Wenger, 1991, p. 53). Whilst learning clearly involves a cognitive dimension, legitimate peripheral participation emphasises the social engagement in authentic practices of a community as a condition of effective learning rather than merely focusing on the physical and cognitive objects that

represent isolated characteristics of practice. Hence, knowledge and learning is embedded not only within a set of activities which require or generate knowledge, but also a set of relationships which give rise to those activities (Eraut, 2000).

It is important to note Lave and Wenger's (1991) assertion that legitimate peripheral participation be considered as a whole, with each of the three aspects essential to defining the others. It is equally important to note that there is no antithesis to legitimate peripheral participation such as an illegitimate peripheral participant (Lave & Wenger, 1991). Rather, the concept of legitimate peripheral participation represents a process of learning that through participation in the everyday practices of a community, knowledge, meaning, identity and identification with a CoP evolves. Legitimacy defines a characteristic of belonging, denoting an essential condition for learning. Peripheral participation represents a members location in the social world. Moving from peripheral to more full participation represents the changing locations and perspectives in terms of a learning trajectory, the development of identity, and the formation of membership (Lave & Wenger, 1991). These complex concepts relating to the formation of identities whilst addressed only briefly by Lave and Wenger (1991), were described in significantly greater depth in Wenger's (1998a) *Communities of practice: Learning meaning, and identity*. These concepts are explored later in this chapter.

3.1.3 Legitimate peripheral participation and nursing education.

The relevance of Lave and Wenger's (1991) perspective of legitimate peripheral participation to pre-registration nursing education stems from their common historical foundations of apprenticeship. The structure, content and approach of Australian pre-registration nursing education and curriculum remain deeply embedded within its historical foundations of apprenticeship training which evolved and moved to university education more than 25 years ago (Andrew & Wilkie, 2007). Whilst the move to an academic model was intended to advance the rigour of nursing education and the professional standing of nursing

practice, it is the workplace that continues to be perceived as the locus for significant transformation of propositional *know what* knowledge to the practical *know how*. However, literature relating to the clinical placement highlights a perception that the clinical placement remains an apprenticeship model of learning (for example, see: Andrews et al., 2006; Newton et al., 2009; Spouse, 2001). An almost uncritical acceptance of the clinical placement as an apprenticeship-style approach to learning has contributed to a situation whereby university services supporting student success focuses almost exclusively on academic learning with little attention being paid to preparing students for participation in practice (Andrews et al., 2006). This concern could be attributed to the propensity of higher education to emphasise the concept of learning as acquisition rather than learning as participation (Hager, 2005, 2011; Sfard, 1998).

According to Spouse (2001), for nursing students, the clinical placement continues to reflect a behaviourist approach to learning where they mainly learn from observation and through trial and error. Indeed, Andrew et al. (2009) found that at the commencement of the first clinical placement, only 41% of 418 first-year nursing students interviewed indicated that they had any idea about what was expected of them as students when commencing their first clinical placement. Further, Spouse (2001) found that nursing students expected to be passive rather than active learners, believing they would be *taught* by others rather than needing to actively seek out ways to address their own learning needs. It is significant to note that Andrews et al. (2006) indicated that university curricula appear to perceive learning in the context of the clinical placement in a theoretical vacuum. Despite recent shifts in thinking in the theorisation of workplace learning, there are few examples of such theories being employed to explore learning in the clinical placement arena. Theoretical perspectives of workplace learning will be discussed in the following section.

Because of the common historical connection between Lave and Wenger's (1991) conceptualisation of CoP and Australian pre-registration nursing education, legitimate

peripheral participation provides a potentially relevant theoretical lens through which to better understand the ways in which learning, meaning and identity is facilitated or inhibited during the clinical placement. Therefore, potential exists for use of this framework to inform pre-registration nursing curricula in order to prepare student nurses for their introduction to and understanding of the processes of learning during the clinical placement. In this research study it is proposed that such an approach may take the form of immersive simulation informed by the principles of legitimate peripheral participation, and more specifically, the conceptualisation of CoP according to Wenger (1998a).

There are however, several contentions that require consideration in relation to legitimate peripheral participation and the clinical placement. Firstly, legitimate peripheral participation was conceptualised through ethnographic case studies involving apprentice midwives, tailors and naval quartermasters, and later butchers, and non-drinking alcoholics attending alcoholics anonymous (Lave & Wenger, 1991). With the exception of the apprentice butchers and naval quartermasters, all learning occurred completely through direct participation with old-timers; experienced members of a respective CoP. Only in the cases of the butchers and quartermasters was a *third-party*, in the form of off-the-job training[4] involved in the learning of practice. The tension that exists for learners negotiating the different cultures and expectations of academic and workplace communities are not represented in the work of Lave and Wenger (1991). Secondly, legitimate peripheral participation does not consider issues of identity formation and belonging as it relates to university students entering a CoNP for limited periods of time. Nursing students do not belong to a CoNP; they remain transient (Newton et al., 2009), temporary residents (Boud, 2010). The third issue is power relationships between newcomers and old-timers and the restriction of access to learning opportunities inherent within such relations, and whilst they

[4] It is important to note that whilst the off-the-job training appears to offer little to the process of legitimate peripheral participation from the perspective of the apprentice (Fuller & Unwin, 2003), negative connotations towards the value of trade school as expressed by old-timers of a CoP is evident in Lave and Wenger's (1991) work but is not explored.

are acknowledged by Lave and Wenger (1991), they remain largely unexplored (Fuller, 2007; Roberts, 2006). Rather such power imbalances are presented as the natural state of practice in motion (Lave & Wenger, 1991).

These controversies could raise questions about the suitability of legitimate peripheral participation as a lens through which to better understand the participation of ICALD nursing students within an Australian CoNP during their clinical placement. However, as Phillips (2014) in his doctoral dissertation explains, Lave and Wenger's (1991) seminal work represents an introductory monograph where the theoretical concept of CoP is proposed. It is in Wenger's (1998a) *Communities of practice: Learning, meaning, and identity* that details of some of these contentious issues are discussed. Therefore, it is appropriate to use Wenger's (1998a) conceptualisation of learning, meaning and identity to underpin this research study into this largely unexplored area of pre-registration nursing education.

Lave and Wenger (1991) emphasised that legitimate peripheral participation "is not an educational form, much less a pedagogical strategy or teaching technique. It is an analytical viewpoint on learning, a way of understanding learning" (1991, p. 40). When this research study was conceived, calls for such an analytic viewpoint were evident within the nursing education literature. Raelin (2007) argued the need for an epistemology of practice to inform nursing education when he identified "a growing appreciation of the need to infuse theory with practice and to develop educational approaches that map the dynamic requirements of our real-world environment" (p.512). Similarly, Leducq et al. (2012) called for better understanding of the competing dual roles of university student and student nurse so that these roles could become compatible.

In this section of the literature review the theoretical groundwork for addressing the research questions that underpin this research has been articulated. Whilst Lave and Wenger's (1991) conceptualisation of CoP and legitimate peripheral participation provides insight into process of learning in the context of participation during the clinical placement by nursing

students, it is the workplace that provides the social, cultural and political locus where knowledge, meaning and identity exist. It is therefore necessary to position legitimate peripheral participation as one of several theoretical perspectives to more fully understand how learning occurs in the workplace.

3.2 Workplace Learning

The works of Lave and Wenger (1991) and Wenger (1998a) have been heralded as the catalyst for the current theorisation into workplace learning (Hager, 2011). As noted earlier in this chapter, what were dominant perspectives of learning based on psychological theories have now given way to understandings of learning underpinned by sociology and social anthropology (Hager, 2011; Lave & Wenger, 1991; Raelin, 2007). This section focuses on the emergence and evolution of workplace learning theory with the purpose of justifying the use of CoP as the theoretical framework for this research study.

Theorisation about workplace learning has evolved over two main phases. The first represented a fundamental shift from the perceptions about knowledge and learning as a product, to perspectives which emphasise learning as an outcome of active engagement in authentic and meaningful activities (Hager, 2011). The second and more recent phase has focussed on understanding ways in which theories of workplace learning can enhance professional vocational programs, such as pre-registration nursing education. This, it has been proposed, can be achieved through the alignment of the distinct epistemological and ontological perspectives that underpin higher education and the workplace when designing curriculum (Billett & Henderson, 2011; Hager, 2011). These two evolutionary phases of workplace learning will now be discussed as they relate to this research study.

3.2.1 Acquisition perspectives of workplace learning.

In his critical assessment of workplace learning, Hager (2011) recounted the evolution of these perspectives from the 1970s. According to Hager (2011), early accounts of workplace learning were heavily influenced by psychological conceptualisations of knowledge as being a tangible product, able to be acquired and transferred. Significant contributions were offered by Argyris and Schön (1974, 1978) stemming from the fields of organisational psychology and management theory. They introduced concepts such as *single-loop learning* and *double loop learning* to represent the process of reflection undertaken by individuals when deciding on a particular course of action to take when confronted with challenging situations (Hager, 2011). In Schön's (1983) subsequent work the immensely influential concept of the *reflective practitioner* was introduced, as one engaging in knowing-in-action, reflecting-in-action and reflecting-on-action. These reflective processes have provided the theoretical underpinning of learning through simulation (Dreifuerst, 2009). Thus, Schön (1983) developed an epistemology of professional practice, rejecting technical rationality, and instead emphasised practice as a holistic performance with learning as an outcome to finding solutions to everyday problems (Hager, 2011).

Marsick and Watkins (1990) expanded on the concepts of experience and reflection in their influential account of *informal learning* and *incidental learning* as characteristics of workplace learning. They defined informal learning as experienced-based, non-routine, and often tacit. In addition, Marsick and Watkins (1990) highlighted the complexity of workplace learning by identifying a diverse range of conditions that enhance or impede informal learning including contextual factors such as the organisational culture. These works have been instrumental in shaping contemporary perspectives on thinking in relation to workplace learning.

The Dreyfus and Dreyfus (1980) model of skill acquisition expanded the concepts of experiential and informal learning by emphasising the need for prolonged exposure to

practice, with the purpose of developing mastery. Situated within the fields of education and air force operations research, the Dreyfus model was based upon four binaries: recollection; recognition; decision; and awareness. These four binaries were represented as a five-stage process for high-order skill acquisition which included levels of: novice; competence; proficiency; expertise; and mastery. The Dreyfus model of skill acquisition holds particular significance for nursing education, since it formed the basis of Benner's (1984) influential theory of nursing expertise, *From Novice to Expert.*

Benner (1984) adapted the work of Dreyfus and Dreyfus (1980) by comparing the perceptions of clinical incidents from the standpoints of experienced nurses, to those of recent graduates and senior nursing students. The analysis of these perceptions underpinned Benner's model, in which she proposed a trajectory of skill development in nursing. This model comprised of five stages: novice; advanced beginner; competent; proficient; and expert, with the latter characterised by intuitive decision making. Benner (1984) emphasised the importance of *knowing*, and the emotional involvement of nurses in the development of intuition. Importantly, this model provided insights into the complex interactions between nursing theory (at the time) and practice.

As a consequence of the variations in these early theories, Hager (2011) identified three epistemological and ontological assumptions common to each that serve as limitations in relation to contemporary perceptions of workplace learning:

- Learning as an individual, cognitive process, focusing on the individual as the unit of analysis for understanding learning.
- Learning as a *thing*, a product or a type of substance able to be acquired and transferred; and subsequently.
- Learning (content as opposed to process) as independent of context, able to move across space and time.

Acquisition theories of learning have served as the dominant view of learning in higher education (Hager, 2004). These perspectives are particularly problematic for professional vocational programs, including nursing, in two ways. Firstly, reinforcing a perception that university learning is superior to workplace learning, focuses curriculum design on the delivery of identifiable content that can be communicated and tested. The implications of such a perception contributes to the potential of students viewing knowledge as the product of education rather than as a tool unique to the profession used in everyday problem solving. Secondly, the acquisition of knowledge implies the need for a specific set of skills to learn and recall knowledge through essays, presentations and examinations; skills and approaches to learning that whilst representing authentic learning in academia, do not represent authentic processes of learning and the authentic ways skills and knowledge are used in practice (Hodgkinson-Williams, Slay, & Siebörger, 2008).

3.2.2 From acquisition to participation.

According to Fenwick (2008), beginning in 2001, there was a fundamental shift in the conceptualisation of workplace learning, from learning as acquisition to learning as participation. These perspectives were heavily influenced by sociology and social anthropology (Hager, 2011; Sfard, 1998). Participatory perspectives about learning represent workplace learning and performance as an embodied phenomenon shaped by social, cultural and organisational elements that extends beyond individuals (Contu & Willmott, 2003; Hager, 2011). Thus, acquisition theories of workplace learning and participation perspectives of learning are based on the following assumptions of:

- learning as comprising individual and social dimensions;
- learning as an ongoing process of participation; and
- learning as significantly shaped by social, cultural, organisational, and other contextual factors (Hager, 2011).

Underpinning participation perspectives of workplace learning is a relationship between participation, learning and practice. Hager (2011) represented the work of Lave and Wenger (1991) and Wenger (1998a) as providing a landmark in the evolution of workplace learning theory. He asserted, that for the first time, learning was perceived as "something outside the individual's head, or even body" (Hager, 2011, p. 24). Rather than perceiving learning as the acquisition of knowledge, CoP provided a distinctive sociocultural view of the newcomer learning how to function appropriately in a particular social, cultural and physical environment. Here, learning was represented as a framework of legitimate peripheral participation in a network of relations (Hager, 2011). However, CoP has not been without its critics.

Criticism of this theoretical perspective has focussed on: the ambiguity of the terms *community* and *practice* (Hodkinson & Hodkinson, 2004); a lack of clarity as to what defines a *member* (Hara & Schwen, 2006), an *old-timer* or a *newcomer* (Cox, 2005); and the neglect of consideration of the relationship between communities such as the university and the workplace (Fuller & Unwin, 2003), a concern of particular relevance for this research study. A more detailed critique of CoP is provided later in this chapter.

Engeström (2001) provided an alternative to Lave and Wenger's (1991) conceptualisation of learning within a CoP by viewing workplaces as activity systems, comprising workplace rules, the division of labour, and mediating artifacts. According to Engeström's (2001) cultural-historical activity theory (CHAT), contradictions and tensions that arise through the participation in everyday work serve as triggers for learning, with learning an outcome of seeking resolution. Whilst it is questionable whether all workplace learning results from contradictions and tensions, this account of workplace learning does highlight the social, organisational, and cultural factors within a system that acquisition perspectives of learning do not address (Hager, 2011).

3.2.3 An epistemology of practice: Combining acquisition and participation.

Theorisation about workplace learning, for some, straddles both acquisition and participation perspectives. These perspectives provide relevance to this research study because there is a need to consider the two distinct milieu of pre-registration nursing education; formal classroom learning environments and workplace learning environments.

Fuller and Unwin (2003) elaborated on the work of Lave and Wenger (1991) by addressing what they perceived as a relative absence of any discussion of the role of formal education institutions in CoP. Conceived within the context of the United Kingdom's Modern Apprenticeship era of the 1990s, Fuller and Unwin (2003) developed their conceptual framework termed the *expansive-restrictive continuum* for analysing the quality and extent of workplace learning within which apprentices are engaged. The expansive-restrictive continuum focused on features of learning environments in terms of organisational context and culture, and learning opportunities afforded to newcomers by different workplaces (Fuller & Unwin, 2003). They highlighted features of expansive workplace learning environments which include those where apprentices have opportunities to participate in and beyond the workplace including participation in off-the-job formal education and training (Fuller & Unwin, 2004). Conversely, restrictive workplace learning environments comprise affordances, a relation between a learning environment and an individual, that provides an opportunity for learning only within a specific CoP (Fuller & Unwin, 2003).

Whilst Fuller and Unwin's (2004) expansive-restrictive continuum provided insight into the relationship between the workplace and formal education in the context of apprenticeships, these researchers accepted Lave and Wenger's (1991) perspective of the process newcomers enter into a CoP. One issue that Fuller and Unwin (2004) did not address is that of transience of student learners as temporary residents (Boud, 2010; Newton et al., 2009) in workplaces, and the associated implications for students identifying as members of a CoP. Although similarities exist between the apprenticeship model and nursing students as

newcomers entering into a CoP, apprentices are employees of a particular CoP whereas nursing students are not. Whilst the case studies Fuller and Unwin (2003) drew on to form the basis of their research demonstrated the overall benefits of newcomers participating with multiple CoP, many of the affordances for participation were made available due to newcomers' relationship with the CoP as employees. The ways in which short periods of immersion into a CoP is represented by the expansive-restrictive continuum, as is the case with student nurses during the clinical placement, is not clear.

Boud (2010) drew on both acquisition and participation perspectives when emphasising the importance of experience in relation to learning in higher education. In earlier work by Boud, Cohen, and Walker (1993), they highlighted the interplay between knowledge as acquisition and participation when defining experience as:

> ...an active engagement with the environment, of which the learner is an important part. Each learner forms a part of the milieu, enriching it with his or her personal contribution and creating interaction which becomes the individual as well as the shared learning experience. (Boud et al., 1993, pp. 6-7)

Boud et al. (1993) emphasised the individual role of processing and reflecting on personal experience as a major factor for developing higher-level learning, whilst at the same time acknowledging the importance of the social and cultural values that exist in the context where experience occurs. Boud et al. (1993) offered five propositions or assumptions of learning from experience:

1. Experience is the foundation of and the stimulus for learning.
2. Learners actively construct their experience.
3. Learning is a holistic process.
4. Learning is socially and culturally constructed.
5. Learning is influenced by the socio-emotional context in which it occurs.

These five propositions highlight the non-linear nature of learning from experience and discount the view that learning as one's lived experience can be transmitted to another. However, these assumptions on their own do not provide insight into learning across the boundaries of CoP such as universities and workplaces.

Boud (2010) later expanded on the previous work completed by Boud et al. (1993) by analysing learning from what he termed *immersive experience*. Boud (2010) defined an immersive experience as both a situation where learning occurs as well as a condition needed for learning to occur. Boud (2010) adapted previous work by Boud and Walker (1990) to a three-phase model of learning from experience (Figure 1).

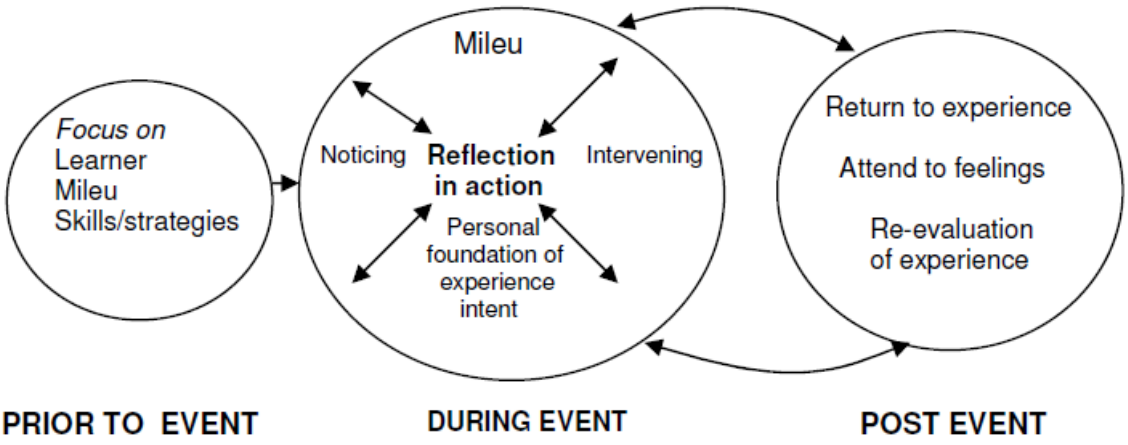

Figure 1. Model of learning from experience (Boud, 2010).

The first phase, *prior to the event*, emphasises the preparation required to enhance the possibility of learning. This phase focuses on: the motivators of the learner; the knowledge required of the milieu by the learner prior to an encounter; and the learning skills and strategies that may equip the learner to participate and therefore learn during an encounter. In the second phase, *during the event*, learners create a learning milieu through their presence and interaction. Boud (2010) perceived learners as navigating their way through the milieu through processes of *noticing*, *intervening*, and *refection-in action*. The third phase, *following*

the event, represents a process of *reflection-on-action* (Schön, 1983), where learning occurs by *returning to experience*, *attending to feelings*, and *re-evaluation of experience*.

Boud's (2010) thinking offers some context in situating this research study. Firstly, is his consideration of pre-registration students as temporary residents in workplaces, as is the case of nursing students during the clinical placement. Boud (2010) also highlighted the differences between the skills and processes required for learning in educational institutions and those in workplaces. Central to his discussion was the acknowledgement that:

- the enterprise of workplaces is the enterprise of work as opposed to meeting student learning needs;
- learning is largely dependent on the personal agency of students as opposed to a facilitator;
- learning occurs through active participation in authentic practices that are meaningful to a CoP as opposed to structured classroom activities designed for learning; and
- a significant amount of learning is reliant on the capacity of learners to recognise and engage in learning opportunities that occur in in-between spaces such as conversations during meal breaks, in workrooms or when travelling to or from work (Boud, 2010; Solomon, Boud, & Rooney, 2006).

Understating the relational nature of experience is important for this research study as emphasis is placed on the need for ICALD nursing students to be prepared for the clinical placement which will not only enhance their capability to engage in in-between learning spaces, but enable them to recognise that such spaces are valuable opportunities for learning. As Boud (2010) explained:

> An event or activity can afford certain possibilities for learning, but these affordances have to be perceived as such and be taken up by the learner. Any given learner may not have the inclination, the capacity or the prior experience to be able to utilise the

> opportunities. Throwing learners in at the deep end only works when the learner has the resources and support to cope. If they don't, they just flounder and sink. (p.10)

The point made by Boud (2010) and Solomon et al. (2006) was that there is a need to prepare nursing students with a repertoire of skills and strategies to assist them to be able to recognise and gain access to learning opportunities in in-between (hybrid) learning spaces. It is the case that within such learning spaces, brokers for learning such as clinical facilitators are often not present. Thus the responsibility for learning becomes that of the student.

In a similar way, the work of Eraut (2000, 2004a, 2004b, 2007, 2010a, 2010b) reflects the evolution of workplace learning theory from understanding how people learn through work, to seeking to understand the conditions and processes that enhance students learning in professional work environments. This body of work further illustrates the increasing understanding of the need for balance between acquisition and participation, individual knowledge and social knowledge, with the purpose of facilitating holistic learning. In his early work, Eraut focused on the exploration of *informal* or *non-formal learning* as complementary to learning from experience (Eraut, 2000, 2004b). Eraut's later studies resulted in a typology of early career learning characterised by three processes: work processes with learning as a by-product; learning activities located within work or learning processes; and learning processes at or near the workplace (Eraut, 2004a, 2007). This typology is presented in Table 1.

Table 1

A Typology of Early Career Learning (Eraut, 2007, p. 409)

Work processes with learning as a by-product	Learning activities located within work or learning processes	Learning processes at or near the workplace
Participation in group processes.	Asking good questions.	Being supervised.
Working alongside others.	Getting information.	Being coached.
Consultation.	Locating resource people.	Being mentored.
Tackling challenging tasks and roles.	Listening and observing.	Shadowing.
Problem solving.	Reflecting.	Visiting other sites.
Trying things out.	Learning from mistakes.	Conferences.
Consolidating, extending and refining skills.	Giving and receiving feedback.	Short courses.
Working with clients.	Use of mediating artifacts.	Working for a qualification.
		Independent study.

Eraut's (2004a, 2007) typology complements Boud's (2010) model of learning from experience by not only identifying the types of *events* that serve as learning experiences, but provides insight into the types of preparation that Boud (2010) speaks of *prior to the event*; knowledge required of the milieu prior to an encounter, and the learning skills and strategies that may equip the learner to participate during an encounter.

More recent work by Eraut (2010a, 2010b) focussed on how students learn when working in professional environments, within boundaries defined by universities. These works emphasised *capability* alongside personal knowledge, representing the individual-centred counterpart to cultural knowledge. Eraut (2010a) defined capability as "what individual persons bring to situations that enables them to think, interact and perform" (p.3). Like Boud (2010), such a perspective demonstrates an acknowledgement of the individual as well as the social and cultural factors that contribute or conversely inhibit learning as complementary rather than competing when considering learning as participation in practice.

Billett (2002, 2006) disagreed with discourse on workplace learning that describes workplace learning environments and experiences as *informal* and argued such terms only serve to de-legitimise the learning that occurs in these spaces. Billett (2002) asserted that the structure of work governed by norms, practices, routines, rituals and tasks has inherent dimensions that serve not only the continuity of practice, but also have pedagogical qualities.

From this perspective, learning is proposed as being interdependent between the individual and social practice. This interdependency forms the basis of Billett's (2006) contention that a workplace curriculum comprises participatory practices with learners needing to navigate the tension between the needs for the continuation of work practice and individual's learning needs.

A central condition underlying Billett's (2006) conceptualisation of a workplace curriculum is that workplaces will invite students to participate in the practices of the workplace. As such, the enactment of a workplace curriculum is dependent upon particular interests such as affiliations and cliques that exist in the workplace, and learners' goals for participation and advancement based upon what is afforded to them (Billett, 2006). Whilst echoing some key themes from previous learning theories discussed in this section, Billett (2006) focused on the politic of a CoP with members of a community represented as gatekeepers to practice, "who regulate learners' access to activities and interactions and provide support that regulates learners' progression" (Billett, 2006, p. 39). Workplace learning may therefore be considered as "something that is constituted by the self, albeit socially mediated" (Billett & Somerville, 2004, p. 322). The next section will include a discussion on the way in which the previously cited perspectives informed the immersive simulation program design.

3.2.4 Combining perspectives to inform immersive simulation design.

Three perspectives of workplace learning have been described above. They are: learning as acquisition; learning as a socially mediated process of participation; and learning as a process that combines acquisition and participation. Indeed contemporary thinking into workplace learning calls for consideration of multiple perspectives (Eraut, 2000; Sfard, 1998; Svensson et al., 2004); with a need for better alignment between acquisition and participation approaches (Billett & Henderson, 2011; Hager, 2005; Raelin, 2007; Sfard, 1998). The benefit

as argued by Sfard (1998), is that by considering both acquisition and participation perspectives, the advantages of one compensates for the deficits of the other. Considering both approaches is particularly relevant when seeking to address issues of learning, as is the case in this research study, with the aim of designing immersive simulations which straddle the contexts of university and workplace.

In this chapter different perspectives of learning have been presented. They have illuminated the processes and activities that contribute to learning from a workplace perspective. The purpose of such an exploration has been to understand perspectives of learning that could be replicated in immersive simulation with the intention of developing the capability of ICALD nursing students to participate within an Australian CoNP during the clinical placement, thereby assisting these students to learn how to learn in the workplace. Understanding ways in which to develop ICALD nursing students' capability to *access* learning opportunities in terms of nursing practice is the focus of this research study. Consequently, there is a need to consider and align both acquisition and participation approaches so as to represent a holistic perspective.

For example, Schön's (1983) three modes of reflection provides a way to understand the processes of learning in practice, as well as during the post-simulation debrief (Dreifuerst, 2009). However, this perspective does not reflect learning as a social process. Eraut's (2004a, 2007) typology of early career learning provides specific examples of the processes and activities of work that contribute to learning. Such examples provided a starting point for the design of each immersive simulation. However, this typology does not provide insight into ways to facilitate newcomers' access to these processes and activities. Lave and Wenger's (1991) conceptualisation of legitimate peripheral participation provides an analytical viewpoint for understanding learning as a trajectory, as newcomers move from a position of peripherality to one of more full participation within the social and cultural context

of a CoP. However, this theoretical perspective does not explore in detail the facilitators and the barriers to learning (Gobbi, 2010), nor does it explore in detail issues of belonging and identity construction.

Wenger's (1998a) Communities of Practice was chosen as the theoretical framework to explore and address the research problem owing to the social, cultural and political perspectives this framework provides when taking into account learning, meaning and identity through participation in practice. Accordingly, in this chapter I will now engage in an in-depth exploration of Wenger's (1998a) conceptualisation of CoP.

3.3 Communities of Practice

Legitimate peripheral participation views learning as an outcome of participation in a social practice, as mentioned previously. It is a practice whereby the relationship between the whole person, the activity, meaning, learning and knowing are interdependent (Lave & Wenger, 1991). Wenger (1998a), when doing research into a work group of insurance claims processors, proposed that learning involved not only the individual, but also the broader CoP. This proposition represented a divergence from Lave and Wenger's (1991) notion of legitimate peripheral participation, shifting the focus from the individual to the CoP as the locus within which a coherent social practice exists. In his 1998 work *Communities of practice: Learning, meaning and identity*, Wenger refined the term *communities of practice* by describing it as a cohesive group connected through three analytical components; mutual engagement, joint enterprise, and shared repertoire.

At the very core of this research is participation, as demonstrated by the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and

linguistically diverse backgrounds to participate within Australian communities of nursing practice?

Within Wenger's (1998a) revised conceptualisation of CoP, social participation is represented as a fundamental characteristic of learning, meaning and identity. This is illustrated by his assertion that participation refers to a "more encompassing process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities" (Wenger, 1998a, p. 4) rather than just to local events of engagement in certain activities with certain people. Such participation shapes not only what we do, but also who we are and how we interpret what we do (Wenger, 1998a, p. 4). Thus, participation provides the mechanism by which practice and identity converge.

Wenger's (1998a) Communities of Practice is explored in the following section of this chapter. First, the five aspects of this conceptual framework, meaning, community, learning, identity and belonging, as they relate to this research study, are discussed. Wenger's (1998a) "skeletal architecture for learning" (p.229) is then presented and the ways in which this architecture informed this research study is discussed. This is then followed by a critique of Wenger's (1998a) conceptualisation of CoP drawing on contemporary literature. Finally, an analysis of the ways in which CoP has been represented in the nursing education literature will form the conclusion of this chapter.

It is important at this point to clarify that this research study was informed by Wenger's (1998a) conceptualisation of CoP. Since Wenger's (1998a) work on this concept, the notion of CoP has continued to evolve (Andrew, Tolson, & Ferguson, 2008; Li et al., 2009). The evolving nature of CoP, and the subsequent proliferation of literature relating to this sociocultural framework, has resulted in confusion about what a CoP is, and the concept has become incoherent, diluted and heterogeneous (Wenger, 2010). Wenger's (1998a) framework is distinct from his later work with McDermott and Snyder (2002) which deviated from the original notion of CoP as an organic phenomenon, by focusing on the *creation* of

CoP for the specific purpose of knowledge management within corporations (Henderson, 2007a). It is important to note that for the purpose of coherence, subsequent interpretations of CoP by Wenger were not considered in this research study.

3.3.1 Meaning: Participation and reification.

Meaning, according to Wenger (1998a), is an outcome of the interplay between participation and reification; a process that results from engaging with the artifacts, activities and conversations that make abstract concepts more real. In the opening to this section of this chapter, participation as more than engagement in an activity was discussed. As individuals engage in the common tasks of work, social connections form between members and valuable knowledge and experiences are shared. Therefore, “Participation refers to a process of taking part and also to the relations with others. It suggests both action and connection” (Wenger, 1998a, p. 55). It is through participation in practice that newcomers are exposed to and begin to understand the artifacts, purpose and culture of a CoP.

Reification is described as a process where an abstract concept is treated as a concrete object. It is "the process of giving form to our experience by producing objects that congeal this experience into 'thingness'" (Wenger, 1998a, p. 58). Reification sees the tools, symbols, terms, stories, processes and systems produced by a CoP as reifying an element of practice into a less abstract form. Reification is therefore understood as both a process and a product by creating "points of focus around which the negotiation of meaning becomes organized” (Wenger, 1998a, p. 58).

According to Wenger (1998a), participation and reification do not exist in isolation, they are interdependent. Reification entails the negotiation of shared understandings through engagement with the unique objects of practice and thus enables particular forms of social relations to be shaped during the process of participation. For nursing students, examples of reification in the context of the clinical placement include the interpretation and application of

nursing care plans, procedural guidelines and tools of curriculum such as competency-based assessment criteria. Such processes require purposeful negotiation between the newcomer and the old-timer, or else there is risk of confusion relating to the meaning, purpose or process of the reified object.

The need for purposeful negotiation as a process of balancing the duality of participation and reification is a central concern in the context of learning during the clinical placement for ICALD nursing students. Excessive reliance on participation in the form of focusing on the *doing* of practice without negotiation, may distort the meaning of reified artifacts, processes, systems and stories as they are defined according to a specific CoP for ICALD nursing students. Conversely, in the event of excessive reliance on reification, "there may not be enough overlap in participation to recover a coordinated, relevant or generative meaning" (Wenger, 1998a, p. 65).

Hence, meaning as defined by a CoP requires negotiation to establish a balance between participation and reification. Participation and reification within a CoP are influenced through three dimensions of practice; mutual engagement, joint enterprise and shared repertoire. These three dimensions provide a distinction between CoP and other notions of *community*.

3.3.2 Community.

Practice according to Wenger (1998a) is characterised by the three dimensions of mutual engagement, joint enterprise and shared repertoire. These represent an indigenous property of a specific community and contribute to community coherence. Therefore, practice and community are inextricably linked. Practice as a source of *mutual engagement* brings members together to engage in practices that are meaningful to a particular community based upon a negotiated understanding. Practice as a source of *joint enterprise* requires a collective understanding of: the goals of the particular CoP; how the goals of the community

are achieved through an indigenous enterprise; and the relations of accountability that result. Practice as a source of a *shared repertoire* represents resources, artifacts and ways of being that develop from a sustained and collectively negotiated pursuit of a joint enterprise.

Mutual engagement is dependent upon individuals doing things together. Mutual engagement may take on the structured form of work, or the informal information sharing that occurs over a meal break. Whether formal or informal, mutual engagement is relative to the authentic context in which everyday practice occurs and is centred around sustained, dense relations that are focussed around the purpose of practice that members are expected to do (Wenger, 1998a). Thus, mutual relationships are essential to mutual engagement, as it is through such social relationships that individuals are involved in what matters. Doing things together and the relationships that ensue fosters a sense of belonging. This in-turn informs the individuals' understanding of the practices of a CoP, and as such, facilitates learning. The process of doing things together, whilst implying positivity, may also result in tension, debate and outright conflict. However, Wenger (1998a) recognised this as an inevitable part of participation in practice, and framed this conflict as a potential source of learning as well.

The joint enterprise of a CoP relates to an identifiable, negotiated and shared understanding as to the purpose of a specific community. Central to the joint enterprise are the collective processes of negotiation and renegotiation that aim to meet both the personal needs of individual members as well as the overriding needs of a CoP (Wenger, 1998a, 1998b). Joint enterprise is more than a stated goal; it helps to create a relation of mutual accountability upon which the practice is dependent (Wenger, 1998a). Joint enterprise provides insight into the nature of situated knowledge. For example, a registered nurse regardless of experience, when entering an unfamiliar practice environment will encounter differences in practice and approaches to solving problems. Through a lens of joint enterprise, these differences represent localised, indigenous practices that have evolved within

a specific CoP over time as a response to negotiating ways to cope with the conditions, resources and demands of a particular context.

Over time, as members of a CoP engage with each other in their socially negotiated practices, they develop a shared repertoire of "routines, words, tools, ways of doing things, stories, gestures, symbols, genres, actions, or concepts...which have become part of its practice" (Wenger, 1998a, p. 83). This creates a unique social history of a particular CoP; one that includes the socially negotiated meanings of concepts, language and tools, as well as a communal memory of action used to inform current and future practice (Phillips, 2014).

These three dimensions of mutual engagement, joint enterprise and shared repertoire, define a coherent CoP. As such, they represent to newcomers what membership to a particular CoP looks and feels like. According to Wenger (1998a), "practices are histories of mutual engagement, negotiation of an enterprise and development of a shared repertoire" (p.95). For novices such as ICALD nursing students, learning in practice includes the processes of: evolving forms of mutual engagement; understanding and tuning their enterprise; and developing their repertoire, styles and discourses (Wenger, 1998a). These three processes of learning will be explored in the section below.

3.3.3 Learning in practice.

Learning though mutual engagement is the foundational premise of the clinical placement in pre-registration nursing education, and as such represents a particular interest for this research study. As seen in Chapter Two, student nurses' perceptions and experiences of the clinical placement are characterised by: their relationships with nurses; affordances provided for participation in practice; and the resultant feelings of fitting in and belonging (Levett-Jones, Lathlean, McMillan, et al., 2007; Newton et al., 2009; Zilembo & Monterosso, 2008a). In Chapter Two an association between belonging and learning was identified.

From a CoP perspective, learning involves the process of *evolving forms of mutual engagement*, characterised by: discovering how to engage; developing mutual relationships; and defining the identities of community members, whether they be knowledgeable, helpful, or difficult to get along with (Wenger, 1998a). Indeed Wenger (1998a) argued that an ability for newcomers, such as ICALD nursing students, to demonstrate an evolving form of mutual engagement in practice may be the basis for what members of a CoP define as competence.

Learning within a CoP involves newcomers *understanding and tuning their enterprise*. For ICALD nursing students this may involve: developing an understanding of the enterprise as defined by a CoP within which they are situated; reconciling conflicting interpretations of what the enterprise is about; and learning to be accountable to, and identify with a local CoP (Wenger, 1998a). For first-year ICALD nursing students, an ability to understand the enterprise during the clinical placement is challenged by: an understanding of the enterprise derived from the representations portrayed through classroom-based activities; the conflicting priorities of the enterprise of practice, and the students' enterprise of learning; and reconciling how they, as a student, can contribute to the enterprise of nursing practice. Due to their limited knowledge, skill and experience, their supernumerary status, and the short duration of the clinical placement, demonstrating accountability may relate less to the enterprise of a CoNP, and may be more about demonstrating the perceived, tacit and highly subjective qualities of being a *good-student*.

Learning within a CoNP involves newcomers *developing their repertoire of styles and discourses*. For ICALD nursing students this includes: renegotiating the meaning of language; using tools in a particular way; redefining terms; and learning stories and generating new ones (Wenger, 1998a). First-year ICALD nursing students possess very limited experience to draw upon to inform their use of the repertoire of practice, thus limiting their ability to engage with it. Nursing curricula make use of learning and teaching methods such as case studies, skills laboratories and simulations in an attempt to create authentic

learning experiences. However, these hybrid de-contextualised classroom activities that Brown et al. (1989) spoke of, invariably contribute to a mismatch between students' understanding constructed in the classroom and the authentic experience of the clinical placement; the tools and processes may be familiar yet their application and purpose may vary. However, if mutual engagement is achieved, I argue that such a mismatch can provide an invaluable and personally meaningful source of learning.

3.3.4 Identity in practice.

The fourth aspect of practice according to CoP is identity. Because learning transforms who we are and what we can do, Wenger (1998a) argued that learning is a process of becoming; an experience of identity. Wenger's (1998a) conceptualisation of identity comprises five components through which an experience of identity in practice can be understood.

3.3.4.1 A negotiated experience.

Identity as a negotiated experience represents how we define who we are by the ways we experience ourselves and how others reify our identities through participation and non-participation. Through participation or non-participation, newcomers form an identity of becoming learners within a CoP as an experience of competence-in-practice, and the discovery of the socially defined boundaries of legitimacy. Through participation, identity is constantly negotiated both internally and externally, implicitly and explicitly, in terms of what it is to be a member of a CoP (Wenger, 1998a). I propose that for ICALD nursing students, negotiating an identity of membership to a CoNP comprises an evolving understanding, and discrimination between, what it is to be a nurse as represented in the nursing literature in Chapter Two, and more importantly, developing an identity as a nursing student participating within a CoNP Facilitating this process of negotiation through immersive simulation is the focus of this research study.

3.3.4.2 Community membership.

Wenger (1998a) argued that one's identity within a CoP is formed through participation and reification according to the dimensions that define a community; mutual engagement, a joint enterprise, and a shared repertoire. It is within this context that membership constitutes one's identity "not just through reified markers of membership but more fundamentally through the forms of competence that it entails" (Wenger, 1998a, p. 152). From a CoP perspective, "a community establishes what it is to be a competent participant, an outsider, or somewhere in between. In this regard, *a community of practice acts as a locally negotiated regime of competence"* (Wenger, 1998a, p. 137).

Determinants of competence in pre-registration nursing programs, particularly the evaluation of *clinical* competence, generally takes the form of competency-based assessment (Cant et al., 2013; Wu et al., 2015). In contrast, rather than an ability to perform skills or the possession of codified knowledge, competent membership according to the sociocultural perspective of CoP is represented by mutuality of engagement, an ability to establish mutual relationships in which mutuality forms the basis of an identity of participation. Competent membership is represented by an accountability to the enterprise, the ability for members to sufficiently understand the enterprise of a CoP and to take some responsibility and contribute to the CoP. A competent member is able to demonstrate negotiability of the a repertoire, and has the ability (the capability and the legitimacy) to make use of the repertoire of a practice. According to Wenger (1998a), these three regimes of competence become dimensions of identity.

3.3.4.3 Trajectory.

Hence, identity in practice arises from an interplay of participation and reification; a continuous negotiation of experiences past and present and as such is not static, but is an evolving process of becoming. Wenger (1998a) proposed that identity is continuous motion,

represented as five trajectories; peripheral, inbound, insider, boundary and outbound. In relation to this research study, peripheral trajectories are of greatest interest.

Peripheral trajectories never lead to full participation, yet they provide a kind of access to the practice of a CoP that is significant enough to contribute to the identity of an individual (Wenger, 1998a). For first-year ICALD nursing students, participation in a CoNP during the clinical placement will not lead to full-participation in terms of competent membership. However, ICALD nursing students need to have an understanding that such a trajectory, particularly in the early years of their nursing studies, is an evolving process of becoming.

3.3.4.4 Nexus of multimembership.

Wenger (1998a) argued that we are all members of multiple communities and these memberships constitute our identity. Such membership may be characterised by nationality, faith, family and vocation. As a nexus of multimembership, we define ourselves by the ways we reconcile our various forms of membership into one identity (Wenger, 1998a).

Interpreting this in a different way, membership to any one CoP represents only part of our identity. Therefore, identity is represented as a nexus of multimembership. Wenger (1998a) emphasised that negotiation of different forms of membership requires effort to reconcile competing demands and conflicting values, beliefs and assumptions. Indeed, "The work of reconciliation may be the most significant challenge faced by learners who move from one community of practice to another" (Wenger, 1998a, p. 160). In relation to ICALD nursing students participating with members of an Australian CoNP, encountering the boundaries where membership to different communities overlap may be experienced as: different ways of engaging in practice; different forms of accountability and socially accepted or expected responses; and discovering elements of one repertoire of practice that may be inappropriate, incomprehensible or even offensive to another (Wenger, 1998a).

Reconciliation "is a profoundly social kind of work" (Wenger, 1998a, p. 161). In terms of learning within a CoNP, reconciliation can be employed to interpret the ways in

which clinical facilitators or supportive members of a CoNP act as brokers, by providing connections between communities by introducing "elements of one practice into another" (Wenger, 1998a, p. 105). Connections between CoP can also be made through boundary objects; the "artifacts, documents, terms, concepts, and other forms of reification around which CoP can organise their interconnectedness" (Wenger, 1998a, p. 105). However, whilst the authentic objects of nursing practice are often introduced into pre-registration nursing programs as a way of preparing nursing students for the clinical placement, as has been seen, meanings of such objects and the ways in which they are used as a repertoire of an indigenous enterprise may differ, and as such, requires the social work of negotiation in order to achieve reconciliation. In other words, the work of reconciliation is highly dependent on mutual relationships and mutuality of engagement.

3.3.4.5 Local-global interplay.

According to CoP, identity is informed by a relation between the local and the global, which is where we define who we are by negotiating ways of belonging to broader constellations and manifesting broader styles and discourses (Wenger, 1998a). Similar to practice, an identity is neither defined locally nor is it abstractly global; rather is an interplay of both. Because of their limited knowledge and experience of nursing practice, first-year nursing students may find the process of negotiating their place within the clinical placement, as learners, presents an uncomfortable challenge to their identity in terms of legitimacy. This challenge to identity may be exacerbated for ICALD nursing students as they are confronted with experiences that may present a fundamental challenge to their cultural identity.

3.3.5 Belonging.

The issues of belonging were cited earlier in the literature review. However, there is a distinction between these aforementioned works which interpret belonging through a psychological lens (Levett-Jones et al., 2009; Levett-Jones, Lathlean, Maguire, et al., 2007;

Levett-Jones, Lathlean, McMillan, et al., 2007), and the sociocultural perspective of CoP in which three distinct modes of belonging as a way to make sense of the processes of learning and identity construction are considered. Wenger's (1998a) three modes of belonging are engagement, imagination, and alignment.

Engagement as a mode of belonging represents the active involvement in mutual processes of the negotiation of meaning. The bounded nature of engagement, the physical limits of time and space, provide a characteristic contrast to imagination and alignment.

Through imagination, images of the world are created which facilitates an ability to draw from experiences of engagement, and see connections through time and space. Imagination represents a creative process that reaches beyond direct engagement, yet it does not represent a withdrawal from reality. According to Wenger (1998a), imagination transcends engagement by emphasising the creative process of producing new *images* and generating new relations through time and space that become part of one's identity.

Similar to imagination, alignment is not confined to mutual engagement. Alignment represents an investment and coordination of personal energies, activities and practices in order to play one's part and contribute to something bigger.

In this section I have presented the fundamental concepts and analytical components of Wenger's (1998a) conceptualisation of CoP. The purpose of this largely theoretical discussion so far has been to inform the reader about these concepts and analytical components as the basis for the following sections. This research aimed to engage Wenger's (1998a) CoP to: frame the context of the research problem; to develop the design framework for an immersive simulation program; and to inform data collection tools, data analysis and the reporting of findings.

In the next section I present the operationalisation of Wenger's (1998a) CoP in the form of his learning architecture. I draw on previous sections in this chapter, and explore the

ways in which the learning architecture has contributed to the development of the design framework for the immersive simulation program for this research study.

3.4 Learning Architecture: Designing for Learning

Wenger (1998a) represented his analysis of learning in terms of participation, practice and identity as a conceptual architecture for learning. This "skeletal" architecture comprised two parts: the basic *dimensions* of a *space* of design for learning represented as four dualities; and the three modes of belonging as basic *components* of a learning design (p. 231).

In the absence of a precedent in terms of informing immersive simulation design with Wenger's (1998a) learning architecture, the potential value of this learning architecture was perceived in terms of alignment between the sociocultural perspective of CoP and the personal philosophical perspective of the researcher as reflected in the research questions that underpinned this research study. Furthermore, the unrealised potential of an immersive simulation program informed by the sociocultural perspective of the learning architecture to facilitate identities of participation in ICALD nursing students was considered a significant justification for this approach. The potential value of the learning architecture according to these perceptions is illustrated in the following quote:

> One can design roles, but one cannot design the identities that will be constructed through these roles....One can produce affordances for the negotiation of meaning, but not meaning itself. One can design work processes but not work practices; one can design curriculum but not learning....*Learning cannot be designed:* it can only be designed *for*. (Wenger, 1998a, p. 229)

Four *dimensions* in the form of dualities represent the challenge of designing for learning as outlined in Wenger's (1998a) learning architecture: participation/reification; designed/emergent; local/global; and identification/negotiability. Further, Wenger (1998a) argued that within a designed learning space, learners need to be able to negotiate and reshape

their identity. This process of learning, he argued, is facilitated by the three modes of belonging, referred to collectively in the learning architecture as *components* (Wenger, 1998a). The challenge of design, according to Wenger (1998a) is to support the work of engagement, imagination and alignment. The conceptual relationship between the dimensions and components is represented in Figure 2 and will now be explored.

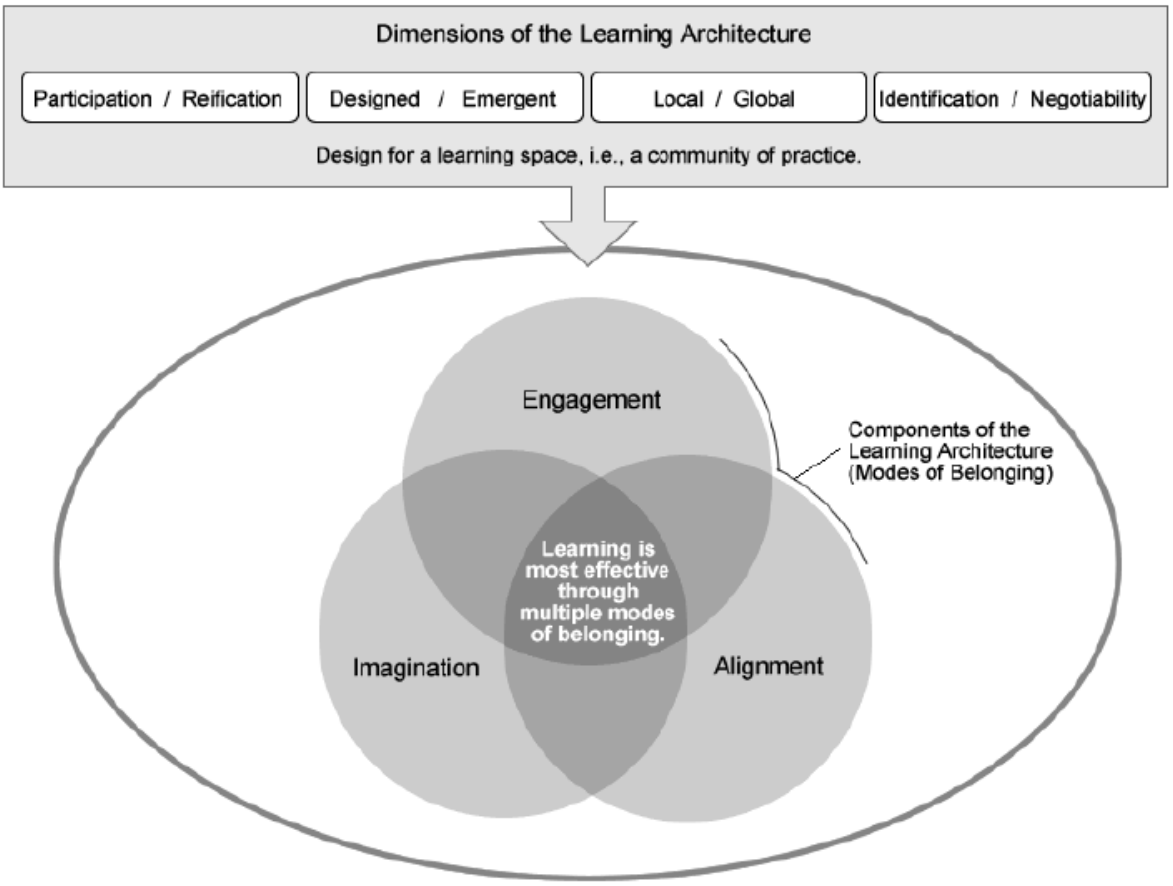

Figure 2. A conceptualisation of Wenger's (1998) learning architecture (Henderson, 2007b).

3.4.1 Participation and reification.

My goal was to design a learning space that considers the interaction between identification and negotiability with the aim to capture the dimensions of both practice and identity as described earlier in this chapter. The proposition, according to Wenger (1998a), is that participation and reification provide two complementary aspects of design that create two kinds of affordances for learning. In terms of reification, examples of design elements

include plans, procedures, tools and other artifacts of practice as focal points for negotiation. In order to afford participation, design requires ensuring "the right people are at the right place in the right kind of relation to make something happen" (Wenger, 1998a, pp. 231-232). A design for learning must consider the interplay between participation and reification with the response to design dependent upon how the two fit together. The need to consider participation and reification as a duality reveals the tension insofar as reification cannot be assumed as easily translated into practice, nor that participation can be guaranteed. This warning from Wenger (1998a) was of particular relevance when designing the immersive simulations to develop the capability of ICALD nursing students to participate with members of an Australian CoNP.

Whilst the use of authentic artifacts of nursing practice is a common feature of designed nursing simulations, as discussed in Chapter Two, one of the greatest challenges for ICALD nursing students' learning in the classroom and during the clinical placement is engaging in a social process of negotiation. Consequently, designing the immersive simulations for this research involved choices about timing and affordances; what reified artifacts to include? Who to involve? What are the expectations of participation? In what timeframe? The role of these choices in the design of the three immersive simulations for this research study is illustrated in Chapter Six.

3.4.2 Designed and emergent.

Central to a design for learning is to acknowledge the unpredictability of the world. This was acknowledged by Wenger (1998a) when he argued that whilst one cannot design learning, one can design *for* learning. Learning activities can be designed in the form of lectures, tutorials and practical skills laboratories, but how students respond to these and how any resultant learning is realised in practice is unknown. In other words, learning, practice and identity need to be considered not as a result of design, but as a *response* to design.

Therefore, there is a need to consider the designed and emergent as a duality. Whilst the value of design is unquestionable, it is also important to consider the ways in which learners improvise and innovate as an opportunity for learning.

One significant strength of immersive simulation is its ability to replicate the inherent unpredictability of the real-world. Whilst at the same time, balancing prescription and minimalism of design, immersive simulation can accommodate the inherent unpredictability of human interaction. The significance of using immersive simulation with the aim of accommodating emergent responses assists in capturing the potential benefit of this approach to learning for ICALD nursing students. This is done by exploring the emergent responses to the designed simulation experiences. A debriefing post-simulation, allows for the exploration of emergent responses to a learning design, and in this way can facilitate personally meaningful learning.

3.4.3 The local and the global.

Wenger (1998a) argued that due to the inherent limitation of engagement, despite being one part of a broader constellation of practice, it is a local CoP with which individuals engage. Accordingly, the challenge for design is to create relationships or connections between local constellations. This need for the design to assist in the creation of connections in the context of constellations of nursing students interacting with a CoNP during the clinical placement is illustrated by Wenger (1998a) when he said:

> Communities of practice are already involved in the design of their own learning because ultimately they will decide what they need to learn, what it takes to be a full participant, *and how newcomers should be introduced into the community*. (p. 234) (emphasis added)

The point here is that a design for learning needs to involve members from different constellations with different knowledge. Such an understanding represents a nexus of

multimembership with experiences that require a social negotiation of practice, since meaning and identity are a significant source of learning. In the case of pre-registration nursing students during the clinical placement, such negotiation frequently requires facilitation by nurses-as-brokers.

Brokers are people who make use of their membership across multiple CoP and boundary objects to form connections between CoP, thus, revealing new understandings and influencing practice within a community. Such brokering however is not instinctive and requires skilful application in the areas of negotiation, translation, alignment and legitimacy (Wenger, 1998a). Examples of brokering include clinical facilitators or buddy-nurses facilitating participation, by discussing clinical presentations, exchanging knowledge as they talk, and giving helpful hints as they work alongside students (Cooke, 1996). As these examples suggest, mutual engagement is pivotal to negotiation of learning, meaning and identity in terms of a nexus of multimembership. Brokering connections for ICALD nursing students becomes more complicated when considering the need to negotiate membership for these students with significantly different values, beliefs, norms, processes and behaviours into an Australian CoNP. The challenge for this research study therefore was to design learning activities that acted as boundary objects, functioning "as a communication artifact around which CoP can negotiate their contribution, their position, and their alignment" (Wenger, 1998a, p. 235).

This research study proposed that the learning and teaching method of immersive simulation could act as a boundary object; a *communication artifact*, bridging the communities of university classroom and nursing practice. Considerations of the local and the global in the design of immersive simulations related particularly to participation and reification; that is, who are the right people are at the right place in the right kind of relation to make something happen? These design considerations are explored in Chapter Six.

3.4.4 Identification and negotiability.

According to Wenger (1998a), a design for learning needs to generate a social energy by creating "fields of identification and negotiability that orient the practices and identities of those involved to various forms of participation and non-participation" (p. 235). Inherent within such social energy are issues of power, and the ability to negotiate meaning. Power in relation to learning may be represented in terms of legitimacy, competence, participation and non-participation. Because identity is constantly being renegotiated, it is inextricably linked with learning. Thus, learning cannot be addressed without considering issues of identity. Therefore, a design for learning must support identity construction through the facilitation of competence as defined by a CoP, as well as affording individual negotiability based on trajectories and multimembership (Henderson, 2007a).

Competence, as described earlier in this chapter, is defined by the dimensions of mutuality of engagement, accountability to an enterprise, and negotiability of a repertoire (Wenger, 1998a). Perceiving competence in this way through a learning space of immersive simulation designed to develop the capability of ICALD nursing students to participate within an Australian CoNP, shifts the focus away from connotations of competence as being recall of knowledge and demonstration of technical skill. In addition, I argue that engaging ICALD nursing students in immersive simulations that requires negotiation of competence as defined by Wenger (1998a), can facilitate ICALD nursing students' development of identities as learners on a learning trajectory.

Of particular interest to this research study was the ways in which: participation and non-participation transpires during immersive simulation; how these positions are interpreted by ICALD nursing students; and how these can be negotiated in terms of mutuality of engagement, accountability to an enterprise, and negotiability of a repertoire during the simulation scenario as well as the post-simulation debriefing. This is of particular interest due to the ways in which cultural heritage influences the behaviours of ICALD nursing students

when seeking concord in times of discord, and the ways these behaviours can be misinterpreted by members of an Australian CoNP (Brown, 2005; Edgecombe et al., 2013). In addition, as will be discussed in Chapter Four, not only is there an absence of examples whereby immersive simulation design has been informed by CoP, there are few examples whereby a single established learning theory has provided the epistemological foundation of a simulation program, informed the simulation scenario, as well as provided the framework for the post-simulation debriefing.

3.4.5 Components of the learning architecture: Engagement, imagination and alignment.

Wenger (1998a) argued that a learning architecture must offer facilities for each of the three modes of belonging. Therefore, the challenge when designing for learning is to provide support for learning by facilitating engagement, imagination and alignment.

Learning is dependent on opportunities to actively contribute to the practices of a community, to feel valued, and to integrate experiences and repertoire into our own identity (Wenger, 1998a). *Facilities of engagement* requires a design for learning that provides experiences of engagement that comprise:

- mutuality in the form of doing things together, peripheral participation and the discovery of access points;
- competence in its various forms of initiative, knowledge, accountability, judgement and the use of the artifacts of a practice; and
- continuity in terms of sources of information, generational encounters and sharing of stories (Wenger, 1998a).

Learning involves imagination and is dependent upon processes of orientation, reflection and exploration (Wenger, 1998a). *Facilities of imagination* as a design for learning needs to support an understanding of who we are, where we are, and an opportunity for

reflection on the social, cultural, political and economic reasons. It also has implications for us being who and where we are at a particular point in time. Accordingly, facilities of imagination include exploration; providing opportunities to envision possible alternatives, affording opportunities to try things out and to develop one's own image of future trajectories (Wenger, 1998a).

Finally, learning is a matter of alignment, dependent on one's *ability* – capability *and* legitimacy – to generate and coordinate sufficient social energy to reconcile the challenges that we experience and as such, determine the social effectiveness of our actions (Wenger, 1998a). *Facilities of alignment* as a design for learning needs to provide ways in which newcomers learn how their participation can impact and contribute to the practice of a community that is beyond their direct engagement. The work of such alignment may take the form of conversations as a negotiation of a shared understanding, or artifacts as policies, procedures and processes (Wenger, 1998a).

The intent of facilitating learning and in-turn identity as represented in these three modes of belonging resonates with the very intent of the designed immersive simulation program for this research study. This intent can be articulated in terms of a trajectory. With limited exposure to and understanding of the authentic and historical practices of an Australian CoNP, ICALD nursing students' perceptions of what constitutes membership to such a community may be "so far removed from any lived form of membership" (Hung, Seng-Chee, & Thiam-Seng, 2006, p. 178) that the identity of these students may be fundamentally challenged. Therefore, an aim of the immersive simulation program was to enable ICALD nursing students to connect, through the coordination of energies, actions and practices so they could in some way "become part of something big because we do what is required to play our part" (Wenger, 1998a, p. 179).

The ways in which Wenger's (1998a) learning architecture informed the preliminary design framework for the immersive simulation program for this research study is described in Chapter Six.

3.5 Critical Perspectives of Communities of Practice

Critical perspectives CoP have been provided by Cox (2005), Handley, Sturdy, Fincham, and Clark (2006) and Lindkvist (2005) who contend that fundamental terms including CoP as conceptualised by Lave and Wenger (1991) and Wenger (1998a) remain undeveloped and ambiguous.

Cox (2005) argued that ambiguity and inconsistencies exist with the basic conceptualisation of CoP in terms of community, learning and power. However, Amin and Roberts (2008) argued, that much of this ambiguity stems from an imprecise use of this terminology, an unquestioned blending of interpretations of CoP, and the exploration of CoP in contexts far from those from which CoP originated. Thus such ambiguity may be attributed to the evolving nature of CoP, and a symptom of the "fragmented theoretical landscape" (Henderson, 2015, p. 130) that has resulted from a lack of clarity and consistency within the literature when citing the various iterations of CoP.

The need for clarity and consistency was highlighted by Cox (2005) in his comparison of the seminal perspectives of CoP by Brown and Duguid (1991), Lave and Wenger (1991), Wenger (1998a) and Wenger et al. (2002). Within this work, Cox (2005) documented the evolution of CoP and in doing so highlighted that for each of the four perspectives of CoP explored, key concepts such as learning, power, formality and diversity actually represent different concerns. Cox (2005) argued that these differences outweigh the common ground in relation to the social negotiation of learning, meaning and identity and as such called for clear positioning CoP when employing this theoretical lens. It is for these very reasons that I have

used Wenger's 1998 conceptualisation of CoP in this research as has been clearly stated throughout this chapter.

Handley et al. (2006) argued that the terms *participation* and *practice* are poorly delineated and are occasionally used interchangeably. These authors argued that *practice* should be redefined as simply *activity*, while *participation* should be considered *meaningful activity* (p.651) in order to make CoP easier to operationalise. However, in a counter argument, Henderson (2007a) suggested that Handley et al. (2006) had erroneously perceived participation as encompassing practice since Wenger (1998a) clearly argued that within his framework, participation and reification are both the work of practice. It must also be acknowledged that Handley et al. (2006) approached CoP from an organisational management perspective where easily measurable (observable) outcomes of management interventions are desired (Henderson, 2007a).

Further criticisms of CoP focus on the locus of learning. Yakhlef (2010) argued that CoP reduces learning and knowing to mere participation and as such displaces learning as identifiable, individual cognitive processes to anonymous social practices. Similarly, Handley et al. (2006) argued that as a critique of cognitivist theories of learning, Lave and Wenger (1991) created a duality between cognitive and sociocultural approaches to learning. However, the fundamental basis of both arguments misrepresent the original intent of Lave and Wenger's (1991) and Wenger's (1998a) work; that CoP is an analytical standpoint from which to understand the sociocultural process of learning rather than as a prescription for learning. In this chapter I have acknowledged that CoP was conceived in response to the individualist cognitivist approaches to learning that dominated learning theory at the time (Contu & Willmott, 2003; Hughes, Jewson, & Unwin, 2007). I also acknowledge that a design for learning needs to consider both acquisition and participation approaches. In my research study, I do not suggest that learning, meaning and identity are solely attributed to the

tenets of CoP. In this research, CoP provides only one analytical standpoint from which to explore and address the research questions that guided this study.

A related criticism of CoP focussed on the relationship between the individual, the community and learning. Whilst acknowledging legitimate peripheral participation as providing insight into learning in practice, Elkjaer (2003) argued the lack of clarity when describing how learning results from participation. This criticism remains unaddressed and as such requires further inquiry. Further, Gobbi (2010) argued that legitimate peripheral participation does not adequately explain the ways others influence learning in the workplace, or the role of decision-making, judgement and actions. Whilst acknowledging Gobbi's (2010) contention, Wenger (1998a) does explore the influence of others and the role of decision-making, judgement and actions albeit in passing.

Other researchers are concerned by the neglect of personal attributes in relation to the learner; Billett (2007) terms these as "the missing subject" (p. 55) within CoP. Eraut (2010a) represented such attributes in terms of personal agency; one's responsibility and capability to negotiate learning in the workplace. Wenger (1998a) alluded to issues of agency in terms of ability; the *capability* an individual requires and the *legitimacy* an individual is afforded by a CoP for negotiation of the repertoire. Yet such references are scant and as such, require further exploration to clearly understand the ways in which newcomers initiate access to participation in practice. Clearly, such a line of inquiry relate to concerns of power and control.

A common critique of CoP focuses on the apparent neglect by Lave and Wenger (1991) and Wenger (1998a) to account for issues relating to power and control within a CoP (Fuller, 2007; Roberts, 2006). However, Wenger (1998a) did not ignore such issues, rather it was the "early interpretations of situated learning [that] have tended to neglect the effects of broader social and power relations" (Handley et al., 2006, p. 644). As explained in this chapter, power relations are represented within Wenger's (1998a) framework as processes of

negotiation of the joint enterprise, the mutuality of relationships, and the sharing of the repertoire. Thus, as argued by Henderson (2007a), social and power relations are at the very core of negotiating membership, legitimacy and identity. Consequently, Roberts' (2006) claim that CoP does not adequately address the impact of an organisation's power structure appears to relate to the simplification of social agency in Wenger, McDermott & Snyder's (2002) framework than a weakness with earlier conceptualisations of CoP.

Further critical perspectives of CoP focus on learning that involves different constellations of practice. Engeström (2001) argued that whilst CoP may describe the processes of newcomers entering a local CoP, it does not translate well to large, complex multi-site organisations. Further, research conducted by Boud and Middleton (2003) found that in large organisations comprising different workplace configurations, such differences were characterised by different approaches to workplace learning. For example, whilst some "learning networks" (p. 202) manifested features of CoP such as identity and meaning, others did not. Such concerns were of particular interest to this research study in terms of exploring the ways in which ICALD nursing students negotiated learning, meaning and identity based upon an understanding of a global CoNP represented by university curriculum, and experiences of participation with members of a local CoNP through immersive simulation, and the subsequent clinical placement.

By exploring critical perspectives of CoP, this section has highlighted the need for clarity and consistency when positioning research according to this theoretical perspective. This section has also highlighted the need for a holistic approach to CoP in order for meaningful contributions to be made into the scholarship in this area. As has been shown, many criticisms of CoP stem from applications in contexts far from the origins of this conceptual framework. However, it can be argued that the common historical foundation of apprenticeship for both CoP and pre-registration nursing education negate such criticisms in

relation to this research study. This section has focussed on applications of CoP in contexts other than nursing education. The following section explores the use of CoP in the context of pre-registration nursing education.

3.6 Communities of Practice and Nursing Education: A Fragmented Theoretical Landscape

The ways in which CoP has been represented and employed within the nursing education literature are multifarious. Here too, the fragmented theoretical landscape that Henderson (2015) referred to is clearly evident, providing a confusing, even incoherent representation of this theoretical framework and what it can contribute to understanding student nurses' learning. Consistent with the contention of the previous section, of significant issue is an imprecise use of this terminology and an unquestioned blending of interpretations of CoP (Amin & Roberts, 2008). The following provides a brief critique of the nursing education literature from which to base this claim.

An early study by Cope, Cuthbertson, and Stoddart (2000) set out to explore how nursing students learnt during the clinical placement. The researchers conducted semi-structured interviews of 30 nurses who had recently completed their studies in Scotland. This study focused on students' strategies for learning during the clinical placement and the perceived challenges of negotiating the difference between theory and practice. The researchers stated their theoretical lens for data analysis was informed by Lave and Wenger's (1991) perspective of CoP, and cognitive apprenticeship (Brown et al., 1989). Whilst Cope et al. (2000) provided valuable insight into the processes and strategies nursing students employ when accessing a CoNP during the clinical placement, the blending of theoretical concepts are confusing. Whilst the researchers cited Lave and Wenger's (1991) conceptualisation of CoP as framing the context, the analysis and discussion relate largely to situated cognition. The findings of this paper illustrated a clear representation of legitimate peripheral participation.

However the researcher's explained this process in relation to Vygotsky's (1978) concept of *scaffolding* despite legitimate peripheral participation being cited as a key theoretical lens. Whilst Cope et al. (2000) identified and discussed issues of power, competence, identity and belonging, these relate more to Wenger's (1998a) interpretation of CoP rather than that of Lave and Wenger (1991). In relation to this current research study, Cope et al. (2000) recommended nursing students be better prepared for the clinical placement, however, no clear recommendations are provided as to what such preparation informed by CoP might look like.

Grealish and Trevitt (2005) employed Wenger's (1998a) perspective of CoP to examine the formation of professional identity of nursing students as one part of a larger study. Whilst Grealish and Trevitt (2005) contextualised their study as an exploration of student identity formation within a CoP of university student and that of the workplace, little more than a "notion of communities of practice" is provided (p.140) with the relationship between data analysis and CoP unclear. The researchers employed Wenger's (1998a) construct of imagination as one mode of belonging to frame a reflective exercise for student nurses. However, whilst a brief description of imagination is provided, the relationships between imagination, engagement and alignment and how these were represented in students' sense of belonging are not explored. Of relevance to this current research study were the recommendations to better align pre-registration nursing curriculum to support students learning in practice, and engage clinical facilitators in on-campus learning experiences.

In a later study, Grealish and Ranse (2009) explored first-year nursing students' experiences of learning during the clinical placement. These researchers drew on Wenger’s (1998a) three modes of belonging; engagement, imagination and alignment both to situate their research, but more significantly to frame their analysis of findings. Grealish and Ranse (2009) provided a sufficiently detailed exploration of 49 student nurses narrative accounts of learning during the clinical placement using Wenger’s (1998a) three modes of belonging.

This research provides a valuable contrast to the earlier work of Levett-Jones, Lathlean, McMillan, et al. (2007) and Levett-Jones, Lathlean, Maguire, et al. (2007) who perceived belonging through a psychological lens as opposed to a sociocultural lens. However, whilst Grealish and Ranse (2009) emphasised participation, they did not consider the concerns of non-participation or marginality; significant concerns for ICALD nursing students and are of particular relevance to this current research study. Whilst Grealish and Ranse (2009) theorised about the ways learning during the clinical placement may be understood through the lens of CoP, this study did not explore concerns of: how nursing students can access practice; social relations defined by power; or recommendations for developing ICALD nursing students' capability to participate in an Australian CoNP.

A study conducted by Smedley and Morey (2010) aimed to explore factors that contribute to student nurses' learning in the clinical environment. Through the evaluation of final-year nursing student's perceptions of the clinical placement obtained via the Clinical Learning Environment (CLEI) questionnaire (see: Chan, 2002). Whilst the researchers positioned this study in the context of Lave and Wenger's (1991) perspective of CoP, described the process of learning as one of legitimate peripheral participation, and highlighted the importance of learning within authentic contexts, these fundamental concepts of situated learning are not explored in any detail. Rather, the focus of this paper is on the statistical significance of the qualitative data. Further, the absence of these fundamental concepts in the methodology, analysis and discussion of this work results in a paper that contributes very little to an understanding of student learning according to CoP.

Melincavage (2011) explored student nurses' experiences of anxiety in the clinical setting. Through a series of unstructured interviews involving seven nursing students, a thematic analysis of the data revealed the following as sources of anxiety: experiencing the inexperience of self, peers and nurses; being demeaned by people in positions of authority; having failures exposed to peers; being abandoned by nurses and clinical facilitators; and

sensing difference in knowledge, skills and abilities. Whilst Melincavage (2011) referred to both Lave and Wenger's (1991) and Wenger's (1998a) perspectives of CoP when providing context in the introduction and literature review of their paper, no reference was made in the methodology or data analysis sections. However, by interpreting student's feedback through a lens of CoP, the discussion provided a fascinating insight into students' awareness and experiences of power relations between students, members of a CoNP, and clinical facilitators. Although Melincavage (2011) largely focused on issues of legitimacy, peripherality and marginality, her work supported this current research study by demonstrating the value CoP can provide in understanding issues that impact on student learning, and the need for strategies that better prepare students for responding to challenging interpersonal interactions during the clinical placement.

Whilst there are an increasing number of publications demonstrating the relevance of CoP to nursing practice, such as Andrew et al. (2008) and Andrew and Ferguson's (2008) exploration into establishing connections between academics in higher education and clinical practice, and White's (2010) realignment of undergraduate nursing curricula through the perspective of legitimate peripheral participation, these papers are propositional in nature. What was not found in the literature reviewed as a part of this research study was any substantive literature relating to CoP and simulation-based learning. The use of CoP in relation to simulation-based learning is explored in Chapter Four.

This brief critique has shown the multifarious, incomplete and at times inaccurate ways in which CoP has been represented in the nursing education literature. However, it has also highlighted the following salient points. Firstly, CoP is perceived within the contemporary literature as a relevant framework to explore issues pertaining to nursing education. Secondly, there is a need for research that employs CoP coherently and consistently as a framework for research design. Thirdly, there is a bourgeoning interest in

the nursing simulation community in exploring potential connections between CoP, immersive simulation and pre-registration nursing students' participation in practice. This third point highlights the significance and timeliness of this current research study. Chapter Four explores simulation-based learning as a learning and teaching method as it relates to this study.

3.7 Summary

In this chapter I have documented the evolution of CoP, and the emergence of contemporary perspectives of workplace learning. I have provided a contrast between the acquisition approaches to learning that characterise university education as described in Chapter Two, and the participatory approaches of workplace learning. Importantly, in this chapter I have highlighted calls for alignment of acquisition and participatory approaches in order for more meaningful and relevant learning to occur. From a situated learning perspective, the design of such learning experiences do not determine what the learner needs to know, but rather makes relevant aspects of practice available to learners so that they can draw on these as needed (Brown & Duguid, 1996).

The fundamental analytical constructs of Wenger's (1998a) conceptualisation of CoP have been described in detail as the theoretical framework for this research study. By exploring the contemporary nursing education literature, I have concluded that CoP is a pertinent theoretical lens through which to explore pre-registration students' learning during the clinical placement. At the same time, I have highlighted the complexity and ambiguities surrounding the concept of CoP and the need for clarity and a holistic approach to CoP in order for meaningful contributions to be made to the scholarship in this area.

The inherent epistemological foundations of this sociocultural framework have been made explicit, with connections made between learning according to the theoretical

perspective of CoP, nursing practice and the clinical placement. In essence, these connections reflect the aims of the research questions which underpin this study.

Of particular interest has been the potential for Wenger's (1998a) learning architecture to contribute to a design framework for immersive simulation. More specifically, the learning architecture provides a design framework that explores processes for newcomers to negotiate access to the practice of a CoNP; processes not fully explained by other perspectives of workplace learning. Hence, Wenger's (1998a) learning architecture suggested a way to operationalise CoP and as such, informed the design framework for the immersive simulations that represented a fundamental characteristic of this research study.

In the chapter that follows, the trends, assumptions and contentions that characterise contemporary healthcare simulation will be explored.

Chapter Four: Healthcare Simulation

In this chapter, the conceptualisations, guidelines, practices and assumptions that underpin contemporary healthcare simulation will be explored. Initially a definition of *immersive simulation* as the mode of simulation employed in this research study is provided. This is followed by an historical account of healthcare simulation. A fundamental concern, which is, that the correlation between the evolution of technology and healthcare simulation has resulted in a lack of theoretical rigour in healthcare simulation design and research is explored. Attention will then turn to the conceptual representations of healthcare simulation and the fundamental elements of simulation that are perceived as contributing to learning. Assumptions relating to simulation *fidelity* are explored and challenged. Lenses of *authenticity* and *authentic learning* drawn from the instructional design literature are proposed as fundamental factors to be considered in the design of simulation for nursing education. The focus in this chapter then moves towards the emergent importance of the relationship between simulation design and learning theory. Significant gaps are identified in the literature concerning the relationship between healthcare simulation, learning, and simulation activities where the aim of designed simulation is to facilitate the construction of identities in ICALD nursing students as learners interacting within an Australian CoNP. An analysis of the use of CoP within the nursing education literature forms the conclusion to this chapter.

The overall purpose in this chapter is to present the principles and characteristics of immersive simulation which resulted from an analysis of contemporary healthcare simulation literature, and to explore how this analysis informed the design of the simulation program for this research study.

4.1 Preface

Before commencing this chapter, I wish to provide two clarifications in relation to healthcare simulation in the context of this research study.

Firstly, simulation-based learning as an accepted learning and teaching method in healthcare education is acknowledged.

Secondly, *immersive simulation* as implemented in this study is only one of several possible modes of simulation used in healthcare education. The term *simulation* represents a range of techniques and technologies including part-task trainers, human simulators, role-play, actors, computer-based games, and augmented and virtual reality. Immersive simulation, also referred to as full-scale (Seropian, Brown, Gavilanes, & Driggers, 2004), full-mission (Beaubien & Baker, 2004) or high-fidelity simulation (Lapkin, Levett-Jones, Bellchambers, & Fernandez, 2010) attempts to recreate all of the elements of an actual situation. Immersive simulation integrates multiple simulation modes including real people, real physiology, real interactions, and reveal real actions, responses and reactions (Seropian et al., 2004).

The intent of immersive simulation is to recreate an actual or realistic situation, thus, the design of this mode of simulation requires careful consideration of the interaction between the environment, participants, and possible emergent responses to these interactions in order to facilitate an immersive experience. An *immersive experience* in this context relates to a high-level of participant involvement and commitment in terms of active and interactive participation in learning. This involves increased interaction subject to participants' acceptance of affordances (Nadolski, Hummel, Slootmaker, & van der Vegt, 2012).

The designed environmental factors such as equipment, people, sounds and smells need to be considered with the aim to balance the replication of an actual situation with an environment that facilitates learning. However, immersive simulation *should* be inherently unpredictable (Beaubien & Baker, 2004; Seropian et al., 2004). Therefore, the need to

anticipate and accommodate possible actions and reactions in students, when designing immersive simulation experiences is imperative.

It is important to note that during the period of late 2010 to early 2011 when the immersive simulation program was designed for this research study, the focus of immersive simulation as described in the healthcare simulation literature was on *high risk – low frequency* situations (Chiniara et al., 2013) such as cardiac arrest scenarios. The approach to immersive simulation adopted in this research was one of *low risk – high frequency* events; events that represent everyday ordinary practices (Brown et al., 1989) of an Australian CoNP. These were events that ICALD nursing students would encounter during their clinical placement. The literature reviewed for this research study found that comparatively little attention has been paid to immersive simulations designed for pre-registration nursing especially those which focus on low risk – high frequency situations.

A description of the evolution of healthcare simulation is presented in the paragraphs which follow. In these paragraphs, insights into the reasons for a relative absence of examples where learning theory has been used as a framework for a coherent and cohesive approach to the design, evaluation and research of healthcare simulation are provided.

4.2 The Evolution of Healthcare Simulation

The utilisation of simulation is not a new phenomenon within healthcare education. Indeed, it has been used in its various forms as a learning and teaching method for many years in nursing, medicine, midwifery, and paramedicine education to name a few examples. Indeed, simulation as a strategy within healthcare education has been traced back for centuries (Bradley, 2006). However, the focus of interest reflected in this research is the in the establishment of simulation in healthcare education over the past 50 years. The fundamental driver for the proliferation in the use of simulation in healthcare education during this period has been attributed to advancements in technology. This has inadvertently and significantly

influenced the way in which simulation in healthcare education is perceived, but more importantly, the way in which healthcare simulation is designed. According to Bradley (2006) and Harder (2009), the evolution of contemporary healthcare simulation can be recorded as distinct movements during the second half of the 20th century.

4.2.1 The first evolutionary movement.

This first movement began in the 1950s, and involved a collaboration between the Norwegian toy manufacturer Äsmund Laerdal, and an anaesthetist Bjørn Lind (Tjomsland, 2015). This 12-month partnership was driven by a determination to devise a life-sized, anatomically correct human simulator (colloquially termed a *manikin*). This manikin was used for the purposes of cardiopulmonary resuscitation training. The development of this simulation model was then followed by the production of the Resusci Anne® resuscitation manikin which was released in 1958. This revolutionised cardiopulmonary resuscitation training by providing an affordable and effective training model (Bradley, 2006). The development of these models were a precursor to the evolution of contemporary healthcare simulation since this significant technological change signalled a change in thinking about what could be simulated.

4.2.2 The second evolutionary movement.

The second movement of healthcare simulation according to Bradley (2006), spanned from the 1960s through to the 1980s. Advances in technology continued and manikins that accurately simulated human physiology, for example, pulse, respirations and blood pressure, were designed. Further advances included the ability to set parameters on the manikins that reflected physiological responses to intravenously administered medications and oxygen (Harder, 2009). Widespread acceptance of this form of simulation in the healthcare education community was impeded by the high cost of these simulators, limitations of the technology,

and the non-essential nature for such approaches given that, at that time, the majority of teaching clinical skills involved practicing on actual patients (Harder, 2009). However, in the late 1970s and early 1980s increased affordability and improved realism in high-technology manikins began to occur. At the same time, educators in the field of anaesthetics looked to aviation and military training with the purpose of understanding their use of simulation as form of preparation of individuals and teams during critical events and missions (Hovancsek, 2007; Issenberg, McGaghie, Petrusa, Gordon, & Scalese, 2005). It was also during this time that exploration of the value of the use of high-technology manikins in teaching clinical nursing skills in nursing education, began to be explored (Rystedt & Lindström, 2001).

4.2.3 The third evolutionary movement.

The third movement began in the 1980s and continues to the present day. During this period, advances in technology resulted in the development of highly realistic simulators that were affordable to healthcare and health education organisations. This period was also characterised by significant nursing and medical education reform.

In the early 1980s nursing education in Australia moved from hospital-based training to university education, with a perceived need for simulated healthcare environments to be built on university campuses (Berragan, 2011). Ethical and legal imperatives prompted the use of alternatives, such as the use of manikins for learning procedural skills, rather than practicing on actual patients in both nursing and medical education (Bradley, 2006; Kneebone, Scott, & Horrocks, 2004). In addition, increasing patient acuity and complexity, along with shorter durations of hospital admissions provided a catalyst for exploring alternatives to healthcare education (Conrad, Guhde, Brown, Chronister, & Ross-Alaolmolki, 2011; Issenberg et al., 2005). Furthermore, an emphasis on the advancement of nursing practice translated into a requirement for nurses to learn more advanced skills, at both pre- and post-registration levels (Harder, 2009). Accordingly, educators were seeing ways in

which high-technology simulators could be used within health education. Importantly, the experiences of health educators with manikin-based simulation, the "nuts and bolts" of using high-technology simulators, were beginning to be published (Harder, 2009, p. e171). However, exploring any relationship between simulation and learning was not, at this time, a focus of inquiry.

4.2.4 The fourth evolutionary movement.

In her historical account of the evolution of simulation use in healthcare education, Harder (2009) posited that healthcare simulation is now entering a fourth movement. Within this fourth movement, simulation as a learning and teaching method has been rapidly and widely adopted by nursing education internationally. In this movement, a significant driver for simulation in healthcare education includes the reduction of clinical placement hours in pre-registration health programs combined with significant increases in enrolments into these programs, as is the case in Australia. Thus, these issue have provided a catalyst to explore alternative ways to prepare pre-registration students for practice (Brown et al., 2012; Conrad et al., 2011; Department of Human Services, 2007; McKenna et al., 2007). This current period of healthcare education has witnessed a proliferation of simulation learning environments, purpose-built facilities for simulation activities, to provide students enrolled in healthcare programs with accurate facsimiles of healthcare practice environments. Examples include hospital wards (Wellard & Heggen, 2010), nursing homes (Green & Bull, 2014), and community settings (Boyle, Williams, & Burgess, 2007; Green & Bull, 2014; Husson, Zulkosky, Fetter, & Kamerer, 2014). Continued advances in and affordability of technology have meant that high-technology manikins are a key feature of many simulation learning environments (Berragan, 2011; Bland, Topping, & Wood, 2011; Ker & Bradley, 2010; Parker & Myrick, 2009; Schiavenato, 2009). As the use of simulation has increased, so too has the diversity of applications and significantly, the depth, breadth and quality of research and

scholarship into simulation as a learning and teaching method. It is the evolution of quality scholarship of learning and teaching in the area of simulation practice that Harder (2009) characterised as this fourth movement of simulation in healthcare education.

It is important at this point to acknowledge the relationship between two important elements which have been highlighted thus far; chronological order, and the evolution of high-technology human simulators (manikins). The correlation between advancements in simulator technology and the wide-spread almost unquestioned adoption of *simulator*-based simulation in healthcare education over recent years has contributed to a perception, particularly in nursing and medical education, that simulation equates to technology.

This perception is evidenced by the prevalence in the healthcare education literature of human-patient simulation, and a subsequent lack of clarity found in the literature between the use of the simulator and use of simulation. The implications here are two-fold. Firstly, whilst there is, at the time of this research, a significant and increasing body of literature exploring simulation as an education method, the value of this literature in contributing to understanding how simulation contributes to learning is questionable (Cant & Cooper, 2010; Dieckmann, Gaba, & Rall, 2007; Kaakinen & Arwood, 2009). Secondly, the ambiguous yet widely adopted use of the term *high-fidelity simulation* to represent the realism in both a high-technology manikin and the designed elements of a simulation, make it impossible to determine which of these designed elements of healthcare simulation, or indeed simulation design, contribute to or conversely impede learning. This should not be seen as a criticism of the simulation community. Rather it represents the maturity of scholarship in healthcare simulation as we progress into the fourth movement of healthcare simulation. These contentions represent fundamental concerns and are explored throughout this chapter.

4.3 Healthcare Simulation: Theoretical Assumptions, Conceptual Frameworks, and Guidelines

Definitions of simulation within the healthcare simulation literature tend to vary slightly reflecting the discipline from which these definitions have emerged. Whilst many definitions of simulation exist within the healthcare literature, two oft cited definitions are those of Morton (1996) and Gaba (2004).

Morton (1996) defined healthcare simulation, from a nursing perspective, as an attempt "to replicate some or nearly all of the essential aspects of a clinical situation so that the situation may be more readily *understood* and managed when it occurs for real in clinical practice" (p. 3) (emphasis added). A second and more frequently cited perspective is from a medical stance provided by Gaba (2004), who defined simulation as "a technique – not a technology – to replace or amplify real experiences with guided experiences that evoke or replicate substantial aspects of the real world in a fully interactive manner" (p. i2). Central to both definitions is a need to replicate, replace or amplify aspects of the *real world*. Whilst the two definitions appear similar, there exists a subtle yet significant difference in terms of emphasis. Morton's (1996) definition represents simulation as a vehicle to *explore* and *understand* as preparation for practice. Implicit within this perspective is *learning*. In contrast, whilst Gaba (2004) highlighted the qualities of simulation as experiential, interactive and realistic, his emphasis appears to be on the replication of a real situation without a connection between replicating *reality* and learning. Indeed within Gaba's (2004) work from which this quote emanates, there is a clear emphasis on technology-based simulation.

Bland et al. (2011) in their concept analysis of simulation sought to understand the relationship between simulation and learning by investigating the concept of simulation as a learning strategy in pre-registration nursing education literature. Five "critical attributes" (Bland et al., 2011, p. 667) were identified: creating a hypothetical opportunity; authentic

representation; active participation; integration with curriculum; and repetition, evaluation and reflection. From these attributes, simulation was defined as:

> A dynamic process involving the creation of a hypothetical opportunity that incorporates an authentic representation of reality, facilitates active student engagement and integrates the complexities of practical and theoretical learning with opportunity for repetition, feedback, evaluation and reflection. (Bland et al., 2011, p. 668)

In some ways, this concept analysis marked a turning point in healthcare simulation by critically questioning what have been fundamental assumptions of simulation; a turning point that reflects the fourth movement of healthcare simulation. The way in which literature pertaining to healthcare simulation appears to imply that the replication of reality in simulation design correlates to learning is of central concern to Bland et al. (2011) Pivotal to this concern is the prominence and emphasis of fidelity as a central construct of simulation design, and it's synonymous use with the terms *realism* and *authenticity* within the healthcare simulation literature (for example, see:Arthur, Levett-Jones, & Kable, 2010; Issenberg et al., 2005; Jeffries, 2005). In the section below the concept of fidelity, as it pertains to healthcare simulation, is defined. A critical review of conceptual frameworks and design principles for healthcare simulation will follow, highlighting the problematic nature of an uncritical adoption of *fidelity* in relation to simulation design, participant learning, and research.

4.3.1 Fidelity.

The term most commonly associated with the realism of simulation is fidelity. Groom, Henderson, and Sittner (2014) in their comprehensive literature review, found the term *fidelity* appeared with the term *simulation* in more than 1,000 citations. However, these authors also found inconsistent use of the term fidelity when providing a generic description for an immersive simulation experience, describing the level of realism replicated in a

simulation environment, or to indicate the level of realism of a simulator. Ker and Bradley (2010) traced the origins of the term fidelity as it pertains to simulation, to aviation training (Miller, 1953; Rehmann, Mitman, & Reynolds, 1995). This term has since been adopted almost unquestioningly and certainly uncritically, firstly by the medical, then the nursing simulation community.

In the healthcare simulation literature, fidelity is represented as fundamental to the contribution towards the ultimate objective, which is achieving sufficient realism with the intention of enabling participants to suspend disbelief (Dieckmann et al., 2007); a state where participants believe they are engaged in an experience that closely resembles real life (Seropian et al., 2004). Simulation fidelity has been defined as "The degree to which a model of simulation reproduces the state and behaviour of a real world object or the perception of a real world object, feature, condition, or chosen standard in a measurable or perceived manner" (Gross, 1999, p. 55). In simpler terms, the degree to which a simulation reflects reality. However, it is important to point out that fidelity is a perception; what may be perceived as a close representation of a real situation for an experienced healthcare professional designing simulation experiences, may be perceived by a novice participant as an over-the-top amplification of reality (Tun, Alinier, Tang, & Kneebone, 2015). Fidelity is a complex multi-faceted concept, defined in terms of physical, environmental, psychological and temporal characteristics. In Table 2, a summary of the different characteristics of fidelity as represented by influential works in the field of healthcare simulation is provided.

Table 2

Characteristics of Simulation Fidelity

Characteristic of simulation fidelity	Definition
Environmental fidelity (Beaubien & Baker, 2004; Chiniara et al., 2013; Ker & Bradley, 2010)	The realism of the context and environment within which the simulation is situated.
Engineering fidelity (Ker & Bradley, 2010; Maran & Glavin, 2003) Equipment fidelity (Beaubien & Baker, 2004; Ker & Bradley, 2010) Patient fidelity (Maran & Glavin, 2003) Physical fidelity (Ker & Bradley, 2010; Maran & Glavin, 2003)	The degree to which the patient or element being simulated replicates the appearance and feel of the real thing.
Psychological fidelity (Beaubien & Baker, 2004; Ker & Bradley, 2010; Maran & Glavin, 2003) Functional fidelity (Maran & Glavin, 2003)	The degree of realism captured in the simulation. The degree to which the simulation is perceived as real by participants.
Response fidelity (Seropian et al., 2004)	The degree to which a simulator responds to interventions.
Temporal fidelity (Gross, 1999)	The proximity between the duration of the simulated situation, and the real-world situation.

Fidelity is commonly expressed as a continuum of low, medium or high-fidelity (Hovancsek, 2007; Jeffries & Rogers, 2007; Lapkin et al., 2010; Seropian et al., 2004). Low fidelity equates to a poor representation of realism, with whilst high fidelity refers to a close approximation of the object or situation being simulated. Recognising the complex nature of the term fidelity as well as the perceived importance of this concept in contributing to learning in healthcare simulation is noteworthy and is revisited throughout this chapter.

The problematic nature of inconsistent use of the term fidelity begins to become evident when critically analysing conceptual frameworks, simulation programs, and inquiry intended to illuminate the relationship between immersive simulation and learning. Central to this problem is that whilst the term fidelity is often used to define the characteristics of a simulation experience, it is just as often used to represent simulator technology.

Human-patient simulators, or manikins are simulators designed to replicate human form and function. Manikins are commonly categorised within the literature according to the level of embedded technology. These manikins are frequently classified as low, medium or moderate, and high-*fidelity*. Whilst these categories are useful in describing the level of interactivity and potential function of a manikin, the definition of fidelity of a simulation, is

not limited to the use of these manikins. This concept will be discussed, since it presents significant challenges to scholarship in this area. For example, the fidelity of a simulation may be enhanced depending on how the *simulation* as a holistic learning experience is designed with the manikin but one component.

4.3.2 Theoretical assumptions.

The theoretical underpinnings of contemporary healthcare simulation as represented in the literature include behaviourism (Bradley & Postlethwaite, 2003; Ker & Bradley, 2010; Parker & Myrick, 2009), cognitivism (Ker & Bradley, 2010; Parker & Myrick, 2009), experiential learning (Doerr & Bosseau Murray, 2008; Hope, Garside, & Prescott, 2011; Jeffries & Rogers, 2007; Kaakinen & Arwood, 2009; Ker & Bradley, 2010), reflective and transformative learning (Bradley & Postlethwaite, 2003; Dreifuerst, 2009; Jeffries & Rogers, 2007; Kaakinen & Arwood, 2009; Ker & Bradley, 2010; Nehring & Lashley, 2009), adult learning theory (Doerr & Bosseau Murray, 2008; Kaakinen & Arwood, 2009), and social constructivism (Bradley & Postlethwaite, 2003; Kaakinen & Arwood, 2009; Ker & Bradley, 2010; Reilly & Spratt, 2007).

Whilst this list appears extensive, it is important to highlight two important clarifications. At the outset, whilst there appear to be many ways to perceive simulation as a learning and teaching method, the engagement with learning theory is represented in literature by relatively few researchers within the healthcare simulation community. Furthermore, the works cited constitute authors theorising about the ways in which healthcare simulation can be understood in terms of learning theory. Whilst such theorisation is essential in order to advance inquiry into the relationship between simulation and learning, there is a paucity of literature or research, in which this theory is operationalised, with the purpose of *informing* simulation design. Indeed, there is concern that the rapid and widespread adoption of medium- and high-technology manikin-based simulation into nursing and medical curricula is

being driven by a focus on the technological aspects of simulation rather than sound theory-based pedagogy (Ker & Bradley, 2010; Parker & Myrick, 2009; Wellard & Heggen, 2010). This concern is evident in what is considered a seminal work in nursing simulation; The Nursing Education Simulation Framework (Jeffries & Rogers, 2007).

4.3.3 Conceptual frameworks.

As the evolution of scholarship in healthcare simulation has occurred, the need for the development of conceptual frameworks and guidelines to represent and inform quality simulation has become apparent. However, these frameworks and guidelines do not necessarily reflect or clearly communicate a relationship between simulation, learning theory, educational design and learning.

4.3.3.1 The Nursing Education Simulation Framework.

The Nursing Education Simulation Framework (Jeffries & Rogers, 2007) was one of the first frameworks developed with the aim of conceptualising nursing simulation. This framework, was developed in 2003 and revised in 2005, 2007 and in 2012. The aim was to describe the major constructs of nursing simulation design, implementation and evaluation. The five conceptual components that form the core of this model are: teacher factors; student factors; educational practices; simulation design characteristics; and outcomes. These are represented in Figure 3 and serve to highlight the relationship between teacher (facilitator), student (participant), and educational practices, which in-turn informs the design characteristics and outcomes of this learning and teaching method.

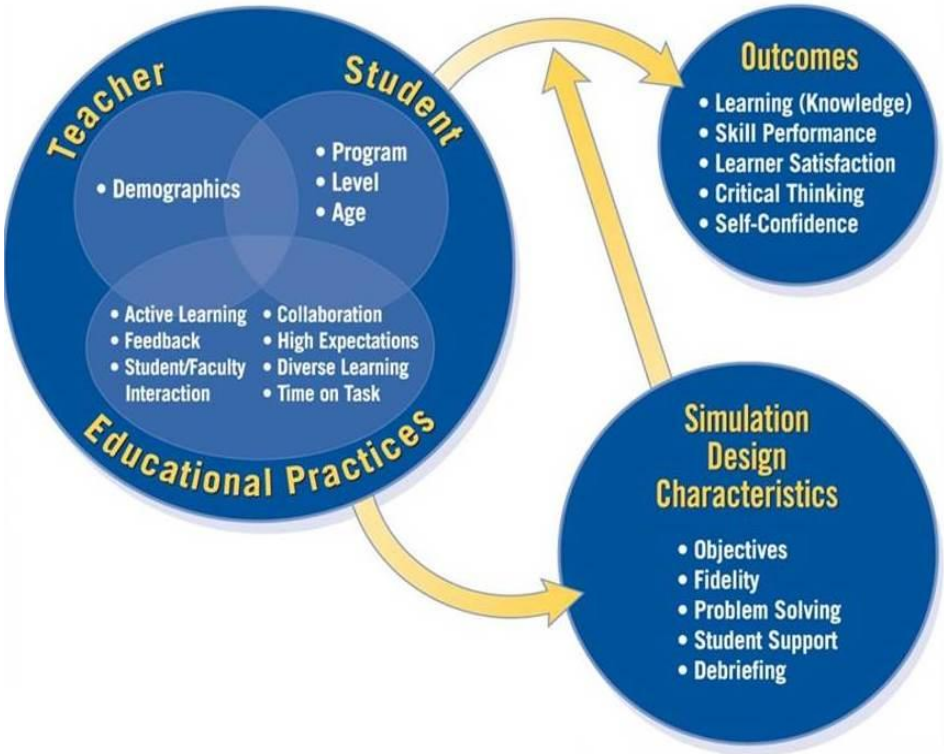

Figure 3. The Nursing Education Simulation Framework (Jeffries & Rogers, 2007).

The *teacher* and *student* components of this framework comprise of the need to consider the characteristics of the facilitator and learner experience in terms of nursing practice and simulation experience when designing simulations. The *educational practices* component upon which The Nursing Education Simulation Framework is based, are those of Chickering and Gamson (1987) whose seven principles for good practice in undergraduate education include: active learning; student-faculty contact; cooperation among students; prompt feedback; time on task; high expectations; and the understanding of diverse learning styles.

According to The Nursing Education Simulation Framework, *simulation design* component calls for:

- the alignment between objectives that underpin the goal of the simulation and the focus of reflective learning during the debrief;
- establishing fidelity;
- providing sufficient challenges that require students to problem solve according to their abilities;
- determining how, when and where student support is to be provided in a way that facilitates rather than hinders problem solving; and
- providing an opportunity for reflective learning through debriefing immediately after the scenario (Jeffries & Rogers, 2007).

The final component of The Nursing Education Simulation Framework is *outcomes*, focusing on: learning; skill performance; learner satisfaction; critical thinking; and self-confidence (Jeffries & Rogers, 2007).

The Nursing Education Simulation Framework has been identified as a seminal, highly influential work, being widely employed within the nursing simulation community (for example, see: Kelly, 2014; Swenty & Eggleston, 2011; Waxman, 2010; Wilson & Klein, 2012). In this framework, considerations such as teacher preparation, student preparation, and simulation design that aligns objectives (learning outcomes), with learner abilities are clearly articulated. Importantly, in this framework three phases of simulation, brief, scenario and debrief, are highlighted. However, in relation to nursing education and broader simulation practice, the following concerns exist.

Firstly is the absence any information about the relationship to or alignment with curriculum or practice; fundamental considerations of pre-registration nursing education. This leads to a second concern, relating to considerations about simulation design characteristics.

According to The Nursing Education Simulation Framework (Jeffries & Rogers, 2007), simulation design requires an alignment between objectives, fidelity, and debriefing. Objectives, according to this framework, relate to objectives for the simulation rather than the need for alignment with a broader curriculum. Additionally, the emphasis on fidelity rather than the design of simulation activities that are informed by learning theory, are of concern. The Nursing Education Simulation Framework draws on the definition of fidelity provided by Issenberg et al. (2005) which has a focus on manikin technology. There is no reference to other forms of fidelity as described earlier in this chapter, authenticity or indeed learning theory to inform simulation activity design. Furthermore, as is the case found in the majority of simulation literature reviewed for this research, the need for alignment between objectives, *scenario design* and the debrief is overlooked. This essential component of immersive simulation represents the forgotten element of simulation design; a concern recently alluded to by Wilson and Klein (2012). Finally, whilst the post-simulation debrief is perceived as the space and time where meaningful learning occurs in simulation (Arthur, Levett-Jones, & Kable, 2013; Cant & Cooper, 2010; Dreifuerst, 2009), there is an absence of guidance for aligning the process of debriefing according to participant experience, or the overarching philosophy or pedagogy of curriculum; for example, didactic instruction, inquiry-based learning or problem-based learning.

The Nursing Education Simulation Framework has been purported as a mechanism for supporting simulation design based upon what is known about learning and cognition (Jeffries & Rogers, 2007). However, there is an absence of reference to or guidance in an approach to educational design which deliberately aligns the simulation scenario, post-simulation debrief and participant characteristics with learning theory (Groom et al., 2014; Waxman, 2010; Wilson & Klein, 2012). Whilst extensive work is being undertaken to evaluate the validity of The Nursing Education Simulation Framework (for example, see: Groom et al., 2014;

Hallmark, Thomas, & Gantt, 2014), the evaluation process to date does not appear to be addressing the concerns raised within this section.

4.3.3.2 The Simulation Learning Pyramid.

Doerr and Bosseau Murray (2008) introduced a framework for the design of simulation, the Simulation Learning Pyramid, in response to the fundamental question "how do you create those key components necessary for learning via simulation?" (p.771). The Simulation Learning Pyramid comprises of four components: the simulation plan; the simulation; the debrief; and transference as a sequential process for simulation design.

Consistent with The Nursing Education Simulation Framework, the Simulation Learning Pyramid advocates a process of: establishing desired goals and objectives; a pre-simulation briefing orienting learners to the objectives of the simulation and to the simulation environment; the scenario; and a facilitated debrief immediately following the scenario. A significant distinction between The Nursing Education Simulation Framework and The Simulation Learning Pyramid is the final design consideration; which is, transference from simulation to practice. The authors discuss how simulation design and transference may be achieved, by employing Knowles' (1984) adult learning principles to inform planning, implementation, debriefing and transference components, as well as Kolb's (1995) theory of experiential learning to guide the purpose and structure of the simulation debrief.

In contrast to The Nursing Education Simulation Framework, Doerr and Bosseau Murray's (2008) relatively simple design framework does not relate solely to one discipline or vocation, rather it draws on the principles of simulation practice from nursing, medicine, aviation and the military. This model stems from workplace simulation as opposed to the context of the academy yet it makes connections between simulation design and learning theory, by embedding the process of learning into the briefing, the scenario and the debriefing. Doerr and Bosseau Murray (2008) do not refer to fidelity, but rather, the realism of the environment and the context which the simulation replicates. It is important to note

that no literature evaluating this framework was able to be identified as a part of this literature review.

4.3.3.3 Instruction design for educational experience using healthcare simulation.

In response to a relative absence of design frameworks for healthcare simulation, Chiniara et al. (2013) adapted an instructional design model from e-learning. The resultant design framework is represented by four progressive levels: the medium; the simulation modality; the instructional method; and the presentation. These levels are intended to represent a holistic simulation education experience. This framework stemmed from in-hospital medical simulation.

The scaffolded approach to this design framework represents an interesting approach to design as a series of interrelated choices. The principle mode of delivery of instruction (Chiniara et al., 2013) provides the foundation for design, with a focus on skills-training, technology-based simulation, and fidelity. However, a significant deficit found in this framework is the absence of the fundamental educational principles of basing design for learning on aims, objectives, or outcomes.

Whilst this framework did not inform this current research study, it does illustrate one of very few examples where healthcare simulation has drawn from principles of instructional design. Such an approach was taken for the design of the immersive simulation program for this current research study, which was informed by the conceptual frameworks of Wenger (1998a) and Herrington and Oliver (2000). This approach is discussed further in this chapter.

4.3.4 Best practice guidelines.

Inquiry into healthcare simulation practice has resulted in the development of a series of best practice principles and guidelines to inform quality simulation design and practice. These include works of Issenberg et al. (2005), McGaghie, Issenberg, Petrusa, and Scalese (2010), Motola, Devine, Chung, Sullivan, and Issenberg (2013), Arthur et al. (2010) and The

International Nursing Association for Clinical Simulation and Learning [INACSL] Board of Directors (2015).

4.3.4.1 Features of high-fidelity simulation that lead to effective learning.

As identified earlier in this chapter, endeavours to understand the ways in which simulation contributes to learning are hampered by a dominating focus on the technological aspects of simulation as opposed to a learning and teaching method. Central to this concern is the focus on simulator fidelity as opposed to simulation design.

Issenberg et al. (2005) published a frequently cited systematic review which sought to understand the features and uses of high-fidelity medical simulations that lead to effective learning. Issenberg et al. (2005) cited 109 studies which focussed on medical education from 1969 to 2003. In this review, ten features and uses of high-fidelity simulations which lead to effective learning were identified. These included: the provision of feedback; offering repetitive practice; curriculum integration, which incorporates a range of level of difficulty; multiple learning strategies that capture clinical variation in a controlled environment; individualised learning; defined outcomes; as well as simulator validity.

Subsequent work conducted by McGaghie et al. (2010) and Motola et al. (2013) have further contributed to the work of Issenberg et al. (2005). However, it is important to note the limitations to the work of Issenberg et al. (2005) and McGaghie et al. (2010). Firstly is the focus of these systematic and literature reviews on (naturally) existing practice. Thus, this presents a dilemma, since, it has been argued, existing simulation practice has been conducted within a theoretical vacuum (Bradley & Postlethwaite, 2003). Thus, these principles and guidelines do not illuminate an understanding of educational design to enhance learning in terms of structure, frequency and timing (Motola et al., 2013). Secondly, these reviews have as their focus, high-technology simulator-based simulation with no distinction made between the high-fidelity *simulator* and high-fidelity *simulation*. For example, Issenberg et al. (2005) do not provide the reader with a definition of high-fidelity medical simulation despite this

being central to their research question. What is provided are characteristics of high-fidelity simulators, with no mention of other forms of fidelity or how fidelity influences learning. This is problematic since the simulator is only one component of a designed simulation. This lack of clarity presents a potential challenge to the validity and transferability of these guidelines.

The work of Issenberg et al. (2005) and McGaghie et al. (2010) was not used to inform this research study. However, these works do serve to highlight the need for clarity about the use of terminology, and a greater engagement with learning theory, if an understanding of healthcare simulation as a learning and teaching method is to be advanced.

The emphasis on high-technology manikin-based simulation as analogous to a more holistic conceptualisation of simulation in the development of best-practice principles and guidelines is reflected in nursing education (for example, see: Arthur et al., 2010; Hyland & Hawkins, 2009; Lapkin et al., 2010; McCaughey & Traynor, 2010; Meakim et al., 2013).

4.3.4.2 Quality indicators and best practice standards.

Arthur et al. (2013) sought to address an identified gap in the healthcare simulation literature by attempting to identify "the most effective simulation design and teaching strategies for quality simulation outcomes" (p.1357). The researchers employed a modified Delphi technique and they synthesised the opinions of 32 international experts in nursing simulation as well as contemporary healthcare simulation research relating to pedagogical principles and teaching strategies. The outcome of this research resulted in the development of 15 quality indicators for the design and implementation of simulation experiences, first published in 2010 (see: Arthur et al., 2010). The quality indicators were categorised under the five headings comprising of: pedagogical principles; fidelity; student preparation and orientation; staff preparation and training; as well as debriefing. A quality indicator statement, rationale, outcome, and guidelines were included under each heading.

At a similar time, The INACSL Standards for Best Practice in Simulation were conceived as standards that could be implemented to guide practice and to reflect the values of nursing simulation (Sando, Faragher, Boese, & Decker, 2011). The development process for these standards appeared to be based on the INACSL Board members' professional opinion. Thus, the standards they were developed based on the concepts perceived as important for inclusion by this select group. Seven standards for best practice were developed through the processes of: a modified Delphi method; draft; peer-review; and final draft (Sando et al., 2011). These findings were first published in 2011 and comprise standards for: terminology (Meakim et al., 2013); professional integrity of participants (Gloe et al., 2013); participant objectives (Lioce et al., 2013); facilitation (Franklin et al., 2013); facilitator (Boese et al., 2013); the debriefing process (Decker et al., 2013); and participant assessment and evaluation (Sando et al., 2013). Each standard developed comprised of a statement, rationale, outcome, and guidelines.

The similarities between the work of Arthur et al. (2013) and The INCASL standards highlight the perceived need for such guidelines to inform contemporary nursing simulation practice. Of particular relevance to this current research study were the quality indicators and standards relating to simulation design; pedagogical principles, and fidelity.

Whilst both works highlight the need for alignment with curriculum, and reinforce the need for learning outcomes to inform simulation design (Arthur et al., 2010; Lioce et al., 2013), there is little guidance as to what constitutes a quality simulation scenario. Under the quality indicator *Pedagogical Principles*, Arthur et al. (2010) identify the need to embed educational theory, scaffolding and apply experiential learning principles. However, there is no in-depth explanation about what these mean nor are the theoretical origins of these terms provided. Similarly, there is only superficial acknowledgement of the role of learning theory in simulation design mirrored in the INACSL standards. Standard IV calls for facilitators of simulation to employ strategies that are theoretically based, using a "constructivist

instructional style" (Franklin et al., 2013, p. S20). Furthermore, in Standard V the needs for facilitators to understand the principles of experiential and contextual learning, modelling, and systems theory is identified (Boese et al., 2013). Again, no explanation is given about what is meant by these terms, or the theoretical origins of these concepts nor why they are important.

There is however an acknowledgement of these concerns. In 2015, the INACSL published Simulation Standard IX focussing on simulation design (Lioce et al., 2015). This standard calls for a theoretical or conceptual framework based on the purpose and participants for whom the simulation experience is designed for. However, this is not explored in depth. This lack of clarity in relation to the role of learning theory and simulation design represents a fundamental challenge to the advancement of quality simulation practice. Wellard and Heggen (2010) confirm such a challenge when they argued that approaches to learning and teaching in pre-registration nursing education are largely based on personal experiences and the traditions established within higher education institutions.

However, what is highlighted in both works, is the need to establish and maintain fidelity. This emphasis on fidelity highlights the fundamental concern expressed in this chapter; namely that the concept of fidelity is being emphasised to the detriment of learning theory in simulation design.

Based on an analysis of conceptual frameworks, best practice guidelines and standards, and the assumptions that underpin these, the following salient points relating to the design of immersive simulations for this research study can be stated as follows:

1. Immersive simulation must incorporate a combination of techniques that require considered design and implementation with the purpose of providing learning experiences that are engaging, learner-centred and facilitate learning (Jeffries & Rogers, 2007).
2. Immersive simulation should be comprised of three phases which include: a briefing, the scenario, and debriefing (Arthur et al., 2010; Cant & Cooper, 2010;

Doerr & Bosseau Murray, 2008; Jeffries & Rogers, 2007; Lioce et al., 2015; Motola et al., 2013).

3. In each phase the immersive simulation exercise should be underpinned by learning aims, objectives or outcomes (Arthur et al., 2010; Doerr & Bosseau Murray, 2008; Jeffries & Rogers, 2007; Lioce et al., 2015; Lioce et al., 2013).
4. In the debriefing phase, reflective learning strategies to analyse and explore the events that transpired during the scenario should be employed (Arthur et al., 2010; Cant & Cooper, 2010; Decker et al., 2013; Doerr & Bosseau Murray, 2008; Dreifuerst, 2009; Motola et al., 2013).
5. Aims, objectives or outcomes of immersive simulation must be aligned with curriculum, whether this occurs in the university (Arthur et al., 2010; Lioce et al., 2013), or workplace (Doerr & Bosseau Murray, 2008).
6. The facilitator and participant experience with nursing practice *and* immersive simulation needs to be considered in the design of immersive simulation (Arthur et al., 2010; Doerr & Bosseau Murray, 2008; Jeffries & Rogers, 2007; Lioce et al., 2013).

Subsequently, the following contentions require further exploration:

1. The role of fidelity in contributing to learning in healthcare simulation (Bland et al., 2011).
2. The use of learning theory to *inform* and align learning outcomes/objectives, *scenario* design, debriefing and likely future practice-based experience (Doerr & Bosseau Murray, 2008).
3. The engagement with established learning theory and design frameworks where the *whole person* is considered in order to ensure relevance of the designed simulation experience, with the aim to enhance the potential for transference. In nursing practice, these theories and frameworks need to move beyond individual

approaches to learning towards participatory approaches (Berragan, 2011; Bland et al., 2011; Raelin, 2007).

A consistent theme throughout this section has been that of fidelity. The intent has not been to dismiss the perceived importance of fidelity, but to clarify its role by understanding how fidelity contributes to learning. Despite being labelled as "dimensionless characterizations" in 1999 by the aviation simulation community from which the concept of simulation fidelity heralded (Gross, 1999, p. 3), *fidelity* continues to be standard nomenclature of the healthcare simulation community, albeit used inconsistently and at times inappropriately. In terms of learning, it has already been argued that the relationship between fidelity and learning is not clear (Bland, Topping, & Tobbell, 2014; Dieckmann et al., 2007; Kneebone, 2005). In terms of research, the interchangeable and synonymous use of fidelity in reference to simulator and simulation (for example, see: Decker, Sportsman, Puetz, & Billings, 2008; Hovancsek, 2007; Laschinger et al., 2008; Nehring & Lashley, 2010; Reilly & Spratt, 2007; Swenty & Eggleston, 2011), and in the absence of inquiry analysing both mode of simulation and the interrelated construct of fidelity as distinct design elements through a theoretical lens (for example, see: Chiang & Chan, 2014; Foronda, Liu, & Bauman, 2013; Lapkin et al., 2010; Paige & Daley, 2009; Swenty & Eggleston, 2011), renders the majority of this research unintelligible (Kaakinen & Arwood, 2009). This risks inquiry into the effectiveness of healthcare simulation as a learning and teaching method being relegated to little more than a way to teach technical, procedural and psychomotor skills (Bland et al., 2014; Dunnington, 2014), and self-reported participant outcomes of satisfaction, confidence and competence (Harder, 2010).

This section has highlighted the assumptions, inconsistencies and misinterpretations that exist within the healthcare simulation literature. In doing so, I have attempted to justify the rationale for establishing a clear theoretical grounding for the immersive simulation

program and the broader research design for this research study. In the following section I will explore the ways in which learning theory and frameworks from outside healthcare education may illuminate these contentions and inform this research study in order to address the first research question:

> In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?

4.4 Authenticity and Authentic Learning

In order to address the exploration of the three unaddressed contentions from the previous section, two connections between healthcare simulation literature, the educational design literature and this current research study are made. Firstly, whilst the healthcare simulation community describes the replication of realism and reality in terms of fidelity, the educational design community describe design characteristics that contribute to such replication in terms of *authenticity* (for example, see: Barab, MaKinster, & Scheckler, 2003; Herrington & Oliver, 2000; Herrington, Reeves, Oliver, & Woo, 2004; Hung & Chen, 2007). Secondly, of central concern to the works of these cited authors is the operationalisation of situated learning theory; the conceptual foundation of Wenger's (1998a) Communities of Practice.

In the following section the concept of authenticity from a situated learning perspective will be explored. Thus, a clear distinction is proposed between authenticity and fidelity in relation to healthcare simulation. In the following section, conclusions will be drawn by demonstrating the ways in which authenticity contributed to this research study.

4.4.1 Authentic learning environments.

As described in Chapter Three, fundamental to situated learning is the authentic context where knowledge exists, and individuals' participation in authentic activities to engage with such knowledge and in-turn learn (Brown et al., 1989; Collins, 1988; Lave & Wenger, 1991). A situated learning perspective emphasises a "notion of learning knowledge and skills in contexts that reflect the way the knowledge will be used in real life" (Collins, 1988, p. 2). This, as argued by Herrington and Oliver (2000), includes physical and virtual learning environments that resemble the real-world, with real-world complexity and limitations, as well as providing real-world options and possibilities. Clearly similarities exist between authentic learning, authentic learning environments and an amalgam of the various characteristics of fidelity. However, unlike fidelity, authenticity according to a situated learning perspective provides insight between an authentic *context* for learning and an authentic *process* for learning (Herrington & Oliver, 2000; Hung & Chen, 2007). Accordingly, to design learning activities that have one without the other, may mean that knowledge may be perceived by learners as the product of education rather than as a dynamic tool to use to solve problems (Brown & Duguid, 1996).

After an extensive cross analysis of the situated learning literature, Herrington and Oliver (2000) identified nine elements deemed to be critical in the design of authentic learning environments, and as such represented an operationalisation of situated learning theory. Herrington and Oliver (2000) proposed that situated learning environments should: provide *authentic contexts* that reflect the way that knowledge will be used in real life; provide *authentic activities*; provide access to *expert performances* and the modelling of processes; provide *multiple roles* and *perspectives*; support *collaborative construction of knowledge*; promote *reflection* to enable abstractions to be formed; promote *articulation* to enable tacit knowledge to be made explicit; provide *coaching* and *scaffolding* by the teacher at critical times; and provide *authentic assessment* of learning within the tasks (pp. 25-26).

The focus of Herrington and Oliver's (2000) study was on the operationalisation of situated learning theory for online learning environments. Whilst these are not the same as immersive simulation, the focus of this research study, clear parallels can be drawn between the two. Herrington and Oliver (2000) cite the work of McLellan (1994) who argued that "context can be the actual work setting, a highly realistic or 'virtual' surrogate of the actual work environment, or an anchoring context such as a video or multimedia program" (p.8). What Herrington and Oliver (2000) allude to in their instructional design framework are two dimensions of authenticity: authenticity as a *context*; and authenticity as a *process*. These two dimensions are explored further in the following section.

Herrington and Oliver's (2000) research has made a considerable contribution, particularly to the education, online learning and educational design literature. When I commenced this research study in 2007, there was a relative absence of healthcare simulation literature citing this work. Since this time, there has been a gradual acknowledgement of the potential contribution Herrington and Oliver (2000) and the subsequent versions of this framework, can make to healthcare simulation practice (for example, see: Onda, 2012; Reilly & Spratt, 2007).

More recently, this situated learning perspective of authenticity has been suggested as a way to conceptualise nursing simulation, highlighting the potential that the use of Herrington and Oliver's (2000) instructional design framework may increase the theoretical basis of simulation design and research (Bland et al., 2011; Harder, 2009). More recently in the works by Rystedt and Sjöblom (2012) and Bland et al. (2014), they have explored the suitability of the use of a situated learning perspective of authenticity in nursing and medicine simulation; with the latter engaging in a detailed analysis comparing the fundamental tenets of fidelity and authenticity in relation to nursing simulation. Within these works, authentic learning, like fidelity, is acknowledged as a perception of the participant and as such requires careful consideration in the design of immersive simulation (Rystedt & Sjöblom, 2012). Both

works highlight the ways in which authenticity reveals the value of situated learning in healthcare simulation. These include: active, social participation; engagement of emotion; and reflexivity, drawing parallels with Lave and Wenger's (1991) concept of legitimate peripheral participation. Of interest is the way Bland et al. (2014), whilst analysing fidelity and authenticity, inadvertently emphasised context rather than process. This emphasis suggests that fidelity may contribute to learning in healthcare simulation in terms of a designed authentic context rather than an authentic process for learning, meaning and identity construction. This is an important distinction and as such requires further exploration.

4.4.2 Authentic learning: Context and process.

From the field of education, Hung and Chen (2007) made a distinction between context and process authenticity. According to these authors, *context authenticity* relates to the realness of the sociocultural context of the community; "the physical and social infrastructure as well as the social relationships that emerge in interactions made meaningful by the contextual demands of the practice" (Hung & Chen, 2007, p. 153). *Process authenticity* on the other hand relates to the *process* of identity enculturation; the "insitu emergence of meanings arising in the dynamic relations and interactions between persons and not so much the problem, task or environment" (Hung & Chen, 2007, p. 151). Through this quote, clear parallels can be drawn between the concepts of context and process authenticity and Wenger's (1998a) perspective of learning and identity formation whereby "Viewed as an experience of identity, learning entails...a process of transforming knowledge as well as a context in which to define an identity of participation" (p. 215). The challenge therefore for this research study when designing immersive simulation according to CoP, was to design authentic learning environments for ICALD nursing students that included the requisite artifacts to *look* like the real thing (space, equipment, documents, manikins). Furthermore, the challenge was to support the processes of learning and identity construction by replicating

the sociocultural *processes* of participation in practice, authentic roles and activities, that would be encountered by ICALD nursing students when interacting with a real Australian CoNP during the clinical placement.

4.4.3 Scaffolding entry to practice: Aligning simulation with curriculum.

Hung, Chee, Hedberg, and Seng (2005) drew on the principles of CoP according to Lave and Wenger (1991) and Wenger et al. (2002) to design a framework where learners situated within a community are scaffolded to more full participation. This framework comprised four phases: simulation; simulation-participation; participation-codetermined interactions; and codetermined interactions. The essence of this framework focuses on the amount of support provided to students by university lecturers as they participate as novices in the practices of a community (process), and the authenticity of activities (context). It is important to clarify that this framework was designed to develop a CoP by scaffolding participation of information technology teachers, as newcomers to Singapore schools. This framework is presented as Figure 4.

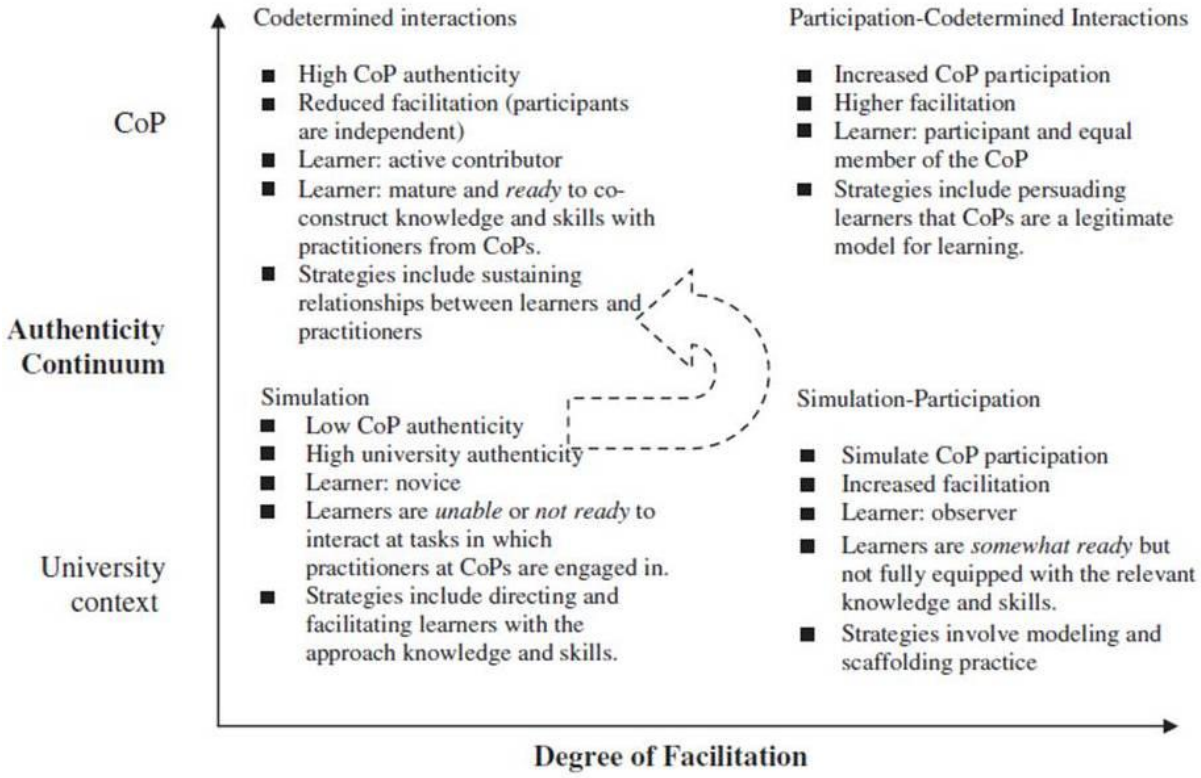

Figure 4. Degree of authenticity versus degree of facilitation (Hung et al., 2005).

Hung et al. (2005) described the first phase, *simulation*, as formal university classroom learning. Here, the student (learner) experience is largely one of being taught codified knowledge. The context represents that of the university classroom rather than the workplace.

The second phase *simulation-participation*, represents a transition where the student continues to require instruction, but participation is increased through facilitation by experts (lecturers) in role (Hung et al., 2005). Here, the student may understand the task at hand, yet remains largely an observer.

In the third phase, *participation-codetermined interaction*, the student engages in greater participation, facilitation by workplace experts of the practice is increased, and teaching by university lecturers is decreased (Hung et al., 2005). Here, learning focuses on understanding how learning within a CoP takes place.

The fourth phase, *codetermined interactions*, is described by Hung et al. (2005) as where the student participates within an actual CoP. Learning facilitated by university lecturers is replaced by the support of members of a CoP. The environment is that of the CoP as are the authentic practices.

The approach of scaffolding participation as articulated by Hung et al. (2005) informed the approach of aligning the immersive simulation program of this research study with an existing pre-registration nursing curriculum. *Simulation*, as described by Hung et al. (2005), is comparable to the process of learning through the *teaching* of knowledge and skills via tutorial and clinical skills laboratory classes in pre-registration nursing education. Whilst some of the artifacts of nursing practice may be used, tasks are defined and the focus is on the teaching of codified knowledge, and technical and procedural skills.

Simulation-participation, as described by Hung et al. (2005), reflects low-level or immersive simulation activities in pre-registration nursing education where lecturers or other students take on roles of experienced members of a CoNP. At this stage whilst the context authenticity (environmental fidelity) may be high, process authenticity is low due to students' participation in roles such as nurse, patient, family member, observer. The focus may be less on tasks, but the designed experience is objectives driven.

Participation-codetermined interaction, as described by Hung et al. (2005), represents the positioning of the immersive simulation program for this research study within an existing Bachelor of Nursing curriculum. Context authenticity is high (environmental fidelity). However, in contrast to the previous phase, it is proposed that process authenticity is enhanced through authentic ICALD nursing student roles, and their engagement of authentic members of an Australian CoNP. Process authenticity, it is proposed, is further enhanced by designing elements of practice with which first-year ICALD nursing students can more-fully participate, as well as activities that demand non-participation. Outcomes are ill-defined and are dependent upon the interactions, actions and reactions of all participants involved. It is in

this phase, it is proposed, that an identity of participation as an ICALD nursing student within an Australian CoNP begins to form as these students get a feel for the game.

Finally, codetermined interactions is comparable to the clinical placement in the Bachelor of Nursing curriculum. At this stage, although ICALD nursing students are not independent, they are immersed within an authentic CoNP. Interpreting this framework in relation to aligning immersive simulation with existing curricula is important in order to provide a type of pedagogical scaffolding from classroom to CoP. This is explained in the following paragraph.

One threat to the effectiveness and sustainability of simulation as a learning and teaching method is that it is often not represented in formal curricula. The risk is that simulation is implemented by what has been referred to as a bolt-on approach (Andersen & Carter, 2011), resulting in poor alignment with course aims, outcomes, and future application of student learning. The immersive simulation program for this research could be considered to be a bolt-on to an existing curriculum. However, the framework as articulated by Hung et al. (2005) provided guidance for the consideration of alignment between existing curricula, immersive simulation as a bolt-on, and the clinical placement.

By bringing together the fundamental concepts raised throughout the literature review, it is at this time possible to illustrate how these various concepts were brought together as the conceptual foundations for the immersive simulation program for this research study. In doing so, these conceptual foundations began to address the first research question:

> In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?

1. Epistemological foundation.

Wenger's (1998a) CoP and learning architecture provided not only the theoretical basis, but the *epistemological philosophy* of the simulation program for this research

study. The dimensions and components of the learning architecture provided a framework to design a learning space that aimed to be "epistemologically correct" (Wenger, 1998a, p. 101) in terms of confronting fundamental issues of meaning, time, space and power by focusing on participation, learning, identity and belonging as they related to ICALD nursing students within an Australian CoNP.

2. Curriculum alignment.

The framework adapted from Hung et al. (2005) (Figure 4) provided an approach to curriculum alignment that was cognisant of: the trajectory of the research participants, as ICALD nursing students in their first year of an existing Bachelor of Nursing program; the designed immersive simulation program of this research study; and the first clinical placement.

3. Phases of simulation.

Best practice guidelines for healthcare simulation recommend simulation activities follow a three-phase format of brief, scenario and debrief (Arthur et al., 2010; Cant & Cooper, 2010; Doerr & Bosseau Murray, 2008; Jeffries & Rogers, 2007) guided by learning outcomes (objectives). The immersive simulations for this research study were structured according to these three phases. However, it is pertinent to highlight that whilst such guidelines recommend alignment between learning outcomes and the post-simulation debrief, there is an apparent lack of explicit alignment between learning outcomes, design of the simulation *scenario*, and the debrief. This research study aimed to demonstrate such alignment by engaging Wenger's (1998a) theoretical perspective of CoP throughout the design of all three phases.

4. Characteristics of simulation design.

By illustrating examples of what constitutes authentic contexts and processes according to a situated learning perspective, the nine elements of Herrington and Oliver (2000) formed the foundation of the design and implementation of simulation as a designed situated learning environment.

Characteristics of simulation design were further informed by the work of Eraut (2004a, 2007) by incorporating the processes and activities where learning is located in the workplace.

Characteristics of simulation design were further informed by the perceptions and experiences of international nursing students after their first clinical placement in Australia. This is the focus of Chapter Six, with the recommendations suggested in this chapter consisting of eight design elements as a preliminary design framework for immersive simulation.

It is important to emphases the role of Wenger's (1998a) CoP as the epistemological foundation of the preliminary design framework for simulation for this research study. Indeed, at first glance, the role of CoP may appear redundant. However, whilst the work of Eraut (2004a, 2007) and Herrington and Oliver (2000) focussed on learning as social participation, they do not illuminate the ways in which newcomers learn to access opportunities to participate within a CoNP. Exploring the concern of access was a fundamental focus for this research as illustrated in the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

I now turn to positioning this research study within the existing literature by providing an understanding about how situated learning theory and CoP have been employed in simulation for pre-registration nursing education.

4.5 Situated Learning, Communities of Practice and Nursing Simulation

The aim of this chapter has been to demonstrate the ways in which this research differed to the existing literature relating to design of and research exploring healthcare simulation; specifically, simulation in pre-registration nursing education. In the previous section I have explored initial propositions in relation to how the preliminary design framework for immersive simulation could engage learning theory to inform conceptualisation, design and implementation of immersive simulation. In the following section I position this research in the landscape of nursing simulation research, and the use of situated learning and CoP as theoretical perspectives to inform simulation design, and inquiry in this field.

4.5.1 Learning theory, simulation design and inquiry.

In a systematic review conducted by Kaakinen and Arwood (2009), they sought to understand the use of learning theory in the design and evaluation of nursing student learning from nursing simulation. The inclusion criteria for this inquiry were: studies published between 2000-2007; studies where the design and implementation of nursing simulation were provided; and studies that focussed on simulation design as a method for learning or teaching. These inclusion criteria were informed by two assumptions. Firstly, that learning theory would appear as the foundational element in the design of simulation activity if learning was the intended purpose of the simulation. Secondly, if the purpose of simulation was teaching, teaching would be directed by aims, objectives and outcomes (Kaakinen & Arwood, 2009). In an analysis of 120 studies where learning as the purpose of designed simulations was the

focus, 104 did not reference or mention a learning theory. Furthermore, only 16 studies referenced learning or developmental theory as the basis of the simulation design. Of the 16 studies that did make reference to learning theory, the majority of these focussed on student and lecturer perceptions of attainment of learning outcomes, self-efficacy, and the development of skills. Only two studies explored learning through a theoretical lens (see: Lasater, 2007b; Wong & Chung, 2002), with one further study citing Lave and Wenger's (1991) situated learning as the foundational learning theory (see: Alinier et al., 2004). It is pertinent to note that reviewing the work by Alinier et al. (2004) as a part of this research study revealed situated learning was employed only as a superficial analysis of student outcomes. Based on their findings, Kaakinen and Arwood (2009) concluded that "most nursing faculty approach simulation from a teaching rather than a learning paradigm" (p.17), and that a fundamental paradigm shift is required if student learning through simulation is to be advanced.

From an Australian perspective, Arthur, Kable, and Levett-Jones (2011) conducted a cross-sectional survey of 24 Australian schools of nursing, exploring the pedagogical principles that underpin simulation activities. They found that 48% of 23 respondents indicated the use of a theoretical framework or model as a basis for their simulation learning and teaching activity. These included: pedagogical models such as problem-based learning; Benner's (1984) nursing theory; decision-making frameworks by Tanner (2006) and Lasater (2007a); experiential learning models; and The Nursing Education Simulation Framework (Jeffries & Rogers, 2007). Details relating to the ways in which these theories, models and frameworks informed simulation learning and teaching was not provided.

Rourke et al. (2010) sought to explore the ways in which theory-based research is contributing to understanding simulation in nursing education. Through the review of 47 empirical research studies focussing on the use of high-technology manikin-based simulations in nursing education between 1989 and 2009, Rourke et al. (2010) found that only ten percent

of studies made adequate use of theory: to inform an understanding of learning; to inform instructional design; to provide a justification for the use of technology; or to inform research questions, guide data collection, structure data analysis, interpretation of results and to inform recommendations for practice or further research. Whilst it must be acknowledged that Rourke et al.'s (2010) literature review was limited to research exploring the use of high-technology manikin-based simulation, their findings are supported by those earlier identified by Kaakinen and Arwood (2009).

4.5.2 Nursing simulation, communities of practice and situated learning theory.

CoP and situated learning theories such as situated cognition and cognitive apprenticeship have been proposed as theoretical perspectives to inform the design of simulation experiences that better reflect practice, and enhance the *affective* (emotional) dimension of learning (Berragan, 2011; Bland et al., 2014; Harder, 2009, 2010). Underpinning these propositions is a belief that situated learning perspectives can contribute to students' understanding of learning as a process of social participation, for example, as an outcome of direct patient care (Berragan, 2011). At the time of this research study, there are calls for a shift in focus from simulation on technical and procedural skills, to simulation activities that facilitate identity construction; encouraging students to "think" of the job as well as how to "do" it (Berragan, 2011, p. 661). Despite such recommendations, there are few examples which employ an accurate representation of situated learning theory in simulation design.

4.5.2.1 Nursing simulation, legitimate peripheral participation and communities of practice.

In an early paper, Alinier et al. (2004) proposed the underpinning principles of nursing simulation as a learning and teaching method stem from theories of experiential learning (Cioffi, 2001; Kolb, 1984) and situated learning (Lave & Wenger, 1991). The aim of their

study was to explore the effectiveness of high-technology manikin-based simulation as preparation for clinical skills assessments (OSCEs). However, despite prefacing the theoretical tenets of simulation-based learning as experiential learning and situated learning, no further reference to any learning theory, justification for design, or how learning theory may have related to the findings of this work were provided.

Hovancsek et al. (2009) wrote of creating a community of simulation practice from an international perspective. This work focused on the creation of a community of educators interested in advancing simulation practice. Despite this focus, no reference was made to the concepts of CoP, or indeed to the seminal work of Lave and Wenger (1991) or Wenger (1998a).

In her doctoral dissertation Kelly (2014) drew on CoP as one of several learning theories when investigating the use of simulations to enhance nursing students' judgement to practice as registered nurses. In this study, the researcher referred to different conceptualisations of CoP by citing Lave and Wenger (1991), Wenger (1998a) and Wenger et al. (2002), yet the distinctions between these perspectives is not clarified. As an important contribution in this field of inquiry, Kelly's (2014) work suggested connections between nursing students' clinical judgement in simulation and in a CoNP. However, as distinct from this current research study, CoP did not appear to significantly inform the framework of simulation design. Further, Kelly's (2014) simulations focused on more experienced nursing students constructing an identity of a registered nurse rather than of a nursing student.

4.5.2.2 Nursing simulation and situated learning.

Whilst the nursing simulation literature that was reviewed in this research study illustrated that little attention has been paid to the design of simulation activity according to CoP, several authors have identified the theoretical perspectives of authentic learning, situated cognition and cognitive apprenticeship as informing simulation design.

Woolley and Jarvis (2007) described an approach to teaching technical skills to pre-registration nursing students framed around the six components of cognitive apprenticeship described by Collins, Brown, and Newman (1989); modelling, coaching, scaffolding, articulation, reflection and exploration. This was done by integrating and scaffolding multimedia videos demonstrating technical skills with opportunities for collaborative learning between students in simulation learning environments. In doing so, the authors demonstrated a way in which the theoretical perspective of cognitive apprenticeship could be successfully applied to provide a framework for the purposeful design of teaching technical skills. It is, however, important to emphasise the focus of Woolley and Jarvis' (2007) study was on learning psychomotor skills as opposed to learning through engagement in a simulated episode of practice with members of a CoNP.

Paige and Daley (2009) provided an example high-technology manikin-based simulation designed according to their interpretation of situated cognition. In this paper, the authors provided a broad overview of situated cognition drawing from a range of perspectives. Simulation design was described as being based upon four principles: transfer of knowledge; the construction of meaning within a CoP; the artifacts that exist within a situation, both physical as well as the knowledge students bring with them; and the historical context encompassing cultural practices, values and ways of thinking and perceiving a situation. Paige and Daley (2009) demonstrated a sound approach to designing simulation activity according to situated cognition, by integrating theory with: the conceptualisation of an intentional approach to simulation to facilitate learning; simulation design; and analysis and discussion of the findings. However, whilst the authors provided examples of authenticity, their focus was on the physical characteristics of the environment, with students adopting inauthentic roles and engaging in practices which they were not qualified to do. Dunnington (2014) has recently warned of the potential "mis-educative" (p. 20) effects of inauthentic roles by contributing to a false understanding of responsibility and accountability; a particular

concern when designing immersive simulations for ICALD nursing students who, as has been identified in Chapter Two, may misunderstand or not understand the difference between what is acceptable in simulation but is unacceptable in practice. Further, the simulation design described by Paige and Daley (2009) did not account for authentic processes of learning insofar as authentic social participation between nursing students and members of a CoNP.

Onda (2012) provided a discussion paper by drawing parallels between a hypothetical myocardial infarction (heart attack) simulation scenario, and the concepts of authentic learning as articulated by Herrington and Oliver (2000), situated cognition described by Brown et al. (1989) and situated learning as theorised by Lave and Wenger (1991). However, it is important to highlight that the examples provided of authentic learning do not reflect the intent of Herrington and Oliver's (2000) instructional design framework. Furthermore, Onda's (2012) blending of perspectives of situated learning and situated cognition provides limited understanding of how these *different* situated learning perspectives may contribute to simulation design and student learning. Finally, by drawing parallels between an existing simulation scenario and situated learning theory, Onda (2012) offers an untested observation rather than robust inquiry.

As has been seen, whilst many authors claim to employ situated learning theory and principles of authentic learning environments in pre-registration nursing simulation, the ways in which these theories are interpreted and the depth to which they are applied to the design of simulation activities presents a challenge to advancing understanding and scholarship in this field. Further, there is a concern that ill-conceived simulation activity may contribute to the construction of misunderstandings of practice. The potential for such mis-education (Dunnington, 2014) is particularly relevant when considering designing simulation experiences to plant the seeds for ICALD nursing students' identities of participation within a foreign CoNP.

By designing immersive simulation in a theoretical vacuum (Bradley & Postlethwaite, 2003), nursing simulation risks reflecting little more than a "surface realism" (Berragan, 2011, p. 663) that is dependent upon the creativity of the person who designed it. Nursing simulation activities frequently require students to adopt inauthentic roles such as registered nurse, senior nurse, medical officer or family member; roles that do not reflect the true nature of students' capability and legitimacy within a CoNP. Such simulations require nursing students to adopt an identity they are not and engage in practices that would not be permissible during the clinical placement. Whilst such roles and identities could serve as a facility of imagination (Wenger, 1998a) for student nurses as they construct a picture of their future selves as registered nurses (for example, see: Kelly, 2014), in the absence of theory to inform such intents, mis-education is a significant possibility (Bligh & Bleakley, 2006; Dunnington, 2014; McNiesh, 2015).

Simulation practice unintentionally contributes to mis-education in a second way. Whilst healthcare simulation scenarios are designed to provide an immersive experience that replicate authentic practice situations, it is the post-simulation debrief that is emphasised as the forum where meaningful, reflective learning occurs (Dreifuerst, 2009; Fanning & Gaba, 2007; Husebø, O'Regan, & Nestel, 2015; Mariani, Cantrell, Meakim, Prieto, & Dreifuerst, 2013; Raemer et al., 2011). From a situated learning perspective, this separation of participation and learning is problematic in two ways. First the majority of commonly employed debriefing models and techniques are structured cognitive frameworks developed from analyses of observed facilitator behaviour. As such consideration is rarely given to aligning both the designed simulation scenario and the debrief with a consistent theoretical perspective. Second, focusing on the debrief alone as the locus of learning ignores the authentic processes essential to learning according to a situated learning perspective. As has been clearly stated in the previous section, this research aimed to circumvent such mis-education by designing authentic learning activities whereby ICALD nursing students would

participate in authentic roles with authentic members of an Australian CoNP in everyday, ordinary elements of nursing practice. Furthermore, in this research, simulation design and as such learning through simulation are perceived as a coherent whole, where the theoretical intent of simulation design needs to align with each of the three phases of simulation; the brief, the scenario and the debrief.

4.6 Summary

In this chapter I have positioned this research study within the landscape of healthcare simulation, specifically nursing simulation. Fundamental issues pertaining to design and inquiry of healthcare simulation have been highlighted and common assumptions have been challenged.

In this chapter I have argued that to create authentic immersive simulation experiences requires both an authentic *context* as well as authentic *processes* of learning. Through the course of this argument, I have proposed that the contribution of fidelity to learning in immersive simulation is that of providing context and not process. Whether fidelity equates to *authentic* context is outside the scope of this research study and as such requires further exploration.

Significantly, in this chapter, through a synthesis of existing theoretical frameworks and perspectives, I have presented the conceptual foundations for the immersive simulation program for this research study. In Chapter Six, I combine these conceptual foundations with the findings of Phase One to form a preliminary design framework for immersive simulation. By refining this preliminary design framework (as described in chapters seven and eight), I aim to address the research questions that underpinned this study. In doing so, it is hoped that this research will make a significant contribution to what Harder (2009) termed the fourth evolutionary movement of healthcare simulation.

Chapter Five: Philosophical Perspective, Research Methodology and Methods

Research as described by Mertens (2005) is one way of understanding phenomenon; a process of systematic inquiry in which data is collected, analysed and interpreted in an attempt to "understand, describe, predict or control an educational or psychological phenomenon or to empower individuals in such contexts" (p. 2). Rossman and Rallis (2003) contend that whilst research is about the process of acquiring knowledge, it is also about the constructive learning process of the researcher. These two perspectives highlight the dual nature of this research: it is a focus of inquiry that seeks to address the research questions that have been posed; as well as a process of learning as experienced by myself as a novice researcher endeavouring to make meaning of qualitative research. The purpose of this chapter is to describe the methodology used, and to justify the methodology as the best approach to address the research questions. As such, this chapter presents the methodology, methods and approach to research design taken to address the research questions that underpinned this study.

To aid the readers' consideration of the methodology, methods and research design of this study, this chapter is broken up into five sections. In this chapter I will commence by providing my background as the researcher. This background provides context in terms of considerations for and choices made in positioning this as a qualitative study, and the choices of methodology and methods. In the second section of this chapter I will present the research design framework, structured according to Crotty's (1998) four elements of qualitative research; epistemology, theoretical perspective, methodology and methods. In the third section of this chapter I describe how this research was conducted. This includes details pertaining to the location where this research was situated, ethical considerations, the research participants, participant recruitment and how data was collected and analysed. In the fourth section of this chapter I discuss the measures taken to enhance trustworthiness of this

research. In the final section of this chapter I present the limitations of the research design. This chapter has been structured in this way in order to make it explicit to the reader the reasons why decisions were made during the research design process including the philosophical and theoretical perspective within which the research was situated. In this chapter I also describe the process for data collection and analysis. By making these processes explicit, I present this research as rigorous, trustworthy and auditable.

5.1 Background

This research is about participation, identity and belonging. However, at a more fundamental level, this research is about cultural difference and the processes of negotiating such differences in terms of experiences, perceptions, values, beliefs and behaviours. Providing insight into my background at the commencement of this chapter enables the reader to consider my cultural heritage and the differences that exist between myself and the ICALD nursing students who participated in this research.

5.1.1 The Researcher.

I was raised rural Victoria Australia, with a population of 300 that was almost exclusively *white*. I completed my Bachelor of Nursing degree at Deakin University in 1993; a tumultuous period when hospital-based nursing training was making the significant cultural transition to university-based education. As a qualified registered nurse, I worked in large metropolitan hospitals in Melbourne and Sydney Australia, with my career trajectory gradually moving towards education.

From 2000 to 2003 I was employed as an educator in a 200 bed metropolitan hospital supporting newly graduated nurses, facilitating their transition from student nurse to registered nurse. It was during this time that I began to witness the challenges and barriers newly registered nurses encountered on a daily basis as they adjusted to the culture of nursing

practice. These challenges and barriers were particularly evident for the small number of graduate nurses from CALD backgrounds. Coincidently, it was also during this period that I first engaged with simulation as an emerging approach to learning and teaching.

In 2003 my career began as a university lecturer, working with pre-registration nursing students on-campus, and as a clinical facilitator supervising nursing students during the clinical placement. This period coincided with the early years where large numbers of international nursing students were enrolling into pre-registration nursing programs in Australia. As a lecturer, I began to gain insight into the different assumptions and expectations international nursing students held as learners and of learning. As a clinical facilitator, I witnessed the everyday challenges international nursing students encountered as they attempted to negotiate the norms, expectations, roles and relationships of a well-established CoNP. The common behaviours employed by these students in an attempt to save face, the use of *yes syndrome*, *clustering*, and *suppressing discord* by being quiet were observed. These behaviours were interpreted by buddy-nurses as a disinterest in learning, or as a reluctance to engage with patients or members of the healthcare team.

As my academic career progressed, so did my involvement and understanding of curriculum. I began to question the structure and content of on-campus classes designed to introduce international nursing students to Australian nursing practice. Underpinning my concern was the apparent absence of learning and teaching activities that encouraged international nursing students' understanding for the need to participate in practice during the clinical placement. I began to question whether the needs of these students could be better met through immersive simulation.

During this time, I sought to increase my understanding and skill in the design and facilitation of simulation-based learning. Attending short courses, workshops and conferences, enhanced my knowledge and skill in manikin programming, and increased my awareness of the ways in which simulation was being employed in healthcare education. At

the time, the focus of such simulation activity was largely on high-risk, low-frequency situations such as cardiac arrests or trauma scenarios. Further, such simulations engaged nursing students the role of a qualified nurse, rather than as nursing students working alongside members of a CoNP. I began to consider the ways in which immersive simulation experiences that represent everyday nursing practices may facilitate international nursing students' understanding of the need for, and ability to negotiate access to learning opportunities with registered nurses. These questions that I posed were the very early thoughts that have resulted in this research study.

I have been a full-time academic at the university where this research was situated since 2007. At the time of this study, my role within the university is the academic lead for healthcare simulation. Engaging in the process of this doctoral research focussed my desire to enhance the scholarship of healthcare simulation practice, by initiating and participating in discourse around the relationship between healthcare simulation and learning theory. This discourse has taken the form of facilitating workshops on simulation design, simulator programming and debriefing models and processes. In 2014, my interest in this area resulted in my leading the development of a post-graduate qualification in healthcare simulation.

5.1.2 A qualitative inquiry.

My subsequent and significant undertaking of PhD research in this area has enabled me to further explore and understand that for many international nursing students, studying nursing in Australia has occurred as a result of the social, cultural, political and economic context both in Australia, and also that of these students' countries of origin. As shown in Chapter Two, studying in Australia is not easy for international nursing students, with commonly cited challenges relating to language, communication, misunderstanding and not understanding. Yet whilst these observable challenges provided the impetus for this research study, a deeper understanding gleaned from the literature revealed the difficulties

international nursing students experience when negotiating social and cultural differences, and how these present fundamental threats to their cultural identity, as nursing students within an Australian classroom, and more so in the context of the clinical placement. In this research I sought to understand the ways in which ICALD nursing students make sense of their experiences in the world in which they live. It was not the aim of this research to prove or disprove hypotheses through experimental design or statistical analysis, to measure causal relationships, or to prove or disprove a single objective truth. Hence, in this research I have used a qualitative approach to inquiry.

Fundamental to qualitative research is maintaining a balance of voice between the emic perspective of research participants and the etic perspective of the researcher in order to truthfully represent the thoughts, perceptions and feelings of the research participants (Denzin & Lincoln, 2011). A qualitative approach to this research provided me, a registered nurse and nurse academic, with a sound understanding of the social, cultural, economic and political contexts of Australian academia and healthcare, within which ICALD nursing students are expected to participate. Yet, at the same time, being a sole researcher with a significantly different cultural heritage, life experiences, perceptions and assumptions, fulfilling all roles of data collection and analysis, although a characteristic of qualitative research (Merriam, 1998, 2009; Mertens, 2005; Patton, 2002), did present risks in terms of misunderstanding or misrepresenting the meanings that the research participants attributed to: what they said and what they did; and as a researcher, what was heard and what was seen (Denzin & Lincoln, 2011; Merriam, 1998). Attempts to address these concerns required using multiple data collection methods (Holloway & Wheeler, 2010) and applying rigorous processes of data analysis and interpretation. Further, a reflexive stance was required on my behalf, as a need to be mindful of my cultural, social, political, linguistic and ideological perspectives as distinct from those of the ICALD nursing students being represented. In light of the focus of

this research, such strategies were of particular importance. Therefore, these strategies will be discussed in detail in this chapter.

Once qualitative research was perceived as unreliable, impressionistic, and lacking objectivity (Denzin & Lincoln, 2011) and as such it was considered inferior to quantitative research. Today the deep, rich and descriptive portrayals of research participants' interpretations, feelings and understandings of participants' experiences and the contexts within which these exist provided by a qualitative approach are of interest and indeed highly valued in disciplines such as nursing, education and the social sciences (Denzin & Lincoln, 2011; Glaser & Strauss, 1967; Guba & Lincoln, 2005; Harding & Whitehead, 2012; Holloway & Wheeler, 2010; Lichtman, 2006; Merriam, 1998; Schneider, Elliott, LoBiondo-Wood, & Haber, 2003; Stake, 2005). Whilst active discussion exists regarding rigour in qualitative research (see: Porter, 2007; Rolfe, 2006), there is agreement about the need for the researcher to make explicit their considered approach to research design in order for the reader to determine the methodological credibility of the research (Hyett, Kenny, & Dickson-Swift, 2014; Krefting, 1991; Thomas, 2011).

5.2 Research Design Framework

Nominating the research paradigm is considered by some to be the first step when commencing research (Guba & Lincoln, 2004; Mackenzie & Knipe, 2006), as it is the research paradigm that influences the way knowledge is studied and interpreted. Nominating the research paradigm provides the philosophical lens which influences the beliefs and assumptions that define a person, the nature of their world, and how each individual is placed within their world as well as the ways in which relationships between the individual and their world are made explicit (Guba & Lincoln, 2004; Mertens, 2005). Situating research within a research paradigm at the beginning of inquiry makes explicit the intent, motivation and expectations of the research. If this point of reference is absent, then there is "no basis for

subsequent choices regarding methodology, methods, [or] literature" (Mackenzie & Knipe, p. 194) in the research design process. However, the different and often interchangeable ways in which the terms research paradigm and theoretical perspective are used, in addition to what they represent within the literature, served as a particular source of confusion for myself as a novice researcher.

I sought clarity and understanding in terms of defining the terms paradigm, theoretical perspective, methodology and method, and the relationships between each through four questions posed by Crotty (1998):

- What *methods* do we propose to use?
- What *methodology* governs our choice and use of methods?
- What *theoretical perspective* lies behind the methodology in question?
- What *epistemology* informs this theoretical perspective (Crotty, 1998, p. 2).

Crotty's (1998) four questions enabled me to understand each element of research design, as well as the relationship between each of these four elements. For example, whilst the choice of methodology and methods related to the research processes that I believed would address the research questions, the justification of such choices directly related to my underlying philosophical assumptions about the human world and the social life within it (theoretical perspective), including the philosophical basis, nature together with the limits of human knowledge (epistemology) that underpinned this research (Crotty, 1998). Accordingly, the research design framework for this research is described and justified according to Crotty's (1998) four elements, presented in Table 3.

Table 3

Overview of the Research Design Framework

Element of research design framework (Crotty, 1998)	Research design framework for this research
Epistemology	Social constructionism
Theoretical perspective	Interpretivism
Methodology	Case study
Research methods (data collection)	Semi-structured focus group interviews Semi-structured individual interviews Participant observations Video recordings Contact summaries
Research methods (data analysis)	Thematic analysis

5.2.1 Epistemology: Social constructionism.

Epistemology refers to the nature of knowledge, or "a certain way of understanding what it means to know" (Crotty, 1998, p. 10). Making explicit the epistemological stance of research clarifies the focus and perspective of inquiry. The theoretical perspective of Wenger's (1998a) CoP clearly focuses on a sociocultural view of learning. Lave and Wenger (1991) positioned legitimate peripheral participation as a social constructivist perspective of learning. The epistemological stance of social constructivism represents knowledge as socially constructed by those actively engaging in activities where knowledge exists (Crotty, 1998; Mertens, 2005). From this standpoint, knowledge construction is an individual process of inventing "concepts, models and schemes to make sense of experience" (Schwandt, 2000, p. 197). However, rather than adopting an epistemological stance of social constructivism, this research reflected a social constructionist perspective of inquiry.

Social constructionism is closely related to, but distinct from social constructivism. Social constructionism, like social constructivism, also perceives knowledge as a continual, social process of testing and modifying existing knowledge when confronted with new experiences. To this end, Ackermann (2001) and Crotty (1998) contend that social constructivism represents learning as an individual process, focussing on active meaning-making that occurs *in the individual mind* as a result of the individual's interactions *within* a

group (Ackermann, 2001; Crotty, 1998). In contrast, social constructionists position learning as a process of *collective* generation and transmission of meaning created through the social interactions *from* a group (Crotty, 1998; Schwandt, 2000).

An important distinction in relation to this research study, is the emphasis social constructionism places on learning as engagement with a particular culture, and the artifacts that are characteristic of that culture (Ackermann, 2001). As Crotty (1998) explained "social constructionism emphasizes the hold that our culture has on us: it shapes the way in which we see things (even the way we feel things!) and gives us a quite definite view of the world" (p. 58). Further, social constructionists are interested in issues of power that result from the interplay between cultures and representations of power, as contestations of legitimacy of knowing and of knowledge (Burr, 2003). Such concerns are of significant interest to this research study in terms of exploring the legitimacy of knowing and of knowledge through processes of social negotiation of participation, learning and identity construction where culture, academic and workplace knowledge and practices intersect.

Social constructionism does not appear to engage in discussions of ontology. Crotty (1998) justified this by contending that the concepts of epistemology and ontology are mutually dependent and difficult to distinguish conceptually when discussing research, as: "to talk about the construction of meaning [epistemology] is to talk of the construction of a meaningful reality [ontology]" (Crotty, 1998, p. 10). Therefore, whilst advocating that the assumptions that underpin all qualitative research are both epistemological and ontological, for reasons of clarity, Crotty (1998) omits ontology from his four elements of research design.

5.2.2 Theoretical perspective: Interpretivism.

The theoretical perspective is represented as the philosophical stance or the biases that underpin a methodology. Clarifying the epistemological stance for both myself as the researcher and of this research study as social constructionist, imply assumptions about my

view of the world and in-turn, that of this research. Crotty (1998) posited that these assumptions inform the theoretical perspective by informing the ways in which a research methodology is understood and employed.

The way in which I sought to understand and thus situate this research study was within the world and the social life as it aligned with an interpretivist theoretical perspective. One uses an interpretivist perspective when one seeks to explore and understand the social, cultural and historical interpretations of the world through the perspectives of those who experience it (Rossman & Rallis, 2003). Contrary to the focus of positivist research which is on validity, interpretive inquiry focuses on interpreting the meanings of one's participation, their actions, and reactions within the social and cultural context of one's everyday life (Chowdhury, 2014). This focus enables the researcher to understand the intent of choices made by people when responding to social situations, and the consideration of possible ways of responding as well as the rationale for the way in which people choose to respond including the effects of such actions (O'Reilly, 2009). Interpretivist inquiry therefore relies on the participants' views about the situation being studied (Creswell, 2009).

In this research I sought to understand the social and cultural interpretations of ICALD nursing students as they participated with members of an Australian CoNP. The rich social and situated context formed a critical element of this inquiry. However, it was the meaning-making processes that the research participants undertook individually, and more importantly collectively, as a response to social interaction that was of significant interest in this research.

5.2.3 Methodology: Case study.

A research methodology represents the strategy or design that informs the choice of data collection methods and the use of these methods as a link to addressing the research questions (Crotty, 1998). In this section I present and justify why the case study approach was used as the research methodology for this research.

Case study and case study research is represented in a variety of ways: as a process of conducting case study research; the case as a unit of analysis; or as the end product of case study research (Merriam, 1998). Thomas (2011) observed that such differences are due to the diverse disciplines that employ the case study approach, including the different epistemological and theoretical standpoints which particular disciplines take when seeking to understand the world. However, fundamental to the case study approach as a research methodology is its usefulness when generating an in-depth, multi-faceted understanding of complex issues in a real-life context (Crowe et al., 2011), especially when the boundaries between phenomenon and context are not clearly evident (Yin, 2003). However, the ability to provide such understanding is dependent upon the process of in-depth description and analysis of a bounded system (Merriam, 2009), and the ability to gain a deep understanding of the context, phenomenon and meanings that these have for those involved (Swanborn, 2010). Thus, defining what is to be studied (the case), whilst sometimes challenging, is an essential characteristic and pivotal process of case study research (Merriam, 1998; Stake, 2005; Yin, 2003).

Thomas (2011) proposed a way to clarify what the case is a study of and what it is not. According to Thomas (2011), a case study comprises two elements: a practical, historical unit or *subject* (the case) of the case study; and an analytical or theoretical frame referred to as the *object* of the study (p. 513). From this perspective, the subject is the phenomenon to be observed, however has little meaning if observed on its own. It is the object that affords meaning to the observed subject by providing the analytical lens through which to understand the dynamic context in which the subject is situated. In relation to this research study, ICALD nursing students participating with members of an Australian CoNP during an immersive simulation program represent the subject. The object is represented by Wenger's (1998a) social and cultural perspective of CoP through which to analyse and understand these students' participation. Further, the perspective of CoP illuminated understanding into the

way immersive simulation could develop ICALD nursing students' capability to participate with members of an Australian CoNP. Identifying the object as an established theoretical concept at the outset does not mean that the object is fixed. Rather, it is the way in which the "analytical focus crystallises, thickens, or develops as the study proceeds...that is at the heart of the study" (Thomas, 2011, p. 514).

The case study methodology provides flexibility in both the purpose and intent of the research. Yin (2003), Merriam (1998) and Burns (2000) advocate case study research methodology when the purpose of inquiry is to better understand research questions that focus on *how* or *why* phenomenon occurs. The purpose of this case study research was to provide insight into the phenomenon of ICALD nursing students' participation within an Australian CoNP for the first time, by drawing on and building upon established theoretical perspectives of learning. Thus, in this research I sought to illuminate phenomenon that had been the focus of little previous inquiry. Therefore, in this research study, I aimed to provide a basis for future research and theory building.

Strengths of the case study approach to research have been attributed to the unique characteristics of this methodology. Qualitative case study inquiry is characterised by: the particularistic meaning of the case study which focuses on a particular situation, event or phenomenon; and it is descriptive, in that the product of case study research provides a thick, rich description of the phenomenon under inquiry (Merriam, 1998, 2009). In addition, case study methodology:

- provides a means of exploring complex social phenomenon that consist of multiple variables of interest anchored in real-life situations (Merriam, 1998; Yin, 2003);
- incorporates a number of research methods and sources of evidence (Merriam, 1998; Stake, 2005; Yin, 2003); and
- relies on converging lines of inquiry in a triangulating fashion (Yin, 2003).

Therefore, in order to address the two research questions that underpinned this research, a multiple case study methodology was adopted, comprising of two case studies involving ICALD nursing students who participated in an immersive simulation program prior to their first clinical placement in Australia. In this study I employed multiple data collection methods at four data collection points. These data collection points are presented and discussed in detail in the section below.

5.2.4 Research methods.

Research methods as defined by Crotty (1998) involves describing in detail the techniques and procedures used to collect and analyse data in order to address the research questions. In order to address the research questions, data in the form of interviews, gleaning the first-hand experiences of the research participants was collected, along with the observations and perceptions gathered by the researcher. Gibson and Brown (2009) suggested that there are three categories of research methods employed in qualitative research. They are: asking people questions; observing people; and reading or examining documents and other contextual resources. Yin (2003) argued that whilst there are a number of research methods appropriate to case study methodology, "no single source has complete advantage over all others. In fact, the various sources are highly complementary, and a good case study will want to use as many sources as possible" (p.85). Selected sources of data for this research were focus group interviews, individual interviews, participant observations, video recordings, and contact summaries. In this research I focussed on these data sources based on the comparative strengths and weaknesses of each, and the need for multiple sources of data to allow triangulation through converging lines of inquiry. In the following sections I describe each source of data collection for this research and discuss the comparative strengths and weaknesses for each source.

5.2.4.1 Focus group interviews.

Focus group interviews have become a highly regarded as a research method in qualitative social science, education and health research (Kevern & Webb, 2001; Punch, 2009). According to Krueger (1994), the focus group interview comprises of small groups of research participants who possess certain characteristics. The purpose of focus group interviews is to obtain qualitative data in a focussed discussion (Kevern & Webb, 2001).

Strengths of focus group interviews include the ability for research participants to share their perceptions, attitudes, feelings or ideas about particular issues or experiences (Kevern & Webb, 2001). In focus group interviews, conversational interaction is encouraged between participants, allowing for elaboration and exploration of particular phenomenon. The way in which focus group interviews could be used to facilitate the engagement of participants who may have otherwise be reluctant to contribute (Denscombe, 2003) was of particular interest in this research study. Hence, this data collection method was perceived as a way to gain insights that might not have been possible through one-on-one interviews. Further, Kamberelis and Dimitriadis (2005) highlighted the synergistic and dynamic nature of focus group interviews as a strategy to reveal often unarticulated norms and normative assumptions. Revealing and understanding such assumptions, particularly in terms of the research participants' social and cultural difference, was an important and implicit aim of the focus group interviews. However, concerns about focus group interviews include poor procedures (Krueger, 1995), concerns about the power relationships between the researcher and the research participants (Mertens, 2005), and the potential for some participant voices to dominate those who are more quiet (Kevern & Webb, 2001).

In an attempt to address the concern about poor procedures, the focus group interviews took the form of semi-structured interviews (Merriam, 1998), also described as guided interviews (Grbich, 1999; Patton, 2002). Thus, this approach allowed for the preparation of questions with the purpose of framing the issues to be explored prior to the interviews, whilst

allowing myself as the interviewer, freedom to ask additional questions in order to explore concerns and themes. Interview guides were developed (Appendix A; Appendix B) outlining the procedure for each focus group interview including questions and guiding prompts. Prior to implementation, the interview questions were evaluated in three ways. Firstly, questions were developed according to six principles provided by Mertens (2005), these being:

1. Each interview comprised of fewer than 10 questions.
2. The questions were open-ended.
3. *Why* questions were avoided as much as possible in an attempt to prevent a defensive response by participants.
4. The questions were carefully considered to ensure they related to the research questions and covered the breadth of topics desired.
5. The questions included a context and sufficient information to enable participants to understand what was being asked without overwhelming them.
6. The questions were arranged in a way to funnel the focus of the interview, from the general to the specific.

Secondly, the questions were checked by my PhD supervisor for clarity. Thirdly, the questions were trialled on two first-year ICALD nursing students who were not participants in this research study to check for any ambiguity. As a result of these evaluations, several questions were re-structured or re-written completely. Although the interview guides were developed prior to the interview, and questions were sequenced from the general to specific, questions were designed so they could be asked in any order according to the flow of the conversation (Gibson & Brown, 2009; Merriam, 2009; Patton, 2002).

In an attempt to reduce the influence of a power relationship between myself and the research participants, the role that I adopted, as the researcher, was one of a "friend", rather than that of a supervisor or leader (Mertens, 2005, p. 251). According to Mertens (2005), such a role assumes no specific authority over research participants and communicates to the

research participants a relationship of mutual respect. Further strategies included establishing an environment where the research participants felt safe, and conducting the focus group interviews in a way that resembled a conversation (Grbich, 1999; Patton, 2002). As the researcher conducting the focus group interviews, I was particularly mindful to engage the research participants whose contributions may have been stifled by those who may have otherwise dominated the conversation.

5.2.4.2 Individual interviews.

Individual interviews have been identified as a significant sources of data for case study research (Burns, 2000; Yin, 2003). Individual interviews can provide insight into research participants' interpretations, descriptions and perspectives of their experiences. The purpose of individual interviews is to gain insight into phenomena that are unable to be observed (Merriam, 1998; Patton, 2002). In relation to this research study, I was not physically able to observe the research participants during the clinical placement. Therefore, individual interviews enabled me to gain insights into what were otherwise unobservable phenomena such as: feelings, thoughts and intentions (Patton, 2002); behaviours and actions that occurred at a previous point in time (Grbich, 1999; Patton, 2002); and to elicit the meanings that these participants attached to their experiences (Patton, 2002). The purpose of the individual interviews was to explore each research participant's perceptions of being a learner within an Australian CoNP for the first time. These individual interviews were therefore, conducted as the final data collection method to enable an in-depth exploration of individuals' interpretations, descriptions and perspectives of their experience of the clinical placement, and any relationship to the immersive simulation program. An interview guide was developed (Appendix C) outlining the procedure for each interview including questions and guiding prompts. Interview questions were evaluated according to the same processes outlined in Section 5.2.4.1.

Several warnings are offered to case study researchers employing individual semi-structured interviews. Burns (2000) warned of the possibility of researchers relying on only one data source and suggested the use of multiple sources of data for confirmatory and contrary evidence. Yin (2003) highlighted the potential for bias resulting from poorly chosen or constructed questions. Further, Yin (2003) cautioned about the possibility of inaccuracies due to poor recall, or participant reflexivity by providing responses perceived as what the researcher wanted to hear. These concerns were acknowledged, by employing the same strategies used to address such concerns for individual interviews as described earlier for the focus group questions.

5.2.4.3 Participant observations.

Participant observation is another appropriate data collection method for case study research (Yin, 2003). Strengths of participant observations include allowing researchers to witness in real-time and in the actual context, events and participant responses to such events as they occur (Yin, 2003).

Participant observations in this research study were limited to observing interactions between the research participants and the members of an Australian CoNP during the three immersive simulations. It is important to note my observations took place away from the participants, in a purpose-built simulation centre control room. Such observations were essential to this research in order to provide the focus for the semi-structured group interviews in the form of the post-simulation debrief, and in-turn, the basis for exploring the meanings constructed by participants through their experiences of participation during each immersive simulation. Thus, participant observations for this research, did not take the form of naturalistic field observation employed by ethnographic researchers (Grbich, 1999; Patton, 2002), but rather as a technique commonly employed in simulation practice to inform the post-simulation debrief (Cant & Cooper, 2010; Fanning & Gaba, 2007).

Participant observations as a data source were also limited because of operational reasons. My role during each immersive simulation was not only that of the researcher. My role included the coordinator of each simulation, the voice of the manikin, and the operator of the audio-visual recording system. Due to these limitations, the video recordings of each simulation provided a significant source of data relevant to this case study research.

5.2.4.4 Video recordings.

Similar to participant observations, video recordings allow researchers to observe in real-time, social interactions, participant actions, and responses to such actions. Video recordings, enable a level of observation and analysis not afforded by "live" participant observations, because the researcher is able to replay and review the recordings as often as they wish (Haidet, Tate, Divirgilio-Thomas, Kolanowski, & Happ, 2009). However, it needs to recognised that video recordings provide only a window into what happened and as such may lack important contextual data (Haidet et al., 2009). Furthermore, the knowledge of being recorded may influence participant responses; a phenomenon known as the Hawthorne effect (Haidet et al., 2009; Patterson, Blike, & Nadkarni, 2008).

Constructing meaning of the video data was aided by the use of a framework to guide the process of describing what was observed. In this research project I adapted Patton's (2002) guidelines for understanding interactions within "human and social environments" (p.285). This framework that I developed was used to describe the social interactions observed from the video data. This framework is presented in Table 4.

Table 4

Cues for Making Meaning of Observations

Characteristic of observed social interaction	Cues for describing observation data
Human and social environment	The ways people organise themselves into groups and subgroups. Patterns, frequency and direction of interaction. Decision-making patterns; who makes decisions? To what extent are decisions made openly so that participants are aware of the decision-making process? How are decisions communicated?
Planned program implementation and formal interactions	What exactly is said at the beginning? How did participants respond or react to what was said? Who is involved? What is being said by staff? What are participants doing? What is being said by participants? What are the variations in how participants engage? What is said to indicate the interaction is ending? How do participants react to the ending of the activity?
Attend to the native language of the program participants	What is the exact language used by participants? What are the literal meanings, connotations and symbolism of what is said?
Non-verbal communication	What non-verbal strategies did participants use to gain the attention of or to approach another?
Observing what does not happen	As an observer, what was expected to happen but did not?

Note. Adapted from Patton (2002)

The potential for participant reactivity, the potential for participants to change behaviour due to the knowledge of being recorded, as mentioned previously, could not be dismissed. Consequently, with the aim of minimising the obviousness of being recorded, a small digital camera was used and whilst not concealed, was positioned discretely in the simulation environment; a strategy supported by Gross (1991).

It is important to note that the recorded behaviours of the research participants could not be claimed to be the same as what may occur in the authentic, natural context of practice (Knoblauch, Schnettler, & Raab, 2012). However, it can be argued that the participants interactions, actions, and reactions that occurred during each immersive simulation were not simulated, but were very real. From the perspective of Patton (2002), the immersive simulations were considered a "planned program" (p. 285), with the video recordings

providing a representation of what was said and done during the interactions between ICALD nursing students and members of an Australian CoNP in a specific space and time.

Another source of data collected for this research project were contact summaries. These are described in the section below.

5.2.4.5 Contact summaries.

Miles and Huberman (1994) suggest researchers record essential information about an interaction such as date, time and participant identifiers, as well as initial impressions of contact in the form of contact summaries. Capturing this information allows researchers to reflect on the main concepts, issues, themes and questions that arise from interactions with research participants, making these available for future reflection and analysis.

Being the sole researcher for this research study, presented challenges in taking detailed notes during the interviews as well as during the immersive simulations. I completed a contact summary within 24 hours of each interaction with the research participants, a process that comprised revisiting the brief notes taken during each encounter along with the respective recording of the interaction. In this way, each contact summary whilst provoking reflection, also confirmed or refuted the observations documented in the notes. A sample contact summary is presented in Appendix D.

Miles and Huberman (1994) warn that contact summaries as a sole data source may be subject to researcher bias. It is for this reason that contact summary data was triangulated with other data sources.

5.2.5 Data management and analysis.

5.2.5.1 Transcription.

Data from audio taped interviews, participant observations and video recordings were transcribed verbatim into text. This transcribed data reflected the expression and grammar of the research participants; a point worth noting since for all of the research participants,

English was a second language. Video data was descriptive, with transcription being guided by the characteristics and cues identified in Table 4 in order to provide sufficient context to capture the meaning of what was taking place (Patton, 2002). Misrepresenting the words and behaviours of the research participants was a significant concern. Thus, for this reason I frequently returned to the original recordings throughout the transcription process to ensure transcriptions accurately represented what was being said and what was being done. I did this in order to familiarise myself with the data and to familiarise myself with the research participants. All of the participants were de-identified by using pseudonyms during the transcription process.

5.2.5.2 Data analysis: Thematic analysis.

Yin (2003) acknowledged data analysis to be one of the "least developed and most difficult aspects of doing case studies" (p.109). As a neophyte qualitative researcher, I encountered what Yin (2003) observed as the experience of many beginning case study researchers, by starting the research "without having the foggiest notion about how the evidence is to be analysed" (p.109). This was disconcerting, as I was acutely aware of the need, as Guest, MacQueen, and Namey (2012) put it, "to argue what we know based on the process by which we came to know it" (p.4). Whilst seeking guidance in the works of Yin (2003), Merriam (1998, 2009), Stake (2005) and Patton (2002), it was Patton's (2002) suggestion that "The case story can be told chronologically or thematically (sometimes both)" (p.450) that informed my choice of thematic analysis for this research study.

Thematic analysis is one method for identifying, organising, analysing and reporting patterns within research data. Thematic analysis is a process which is used to allow the researcher to provide rich, detailed descriptions (Braun & Clarke, 2006), and it also provides a way to interpret key aspects of the topic of inquiry (Boyatzis, 1998). Qualitative researchers assert that there is a the need for data analysis to be consistent with the epistemological and theoretical perspectives of research (Crotty, 1998; Merriam, 1998). Thematic analysis is

described as providing a flexible approach to detecting patterns, regularities as well as inconsistencies across multiple sources of data, identifying and describing both implicit and explicit ideas or themes (Guest et al., 2012). The processes of generating and interpreting data, exploring and confirming meanings of what research participants do and say enabled through thematic analysis, facilitates a continuous process of critical reflection and analysis; processes consistent with the epistemological stance and theoretical perspectives that underpinned this case study research (Schwandt, 2000).

In this research I made use of the six-phase framework of Braun and Clarke (2006) to guide the process of thematic analysis. Indeed, in this case study research, underpinned by epistemological and philosophical perspectives of social constructionism and interpretivism, I utilised thematic analysis as an approach to capture the complexities of meaning within and across data. The processes of thematic analysis undertaken for this research are described in the following sections.

In the second section of this chapter I have provided details about the research design framework utilised for this research study based upon epistemology, theoretical perspective, methodology, and research methods as suggested by Crotty (1998). As mentioned previously, this case study research was underpinned by a social constructionist, interpretivist perspective, which provided a way to explore and understand the social, cultural and historical interpretations of the world according to the first-hand experiences of the research participants.

In the third section of this chapter, the way in which the research was conducted is presented.

5.3 Research Design

Research design refers to the way in which the researcher plans and structures the research process (Creswell, 2009; Schneider et al., 2003). This includes details pertaining to

the research setting, ethical considerations, the processes of participant recruitment, the research participants, data collection, the process of thematic analysis undertaken, as well as the strategies taken to enhance the trustworthiness of the research.

5.3.1 Research aims and questions.

The aim of this research was to explore ways to develop international nursing students' capability to learn during the clinical placement, through the use of immersive simulation. Central to addressing this aim was exploring ways to inform immersive simulation design by aligning pedagogies of the classroom and the workplace through the theoretical perspective of Wenger's (1998a) Communities of Practice. Therefore, the two questions posed were:

3. In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?
4. In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

5.3.2 Research setting.

This research was conducted in a public university school of nursing in Melbourne, Australia. The university comprised of six campuses across four states and one territory. At the time, the courses offered were predominantly in the fields of health and education. The justification for selecting this university was based on the large population of international students studying nursing. In addition, this university was selected for the following pragmatic reasons. Firstly, as my place of employment, this university afforded me ready access to the university setting and its simulation facilities. Secondly, I had an understanding of the Bachelor of Nursing curriculum and the learning opportunities offered to the students

studying the curriculum. Knowledge of these factors assisted me in the design of an immersive simulation program that aligned with Bachelor of Nursing curriculum.

During the period of 2009 to 2011 when data collection took place, approximately 39% of students enrolled in the university's Bachelor of Nursing program were categorised as international students (Statistical Digest, 2012). This university admitted ICALD nursing students via two different enrolment pathways for two different programs. One enrolment pathway involved overseas qualified nurses (OQNs) (requiring a student visa) in an abbreviated two-year Bachelor of Nursing program. The other enrolment pathway involved ICALD students with no prior nursing experience who enrolled in the full three-year Bachelor of Nursing program with the following conditions; that they held a student visa, and that they had completed an overseas equivalent of secondary school. At the time of data collection, ICALD students were required to achieve an overall International English Language Testing System (IELTS) level of 6.5 (Academic) in order to enter the Bachelor of Nursing program. During this period, approximately 20 equivalent full-time nurse academics were employed by the school of nursing.

5.3.3 Ethical considerations.

Conducting this research in a way that was ethical was paramount in order to protect the welfare and rights of the research participants; a vulnerable population of first-year ICALD students studying nursing in Australia. Considerations and measures such as informed consent, privacy, safety, and prevention of coercion were addressed to ensure that this research study could be ethically justified.

Ethical approval and consent to undertake this research was obtained from:

- Monash University Human Research Ethics Committee (Appendix E).
- The university Human Research Ethics Committee where the research participants were recruited (Appendix F).

- Consent to access nursing students was obtained from the Head of the school of nursing.

Informed consent was obtained from the research participants by ensuring:

- Recruitment flyers (Appendix G) and explanatory statements (Appendix H; Appendix I) were written in plain English and provided a clear description of the research and what participation would entail.
- Recruitment flyers (Appendix G) and explanatory statements (Appendix H; Appendix I) included my contact details as the researcher should potential participants seek further information prior to providing consent.
- Prior to their involvement in this research, each participant signed a consent form (Appendix J; Appendix K).
- Explanatory statements (Appendix H; Appendix I) and consent forms (Appendix J; Appendix K) stated how data would be collected (including video recording), stored, and that the data would be used for the purposes of this research only.
- Research participants were informed that due to the small sample size, anonymity could not be guaranteed as participant actions or responses described could enable identification by fellow participants through deduction.
- Research participants were able to keep copies of the explanatory statement and the signed consent form.
- Prior to the commencement of any interaction involving data collection, research participants were provided an opportunity to have questions answered, and verbal consent was once again obtained.

Measures to ensure privacy took the form of:

- Data collection took place, where possible, in venues and at times when participants would not be identified by academic staff or peers as participants in this research.

- Research participants were advised via the consent forms (Appendix J; Appendix K) that transcribed data relating to each participant's participation would be provided to them for approval.
- Consent forms were stored separately from the research data.
- Pseudonyms were used during the transcription, analysis and writing processes.
- All contact details of the research participants were stored securely and destroyed after five years.
- Electronic data were stored in password-protected computer files. Hard-copy data was stored in a locked filing cabinet at my workplace office. All data was destroyed after five years.

Anticipating the psychological impact of the immersive simulation program during or after this research was an impossibility. Strategies for ensuring the psychological safety of the research participants included:

- Discussing and exploring what occurred during each simulation during the post-simulation debriefing.
- Providing the research participants with the contact details for the University counselling services.

As a lecturer in the school of nursing where this research was conducted, issues of coercion were a particular concern. Measures to address issues pertaining to coercion were:

- Explanatory statements (Appendix H; Appendix I) and consent forms (Appendix J; Appendix K) advised research participants that participation was voluntary, and no remuneration would be offered.
- Explanatory statements (Appendix H; Appendix I) informed research participants that this research would in no way influence their grades or enrolment.
- Explanatory statements (Appendix H; Appendix I) and consent forms (Appendix J; Appendix K) advised research participants that they could withdraw from the

research at any time without being penalised or disadvantaged in any way, and that best efforts would be made to remove data contributed by the participant.

- The researcher did not teach any of the research participants.

5.3.4 Research phases.

This research study was comprised of two phases. Phase One research participants consisted of five ICALD nursing students (all OQNs) who had recently completed their first clinical placement in Australia. Phase One participants participated in a semi-structured focus group interview after completion of this clinical placement. The purpose of data collection from this cohort of students was to obtain the first-hand experiences of these OQN's after their initial clinical placement in Australia. The analysis of the Phase One data, in conjunction with the perspectives of learning as articulated by Wenger (1998a), Lave and Wenger (1991), Herrington and Oliver (2000), Eraut (2004a, 2007), and the healthcare simulation literature, were used in the development of the immersive simulation program for Phase Two.

Phase Two consisted of seven ICALD nursing students participating in a suite of three immersive simulations developed in Phase One of the study. Phase Two research participants consisted of two OQNs and five ICALD nursing students who had no prior nursing experience in Australia. None of the Phase Two participants had commenced their first clinical placement in Australia. Table 5 provides a summary of the sequencing, research methods and data collection techniques for Phase One and Phase Two of this research study.

Table 5

Research Methods for Phase One and Phase Two

Phase, timeframe and sample	Method	Data
Phase One April 2010 OQNs (n=5)	Focus group interview: post-initial clinical placement. Contact summaries. Thematic analysis.	 Audio recordings (transcribed). Text. Codes and themes.
Phase Two April-July2011 OQNs (n=2) ICALD nursing students (n=5)	Simulation One (n=4; n=3) Direct observation. Video recordings. Focus group interviews: post-simulation debriefing. Contact summaries. Thematic analysis.	 Text. Video data (transcribed). Audio recordings (transcribed). Text. Codes and themes.
	Simulation Two (n=2; n=3) Direct observation. Video recordings. Focus group interviews: post-simulation debriefing. Contact summaries. Thematic analysis.	 Text. Video data (transcribed). Audio recordings (transcribed). Text. Codes and themes.
	Simulation Three (n=2; n=3) Audio recordings. Group interviews: post-simulation debriefing. Contact summaries. Thematic analysis.	 Audio recordings (transcribed). Audio recordings (transcribed). Text. Codes and themes.
	Post-clinical placement (n=5) Individual interviews. Contact summaries. Thematic analysis.	 Audio recordings (transcribed). Text. Codes and themes.

5.3.5 Phase One.

5.3.5.1 Participant recruitment.

A purposive sampling technique was employed for Phase One to ensure the characteristics of the research participants matched those required for this research study. Inclusion criteria for Phase One required research participants to:

- be enrolled in their first-year of the Bachelor of Nursing program;
- be an overseas qualified nurses (OQNs) having completed their initial nursing qualification in a country where English was not the primary language;
- speak a primary language other than English; and
- have had completed one clinical placement in Australia.

This research study was advertised via copies of the Phase One recruitment flyer (Appendix G) placed at various locations around the university campus. In addition, I obtained permission to provide a ten-minute introductory presentation about this study to a group of international nursing students at the commencement of a lecture six-weeks prior to data collection. To avoid any perception of coercion, no academic staff who taught these students were present. Hard-copies of the Phase One recruitment flyer, explanatory statement (Appendix H) and the consent form (Appendix J) were made available at this time.

Although the flyer specified OQNs from China or India, this selection criteria was relaxed to allow OQNs from any country where the primary language was not English to participate. China and India were identified on the flyer as these countries represented the countries of origin of the majority of OQNs enrolled in the University's Bachelor of Nursing program at the time.

Potential participants were invited to contact me via my student email address (provided on the flyer). On receipt of an expression of interest from potential participants, I provided the explanatory letter and consent form via reply email. I then maintained contact with the research participants via email, including the details of the pending focus group interview. The focus group interview was scheduled two weeks after the completion of the research participant's first clinical placement in Australia. Participants were recruited on a first-come first-serve basis.

5.3.5.2 Participant profile.

Five OQNs participated in Phase One. The demographic data and nursing experience of Phase One participants is presented in Table 6.

Table 6

Phase One Participants

Demographic data	Eun-jung	Caixia	Mi-young	Akiko	Eiko
Country of Origin	Korea	China	Korea	Japan	Japan
Gender	Female	Female	Female	Female	Female
Age range	25-29	25-29	30-34	25-29	30-34
OQN	Yes	Yes	Yes	Yes	Yes
Duration of prior nursing experience	6 months	7 months	10 years	4.5 years	10 years
Area(s) of prior nursing experience	Emergency department	Medical (gastro-intestinal)	Surgical (neurology, orthopaedics)	Haematology Oncology Renal Haemo-dialysis	Surgical (neurology, plastics) Operating room Out-patient clinic Counselling
Specialisation	General nursing	General nursing	General nursing	Oncology Dialysis	General nursing
Participant/ researcher relationship	Nil	Nil	Nil	Nil	Nil

The demographics of Phase One participants were relatively unremarkable given the inclusion criteria. All participants were female which was not surprising given nursing is almost globally a female-dominated profession. The average age of participants was 29 years. This too was unremarkable given that in this research I was specifically seeking nurses who had already completed a nursing qualification in another country. Whilst not necessarily remarkable, but certainly relevant for Phase One was the relatively broad range of prior nursing experience that the participants brought to this research study.

The participants' experience of nursing practice ranged from six-months duration in one field of practice to over 10 years of experience in multiple fields of nursing practice. This variation suited the purpose of Phase One of the study which was to provide a first-hand understanding of the differences of the clinical placement experienced as a nursing student in

Australia in contrast to participants' country of origin; specifically, the differences in relation to participation and learning within an Australian CoNP.

This variation of experience in nursing practice also contributed to the credibility of Phase One in two ways. Firstly, participants who had less than 12 months experience of nursing practice could draw on their recent experience as learners-as-nursing students, as well as newcomers to a CoNP in their countries of origin. The analysis of the data gathered from these participants was essential to the development of the immersive simulation program. Secondly, participants with several years' experience of nursing practice brought a rich and deep understanding of: what being a member of a CoNP was like in their countries of origin; the supports and strategies required by newcomers entering this CoNP; and an understanding of the differences between being learners in the participants' countries of origin and Australia.

5.3.5.3 Data collection.

In Phase One, one semi-structured focus group interview involving all five research participants was conducted. The focus group interview took place in February 2010, two weeks after the research participants had completed their first clinical placement in Australia. The venue was a classroom within the university away from the School of Nursing. The focus group interview followed the process set out in the interview guide (Appendix A) and was approximately 95 minutes in duration. The interview was recorded via a digital audio recorder and was later transcribed according to the process described in Section 5.2.5.1.

5.3.5.4 Data analysis.

Analysis of the transcribed data was guided using the six-phase approach to thematic analysis described by Braun and Clarke (2006). A "theory-driven" (Boyatzis, 1998, p. 33) approach to coding, theme identification and refinement was adopted where the meaning and wording of codes and themes reflected the theoretical lens of Wenger's (1998a) three dimensions of practice; mutual engagement, joint enterprise and shared repertoire.

Phase 1: Familiarisation with the data. The transcribed data was read and re-read to check for accuracy against the original recording. Reading the data was a continual process with the purpose of searching for meanings and patterns, and to ensure the analysis was an accurate representation of what had been said. My thoughts and ideas were recorded as notes in the margins of the transcribed data.

Phase 2: Generating initial codes. Initial codes were generated manually based upon the thoughts and ideas identified. Clear definitions of codes were developed to assist with understanding what was and what was not a code (Braun & Clarke, 2006) and to aid with the consistency of coding (Boyatzis, 1998). A second process of coding involved, through triangulation of the data, the continual refinement and interpretation of constructs related to the analysis, seeking relationships between the data, the research questions and the key points from the literature reviewed (Merriam, 1998). Notes in the form of coding and theoretical memos (Harding & Whitehead, 2012) were taken at this time as I attempted to identify patterns of interest in the data, and to determine what patterns were of greatest relevance to the research questions and which were not (Braun & Clarke, 2006).

Phase 3: Searching for themes. Codes were sorted into potential themes including data extracts. I continuously returned to the original data to ensure the context of the code was maintained. Themes were identified through triangulation of the coded data (Merriam, 1998) and the theoretical concepts of Wenger's (1998a) three dimensions of practice; mutual engagement, joint enterprise and shared repertoire. This process resulted in a thematic map. A theme hierarchy was constructed comprising of themes and sub-themes framed according to Wenger's (1998a) three dimensions of practice. This process was aided through the use of NVIVO data management software.

Phase 4: Reviewing themes. Initial themes were compared against each other, along with the codes and the data they represented. These were refined to ensure there was coherence without ambiguity. Further analysis took the form of re-visiting the original data

set and the reviewed literature to ensure the thematic map accurately represented the data set as a whole. Additional data that was relevant but was previously omitted was coded at this time.

Phase 5: Defining and naming themes. Themes and sub-themes were analysed and named in a way that captured the essence of each theme with the aim of providing the reader with an understanding of what is of interest within the theme, as well as providing a reference point to the research questions (Merriam, 1998).

Phase 6: Producing the report. In Phase One of the study, the results were interpreted and discussed according to Wenger's (1998a) dimensions of the learning architecture: participation and reification; designed and emergent; local and global; and identification and negotiability. A synthesis of Phase One findings, Herrington and Oliver's (2000) elements of authentic learning environments, and Eraut's (2004a, 2007) typology of early career learning, as well as nursing simulation literature, resulted in eight propositions, used as a preliminary design framework for the immersive simulation program This process is described in Chapter Six. The immersive simulation program was implemented in Phase Two of this research study.

5.3.6 Phase Two.

In Phase Two of this study, the focus centred on the research participants' experiences of the three immersive simulations.

5.3.6.1 Participant recruitment.

The inclusion criteria for Phase Two of the research reflected those of Phase One apart from one significant element; the participants were not to have attended a clinical placement in Australia. However, recruiting sufficient participant numbers who met the inclusion criteria proved problematic, resulting in three unsuccessful attempts and delaying Phase Two data collection.

The first attempt at recruitment for Phase Two took place in March 2010. 24 potential participants expressed interest after the introductory lecture, however only three consent forms were returned. This first attempt was abandoned due to the low response rate. As the inclusion criteria required participants who had not attended a clinical placement in Australia, the ability to conduct Phase Two was limited to once in an academic semester.

The recruitment process was repeated in August 2010 and March 2011. Both attempts were abandoned due to low response rates. In April 2011, I applied to the Monash University Human Ethics Committee, seeking an amendment to two of the inclusion criteria. These amendments were:

- the recruitment of research participants enrolled in a nursing subject of which I was the coordinator, but in which I did not teach; and
- the recruitment of ICALD nursing students with no prior nursing qualification, as well as OQNs, who had not commenced a clinical placement in Australia.

Approval for these amendments was granted on April 13, 2011 (Appendix E). These changes resulted in a broadening of the focus of this research study to include ICALD nursing students with no prior nursing experience, as well as OQNs studying nursing in Australia. These changes required reconsideration of the complexity of each immersive simulation. Further, there was a need to ensure the focus of the post-simulation debrief and post-clinical interview questions were relevant to the broader participant profile. Rather than focusing on the differences between learning as nursing students in participants' respective countries of origin and Australia, questions focussed on differences between learning in formal education environments, and within an Australian CoNP during the clinical placement. On reflection, this shift in focus contributed to the richness of the data, greater understandings relating to cultural difference and learning, and transferability of the findings of this research.

Recruitment for Phase Two was undertaken for a fourth time in April 2011. According to the conditions of the amended ethics approval, in order to reduce the potential

for coercion, a colleague rather than myself conducted the introductory presentation. Seven potential research participants expressed an interest by contacting me via my Monash University student email. I replied to each with an electronic copy of the Phase Two explanatory statement (Appendix I) and consent form (Appendix K). Seven signed consent forms were returned. Email contact was maintained with the Phase Two participants as the dates for the immersive simulation program approached. The simulation program was conducted during April and May 2011; three weeks prior to the participants' first clinical placement in Australia.

5.3.6.2 Case selection.

Seven ICALD nursing students participated in Phase Two; five with no previous nursing qualifications, and two OQNs. Four research participants originated from China and four from Korea. This case study research (in Phase Two), was divided into two cases. Each case was defined by the days on which the research participants nominated to attend. In Case One, four participants attended the simulation program over three consecutive Mondays. In Case Two, three participants attended the simulation program over three consecutive Wednesdays.

Each immersive simulation was designed to accommodate small numbers of research participants. The rationale for maintaining small numbers was based on a concern of providing a simulation experience that replicated an authentic student experience of the clinical placement. Small numbers ensured that all participants were able to directly participate in each simulation. A larger number of participants would have resulted in a higher student nurse to CoNP member ratio during each simulation, thus, impeding an authentic experience of participation with members of an Australian CoNP. Furthermore, large participant numbers in each simulation would have resulted in some participants adopting purely observational roles.

A two-case case study approach was designed to enable exploration within as well as between cases.

5.3.6.3 Participant profile.

Case One participants

Four ICALD nursing students including two OQNs were research participants in Case One of this study. The demographic data and nursing experience of the Case One participants is presented in Table 7. In order to maintain anonymity, pseudonyms were used in place of participant names.

Table 7

Phase Two Case One Participants

Demographic data	Cheng	Kwan	Hui	Jiao
Country of origin	China	Korea	China	China
Gender	Male	Male	Female	Female
Age range	30-34	30-34	20-24	20-24
OQN	No	No	Yes	Yes
Previous nursing experience	Nil	Nil	Nil	12 months: China
Experience with Australian healthcare	Four-hour observation visit	Four-hour observation visit Employed as a personal care assistant (PCA)	Nil	Nil
Experience with immersive simulation	Nil	Nil	Nil	Nil
Participant/ researcher relationship	The researcher coordinated a Bachelor of Nursing subject in which the participant was enrolled but did not teach or assess this participant	The researcher coordinated a Bachelor of Nursing subject in which the participant was enrolled but did not teach or assess this participant	Nil	Nil

The two OQNs were female whilst the two non-OQN ICALD nursing students were male. Such a gender balance was unusual in the context of pre-registration nursing education which is predominantly represented by females. Previous nursing experience varied between participants with one OQN having 12 months experience after completing her initial studies in China, whilst the other had no nursing experience. Whilst neither non-OQN ICALD nursing student had previous nursing experience, they had both attended a four-hour observation visit to an Australian hospital as a part of their Bachelor of Nursing program in the previous semester. One non-OQN ICALD nursing student was employed in an Australian nursing home as a personal care assistant (PCA[5]).

Case Two participants

Three ICALD nursing students were research participants in Case Two of the study. The demographic data and nursing experience of the Case Two participants is presented in Table 8. In order to maintain anonymity, pseudonyms were used in place of participant names.

[5] A personal care assistant is a Certificate level qualification and provides basic care to patients or clients, usually under the guidance of a registered nurse.

Table 8

Phase Two Case Two participants

Demographic data	Hyo	Jae-Sun	Cai
Country of origin	Korea	Korea	China
Gender	Male	Male	Female
Age range	30-34	30-34	20-24
OQN	No	No	No
Previous nursing experience	Nil	Nil	Nil
Experience with immersive simulation	Nil	Nil	Nil
Experience with Australian healthcare	Four-hour observation visit	Four-hour observation visit	Four-hour observation visit
Participant/ researcher relationship	The researcher coordinated a Bachelor of Nursing subject in which the participant was enrolled but did not teach or assess this participant	The researcher coordinated a Bachelor of Nursing subject in which the participant was enrolled but did not teach or assess this participant	The researcher coordinated a Bachelor of Nursing subject in which the participant was enrolled but did not teach or assess this participant

Two of the Case Two participants were male and one was female. Whilst none of these participants had previous nursing experience, each had attended a four-hour observation visit to an Australian hospital as a part of their Bachelor of Nursing program in the previous semester.

The almost equal gender balance of the Phase Two participants was unusual insofar as there was expected to be greater numbers of female than male students. Similarities existed between the participants in the two cases in terms of age and country of origin.

One important point of difference existed between the Case One and Case Two participants was previous employment in healthcare. Two of the (Phase Two) Case One participants had completed a nursing qualification in their countries of origin whilst in (Phase Two) Case Two there were no OQNs.

Exposure to the Australian healthcare context also differed slightly between cases. Two of the Case One participants, Cheng and Kwan, had attended a four-hour observation visit to an Australian healthcare facility as a part of their Bachelor of Nursing program in the previous semester. The other two Case One participants, Hui and Jiao, as OQNs, were

enrolled in an accelerated two-year Bachelor of Nursing program and as such had not attended an observational visit. Further, Case One participant, Kwan, had completed a Certificate-level personal care assistant program in Australia and was employed in a nursing home at the time of data collection. All of the Case Two participants had attended a four-hour observation visit in the previous semester.

Demographic data such as country of origin, gender and age, whilst not specific points of analysis, were anticipated to influence the ways in which these nursing students would access and participate with an Australian CoNP. However, the ways in which such characteristics would influence participation were not known. Furthermore, it was surmised that the composition of Case One with two OQNs, and Case Two with no OQNs as research participants, would provide opportunities for relevant and insightful exploration of the differences between the values, beliefs, experiences and expectations of OQN and non-OQN nursing students during the analysis and interpretation of the data.

5.3.6.4 Data collection.

In Phase Two, the data collection consisted of participant observations, video recordings, focus group interviews, individual interviews and contact summaries. The description of and justification for these data collection methods have been discussed in Section 5.2.4.

Each simulation was approximately 20 minutes in duration and was recorded via a digital video camera. During each simulation, I made brief researcher notes and these were later written as contact summaries. At the conclusion of each simulation, a semi-structured focus group interview in the form of a post-simulation debrief was conducted. Each debrief was approximately 90 minutes in duration and followed the processes outlined in the Phase Two focus group interview guide (Appendix B). Each debrief was recorded via a digital audio recorder.

Semi-structured individual interviews were the final method of data collection utilised in this research study. These were conducted during the period of May and July 2011. Three of the Case One and two of the Case Two research participants made themselves available for individual interviews. These individual interviews were conducted at the conclusion of their first clinical placement in Australia. Individual interviews were chosen rather than focus group interviews due to each research participant completing their clinical placement at a different time over a two-month period. Each semi-structured individual interview was approximately 60 minutes in duration and followed the processes outlined in the Phase Two individual interview guide (Appendix C). Each interview was recorded via a digital audio recorder.

Video and audio recordings were transcribed according to the process described in Section 5.2.5.1.

5.3.6.5 Data analysis.

Analysis of Phase Two data followed similar processes to Phase One of the study as described in Section 5.3.5.4. Analysis of Phase Two data differed to Phase One in the following ways.

Phase 2: Generating initial codes. Following the process of *familiarisation with the data*, coding was approached as an iterative process. All transcribed data, including the salient points from the contact summaries, were imported into the NVivo software. Initial codes were generated manually. During the process of defining codes, it became apparent that in attempting to code the data according to Wenger's (1998a) three dimensions of practice as well as his learning architecture, resulted in the same data being categorised in several codes. This led to a large number of codes that provided little meaning. I found the use of the NVivo software de-contextualised the data and made the identification of themes difficult. For this reason, I abandoned the use of NVivo. Instead, the process of coding involved

exploring hard copies of transcripts and contacts summaries, underlining data which seemed to be relevant or interesting and generating initial codes.

Phase 3: Searching for themes. Each initial code was written on a "sticky note". Initial codes were refined in relation to the data set, the research questions and Wenger's (1998a) three dimensions of practice and his learning architecture. Each code was placed on a large wall where they could be viewed as a whole and easily moved about as codes were re-allocated, further refined and were clustered into potential themes. This process facilitated this research by providing a visible map of themes and codes and facilitated triangulation across the entire Phase Two data set. This enabled the recognition of similarities, differences and connections between themes. The result was a thematic map and the construction of a theme hierarchy comprising themes and sub-themes.

Phase 4: Reviewing themes. In addition to the processes described in Section 5.3.5.4, it is important to note that no attempt was made to build a rigid coding system that would require, for example, the forcing of the coding structure of Case Study One onto the Case Study Two data. As the coding structure of both case studies drew on the same theoretical perspectives, there were some similarities in themes and sub-themes. There were also however some differences.

Phase 5: Defining and naming themes. Themes and sub-themes were labelled in a way that captured the essence of each theme and sub-theme. Themes, sub-themes and relevant extracts of the original data were then recorded in a Microsoft Excel spreadsheet. These themes and subthemes formed the structure for Case Study One (Chapter Seven) and Case Study Two (Chapter Eight).

Phase 6: Producing the report. In Chapter Seven and Chapter Eight I have focused on Case Study One and Case Study Two respectively. In each chapter I have given a description of the ways in which the research participants participated with members of an Australian CoNP during the immersive simulation program, as well as the experiences reported by

participants during their clinical placement. These descriptions are explored through the lens of CoP, particularly Wenger's (1998a) three dimensions of practice as well as his learning architecture. Based on these analyses, the eight design elements for immersive simulation proposed in Chapter Six are revised and refined. Consequently, each of the following chapters contains a mixture of results and discussion. It is pertinent to note that the findings in Case Study One (Chapter Seven) vary from Case Study Two (Chapter Eight) since in these chapters I present, where it is relevant, the similarities and differences between the findings.

5.4 Trustworthiness of Qualitative Case Study Research

The characteristics of qualitative case study research that enable the exploration of ill-defined and complex social phenomenon have consequently resulted in criticisms of validity, generalizability, reliability and researcher bias (Burns, 2000; LeCompte & Goetz, 1982; Yin, 2003). Active deliberation continues in relation to the appropriateness of quality criteria for qualitative research (for example, see: Hyett et al., 2014; Krefting, 1991; Porter, 2007; Rolfe, 2006). Rolfe (2006) argued three positions on this complex issue exist: "those writers who wish qualitative research to be judged according to the same criteria as quantitative research; those who believe a different set of criteria is required; and those who question the appropriateness of any predetermined criteria for judging qualitative research" (p.304). Whilst acknowledging such concerns, the following discussion focuses on strategies utilised to demonstrate the quality of the research methodology and methods of this research study.

5.4.1 Quality measures of trustworthiness.

In this qualitative research study, I engaged the measures of credibility, transferability, dependability and confirmability as criteria of the trustworthiness of the findings as proposed by Guba (1981). In the final section of this chapter I describe each of these measures as they related to the trustworthiness of this research study.

5.4.1.1 Credibility.

Guba (1981) proposed that credibility of qualitative research can be measured according to the researcher's ability to establish confidence in the research findings as accurate representations of human experiences as lived and perceived by the research participants, and in the context where the research was undertaken. My role as a qualitative researcher was therefore not to match findings with a single reality, but to accurately represent the multiple realities of the research participants.

One strategy for enhancing the credibility of qualitative research suggested by Guba (1981), is to utilise a range of data sources. As described in Section 5.2.4, this research study engaged a number of data sources; participant observations, video recordings, semi-structured focus group interviews, semi-structured individual interviews, and contact summaries. These raw data sources provided a reference point to which I returned during the analysis process to clarify and confirm that my interpretations reflected the original data. Further, the constant comparison of original data sources against themes, sub-themes and the interpretations made, aimed to build structural coherence of the cases.

A second strategy for enhancing credibility of this research was triangulation. Triangulation involved cross-checking findings as converging lines of inquiry across the different data sources, and served in the construction of a holistic representation of what was being explored (Holloway & Wheeler, 2010; Yin, 2003), whilst minimising distortion of the data, and researcher bias.

A third strategy for enhancing credibility of this research, as advocated by Merriam (2009) involved adequate engagement with the data. As a sole researcher, I was involved in every stage of the research process. The processes of collecting and transcribing data, data analysis and writing up of this research provided me with sufficient opportunity to identify and explore patterns, themes and even contradictions within the data (Merriam, 2009). Furthermore, these processes provided me with a detailed understanding of the data, with the

aim of exploring the perceptions of the research participants, as well as questioning my own understandings, assumptions and biases; the latter representing a self-awareness, also known as reflexivity.

Reflexivity as defined by Patton (2002) is a process of emphasising the importance of self-awareness, political and cultural consciousness, and ownership of one's perspective. Reflexivity is perceived as particularly important for a social constructionist researcher where it is the intent to get as close as possible to the phenomenon of inquiry; a closeness that paradoxically presents a threat to research credibility. One approach to reflexivity in this research study as suggested by Guba (1981) and Merriam (1998) was to clarify my worldview, assumptions and theoretical orientation at the beginning of the research process. The purpose of such clarification was to provide the reader with an understanding of the researcher's background and thus frame of reference from which the research data was organised, studied, analysed and reported (Agar, 1986; Maxwell, 2002). This clarification is provided in Section 1.1 as well as in this chapter.

Patton (2002) perceived reflexivity in a slightly different way by highlighting the importance of voice. In order to practice reflexivity, Patton (2002) suggested that the qualitative researcher needs to “be attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one's own perspective and voice as well as the perspective and perspective and voices of those one interviews and to those whom one reports" (p.65). Whilst some researchers talk about reflexivity in an abstract way (for example, see: Grbich, 1999; Guba, 1981; Koch & Harrington, 1998; Lichtman, 2006; Rolfe, 2006), Patton (2002) illustrated what practicing reflexivity can look like by providing a series of reflexive questions as a triangulated method of inquiry. Patton's (2002) perspective of reflexive questioning is presented in Figure 5.

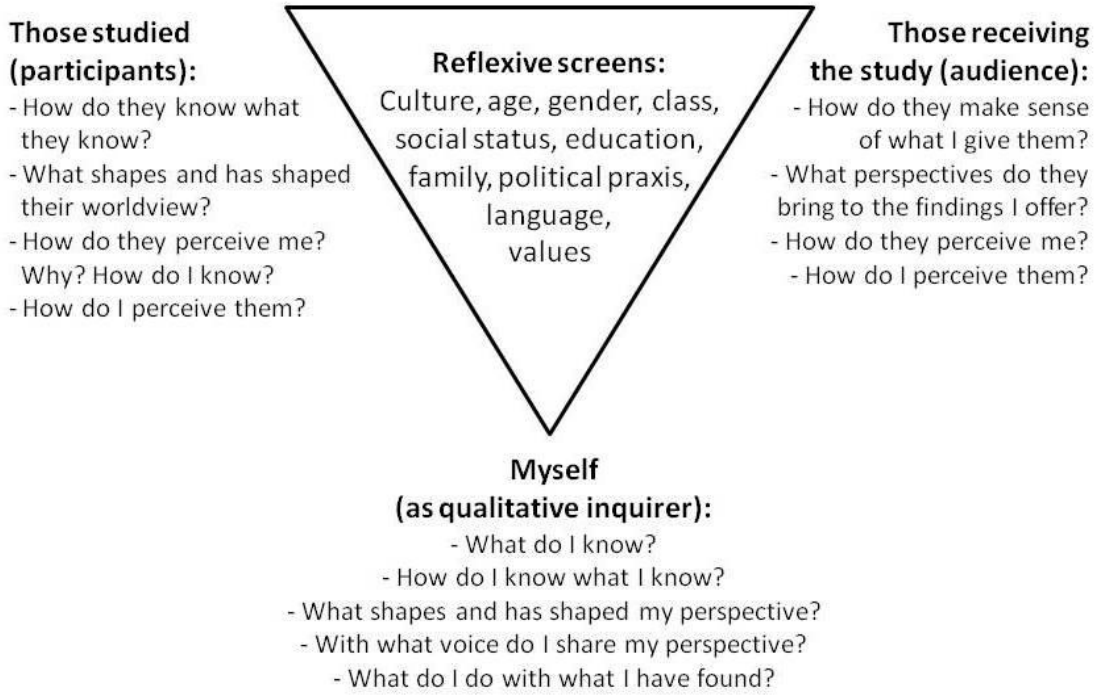

Figure 5. Reflexive questions: Triangulated inquiry (Patton, 2002).

Patton's (2002) three categories of focussed questions proved particularly useful for guiding critical reflection of my role within the research process. Patton's (2002) questions, as reflexive lenses, provided a tangible way to critically explore interpretations and representations of the data in relation to the research participants, potential readers of this research, and my role in constructing and conveying these interpretations. This reflexive process enabled the perspectives of the research participants to dominate throughout the entire analytic and interpretive phase.

One further way of establishing credibility was through member checking (Guba, 1981). In this research study, participants were sent via email, transcribed versions of their contributions made during the interviews. This provided participants with an opportunity to check what was written was what they had meant to say and to request any changes. Of the five Phase One research participants, two replied with no adjustments requested. Of the seven Phase Two research participants, only one reply was received with no adjustments requested.

5.4.1.2 Transferability.

Transferability refers to the extent to which the findings of qualitative case study research are relevant to and can fit into contexts outside that of the research study. According to Guba (1981), transferability is concerned with providing the reader with enough detail to draw comparisons between the research and their own situation and experiences. From this perspective, qualitative research should offer a surrogate experience in which transferability is ascribed by the reader in terms of the research findings resonating with their own experiences. For a judgement of transferability to be made, detailed descriptions of the context of the research are required to enable the reader to imagine themselves in the social world of the case being studied. Details of the context in which this research study was situated have been provided in Section 5.3.2.

Merriam (2009) highlighted the need to capture variation in the characteristics and experiences of research participants in order to enhance transferability. Participant characteristics have been presented in Section 5.3.5.2 and Section 5.3.6.3 with the similarities and differences found in participant characteristics discussed.

5.4.1.3 Dependability.

Dependability as a strategy for enhancing trustworthiness of qualitative research relates to whether the findings are consistent with the data collected. In an attempt to enhance the dependability of this research, the research methodology and methods were reviewed by two qualitative researchers in the form of my PhD. supervisors. In addition, Guba (1981) and Merriam (2009) suggested the need to establish an audit trail to make it possible for another researcher to examine the processes of data collection, analysis and interpretation. Merriam (2009) described an audit trail as a log of research process undertaken including detail about: how data was collected; how themes were identified; and how and why decisions relating to the research were made. In an attempt to enhance the dependability of the analytic phases of this research and to guard against potential bias, the processes of coding and generation of

themes and sub-themes were verified by my PhD supervisors. In another way, this entire thesis represents a detailed inquiry audit.

5.4.1.4 Confirmability.

According to Guba (1981), confirmability of qualitative research relates to ensuring research findings are derived from the research data and not the biases and motivations of the researcher. Confirmability of qualitative research is enhanced by demonstrating the neutrality of the data rather than the neutrality of the researcher. Strategies to enhance confirmability of qualitative research include: triangulation; practicing reflexivity; and establishing an audit trail (Guba, 1981; Krefting, 1991). The ways in which these processes were employed in this research have been described.

5.5 Limitations

This research took a qualitative case study approach to inquiry. The strengths of such an approach was to enable an exploration of ill-defined and complex social phenomenon as they occurred in the context within which they existed. However, it is acknowledged that these characteristics could contribute to questions of trustworthiness of such research findings. It is important to note that the sample size was small with a total of 12 participants. Equally, it is important to highlight that all research participants were from the same Australian school of nursing. This is in keeping with qualitative case study approaches to inquiry yet could raise questions of transferability.

A second potential limitation existed in the ways in which data collection, analysis and interpretation were all undertaken by myself as the researcher and the possibility for my own perspectives and biases to influence virtually all stages of the research process. In one way, this may have contributed to the depth and coherence of the study; in another it suggests a potential for researcher bias. This chapter has described in detail the processes undertaken to

strengthen trustworthiness in terms of credibility, transferability, dependability and confirmability of this research.

These limitations require the reader to interpret the data through the lens of the context of this research study and determine for themselves the trustworthiness of this research and the transferability of the findings to their own contexts and how these resonate with their own experiences.

5.6 Summary

In this chapter I have detailed my background and have justified the rationale for this research study to adopt a qualitative approach in order to explore the research questions. The research design framework has been presented and justified according to Crotty's (1998) four elements of epistemology, theoretical perspective, methodology, and research methods. Furthermore, in this chapter, I have described how this research was conducted, detailed the location of this research, and have described the research participants. I have explained the processes utilised for participant recruitment, and how the data was collected and analysed. Ethical considerations and measures of trustworthiness have also been discussed.

In the following chapter I present the first of three analysis and discussion chapters. In Chapter Six I describe Phase One of this research study with a focus on addressing the first research question:

> In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?

Chapter Six: Phase One

In this chapter I present and describe the process undertaken to design the immersive simulation program, based on the findings from Phase One of the study. This program was then implemented in Phase Two of the study. In Phase One five ICALD nursing students who had recently completed their first clinical placement in Australia were interviewed. Data collected from these interviews provided first-hand perspectives about the experiences of these participants on their first clinical placement in Australia.

This chapter is structured into three main sections. In the first section I present the findings from the Phase One data. A first level of thematic analysis according to Wenger's (1998a) three dimensions of practice, mutual engagement, joint enterprise and shared repertoire provide the three major themes. Findings for each major theme are then interpreted and summarised in terms of Wenger's (1998a) four dualities as *dimensions* of his learning architecture: participation and reification (where learning and identity arises from an interplay between participation and reification); designed and emergent (where learning and identity is seen as a response to design); local and global (where engagement within a local CoP facilitates an identity of membership within a broader constellation of practice); as well as identification and negotiability (where "fields of identification and negotiability orient the practices and identities of those involved to various forms of participation and non-participation") (Wenger, 1998a, p. 235).

In the second section of this chapter I present a second level of analysis where I have synthesised the Phase One data with Herrington and Oliver's (2000) elements of authentic learning environments, Eraut's (2004a, 2007) typology of early career learning; and the workplace learning as well as the nursing and simulation literature. The synthesis of all of these components mentioned, led to the development of the eight design elements as a

preliminary framework for the development of the immersive simulation program for this research study.

In the third section I demonstrate how these eight design elements were utilised in the design of the three immersive simulations implemented in Phase Two of this research study. Accordingly, in this chapter I attempt to address the first research question:

> In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?

In Phase One of this research study, the research participants were all overseas qualified nurses (OQNs) who had recently completed their first clinical placement in Australia. The demographic data of these research participants was provided in Chapter Five (Section 5.3.5.2). Through thematic analysis of Phase One data, three major themes and seven sub-themes emerged. Whilst each theme reflects one of Wenger's (1998a) three dimensions of practice, each theme and sub-theme is labelled according to statements made by the research participants during the semi-structured interview. The major themes and sub-themes are presented in Table 9.

Table 9

Phase One Major Themes and Sub-Themes

Major theme	Sub-theme
Theme One: Relationships are different.	• The pyramid. • Senior nurses and baby nurses. • Get involved! Australia is more friendly.
Theme Two: Community and practice is different.	• Finding yourself within an unfamiliar community. • Negotiating multimembership.
Theme Three: Learning is different.	• Affordances are different. • Learning is different: Learning by joining in.

6.1 Relationships are different

The theme *Relationships are different* relates to the experiences of the participants of Phase One within an Australian community of nursing practice (CoNP) as interpreted through a lens of mutual engagement. As described in Chapter Three, mutual engagement relates to the ways in which newcomers are included in what matters to a CoP. Doing things together represents opportunities for social participation as an experience of interacting with the diverse values, beliefs, and customs of a particular community. The processes of such interaction may include, but does not necessarily guarantee, mutual engagement (Wenger, 1998a). As will be seen, interactions between members of an Australian CoNP (old-timers) and the research participants (newcomers) resulted, at times, in uncertainty and anxiety for these students as they discovered significant differences between the nature of social relationships that characterised an Australian multidisciplinary healthcare team and those that they had experienced in their countries of origin.

According to these participants, the culture of nursing in China, Japan and Korea was defined by hierarchy and a need to demonstrate respect for authority. As nursing students in these countries, understanding and adhering to the social and cultural values, beliefs and norms that permeated the workplace was an unquestioned expectation. Through the course of the focus group interview, the profound ways in which established social and cultural values, beliefs and norms informed each of the participant's identities served as the primary point of difference between nursing and being a nursing student in their countries of origin as compared to Australia. The experiences of these participants are presented through three sub-themes:

- The pyramid.
- Senior nurses and baby nurses
- Get involved! Australia is more friendly.

6.1.1 The pyramid.

A shared feeling of needing to respect people of seniority was reported by all of the Phase One participants. Akiko, an OQN of Japanese heritage expressed her need to respect seniority in terms of "this is our culture" (Akiko, P1GI[6]). Mi-young, an OQN with 10 years nursing experience in Korea elaborated, "We respect elderly people and it is very important to respect aged (pause) the senior member and the junior member" (Mi-young, P1GI). Eun-jung, an OQN with six-months nursing experience in Korea termed the hierarchical nature of nursing in Korea as "this pyramid" (Eun-jung, P1GI). Eun-jung's metaphor of the pyramid represented two perspectives of nursing in Korea; a social relationship defined by a power imbalance and a need to respect hierarchical relationships as described by Akiko and Mi-young; and the social status of nursing within Korean society. Eun-jung portrayed nursing in Korea as a female vocation that garnered very little respect from medical staff, patients or the public. Despite having experienced only one clinical placement in Australia, Eun-jung noticed the collaborative working relationships between nurses and doctors in Australia as significantly different to those in Korea. Eun-jung articulated this difference as nurses and doctors being "in the same position" (Eun-jung, P1GI); a more even and respectful working relationship.

According to Wenger (1998a), mutual engagement provides the opportunity for mutual, social relationships to form between members of a CoP. The experiences described by Akiko, Eun-jung and Mi-young suggest a realisation of the different ways in which mutual relationships exist within an Australian CoNP as opposed to the relationship that they had anticipated based upon their previous life experiences. A workplace where social relationships were identified as collegial rather than dominated by hierarchy, power and authority was unexpected. As will be seen in the following section, these differences represented a significant focus of learning for the Phase One participants.

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[6] P1 (Phase One) GI (Focus Group Interview)

6.1.2 Senior nurses and baby nurses.

According to the participants, nurses in their respective countries were not like nurses in Australia. For example, nurses from Korea were described as "very strict" (Mi-young, P1GI), or "like military or something" (Eun-jung, P1GI). Interestingly the terms used to delineate "senior member and the junior member" mentioned previously by Eun-jung were echoed by Mi-young as she recalled her experiences as a student nurse in Korea and her relationship with the nurses with whom she interacted. Mi-young recalled: "...[another] thing is some relationship with other staff 'cause they are all women (pause) it is a little different in Australia. They [nurses in Korea] are very strict. There are senior nurses and there are baby nurses" (Mi-young, P1GI). The use of the term "baby nurse" appeared to resonate with all five of the Phase One participants, prompting nods of agreement and quiet laughter. The use of the senior nurse/baby nurse (senior member/junior member) duality suggests the boundaries that defined a particular type of membership to and identification with a CoNP. According to the perspectives of Eun-jung and Mi-young, the CoNP in Korea adhered to a particular set of social relationships (Fuller, Hodkinson, Hodkinson, & Unwin, 2005) between senior nurses and baby nurses; social relationships that were a manifestation of a CoNP characterised by hierarchy, power, authority, roles and expectations that reflected the social, cultural and political values, beliefs and norms of Korean society. Identification with and being identified as a baby nurse reflected a position of time and space along a learning trajectory. Accordingly, identification as a "baby nurse" reified a particular identity as a learner and thus a perception of learning. From these statements, learning appeared to be governed by norms, rules and processes; Wenger (1998a) described these as the politics of participation.

Both Mi-young and Eun-jung described their experience of learning during the clinical placement in Korea as "being trained" whilst working under the supervision of a senior nurse. As a part of "being trained", Eun-jung reported an expectation that as a student nurse, it was

her responsibility to "catch up" with the buddy nurse for the purpose of receiving feedback on performance (Eun-jung, P1GI). The process of learning as reported by these two research participants represented a particular experience of identity (Wenger, 1998a) where axes of power such as institutional roles and structure that defined a CoNP became part of their identity as learners. Learning, according to Mi-young and Eun-jung, took the form of becoming a certain type of person; a lived experience involving the negotiation of participation, learning and identity (Lave & Wenger, 1991; Wenger, 1998a).

An opportunity to talk about the social configurations of nursing practice in Korea during the focus group interview provided insight into the ways in which competence as a "baby nurse" was defined. For both Mi-young and Eun-jung, an identity as a "baby nurse" and the social relationships that constituted this identity, remained with them for some time. Mi-young recalled her experiences some months after completing her nursing training when practising as a qualified nurse in Korea:

> ...sometimes I have a new experience like I have never seen those kinds of disease or something like that. So at the time I am a little bit nervous. I can ask the senior nurse, but it is stressful. I think that after one year I feel a little more comfortable. (Mi-young, P1GI)

Becoming a qualified nurse represents a progression along a trajectory of peripheral to more full participation. Mi-young recalled her progression along this trajectory as one of a shifting membership and identity from "baby nurse" to a more full participant of a CoNP, possessing sufficient ability and legitimacy to be able to *buddy* "baby nurses". Participating in this new role required an element of forgetting as well as remembering. Remembering her identity as a "baby nurse" contributed to Mi-young's identification as a "very good" buddy nurse in Korea (Mi-young, P1GI). However, remembering this identity also instilled a sense of caution and feelings of nervousness at the prospect of seeking advice from more experienced nurses, even after practising as a nurse for some time. Becoming a qualified

nurse and feeling "a little more comfortable" (Mi-young, P1GI) with this new form of membership and the social relationships that this new identity represented over a period of 12 months, illustrates the time required for newcomers to re-fashion an identity through forgetting as well remembering "one's" personal histories (Wenger, 1998a).

As discussed in Section 3.3.3, learning as an evolving form of mutual engagement involves discovering how to engage; learning the institutional roles of members of a CoP, identifying people who can facilitate learning, and forming relationships with these people in socially appropriate ways as defined by a particular CoP (Cope et al., 2000; Grealish & Trevitt, 2005; Wenger, 1998a). For these ICALD nursing students as OQNs, remembering one's personal histories suggests the work of imagination (Wenger, 1998a) as informing their identities as learners based upon previous life experiences. Participation within an Australian CoNP characterised by different rules of engagement was characterised by social relationships based on mutuality that differed from those previously experienced, and represented a mismatch between imagination and what was experienced through engagement. Reconciling such a mismatch requires energy in the form of alignment to enable an identity of membership, that is, one of belonging (Wenger, 1998a). However, such energy requires knowledge and skills in order to focus on alignment.

Accordingly, through a lens of mutual engagement, it is important that ICALD nursing students develop the capability to reconcile, as a process of negotiation, the potential differences between what may be anticipated and what may be experienced, in terms of social relationships when entering an Australian CoP. Such negotiation is particularly pertinent to ICALD nursing students when perceptions of power and hierarchy may impede mutual engagement and as such the learning process. It is these diverse and complex social relationships that characterise a CoP as well as govern access to participation in a practice (Fuller et al., 2005; Wenger, 1998a).

6.1.3 Get involved! Australia is more friendly.

The capability to negotiate differing perceptions of social relationships is essential as CoP are inherently social structures; reflecting not only the social, cultural and political values, beliefs and norms of an organisation, but also the society within which an organisation is located (Lave & Wenger, 1991; Wenger, 1998a). Accordingly, learning as an outcome of participation in a CoP involves the formation of identity; a process of becoming a certain kind of person. Greeno (1997) when defining perspectives of situated learning contended that through engagement with old-timers, students develop patterns of participation that contribute to their identities as learners.

With no prior experience with an Australian CoNP, Akiko and Eiko adopted their identities as learners and patterns of participation that were defined as appropriate in Japan. As Akiko explained: "In Japan...if we talk in the ward we would be said [to be] lazy. If we have time to talk, we just study or go to the patient. Use that time for the patients or study" (Akiko, P1GI). Eiko concurred: "If I ask my buddy nurse a lot in Japan, I think they assume she's rude or cheeky. But in Australia if I have questions, I should ask my buddy nurse always" (Eiko, P1GI). The experiences of Akiko and Eiko as nursing students in Japan contributed to patterns of participation that consequently informed their identity as a nursing student in Australia; one who refrains from talking on the ward during work, and who is conscious of not asking too many questions of old-timers. For these participants, participating with an Australian CoNP suggested a transformative experience of identity (Wenger, 1998a). A process of becoming, that was facilitated by an awareness that the patterns of participation expected of nursing students in Japan were different to those expected by an Australian CoNP. This was illustrated by Akiko:

> When I started clinical placement [in Australia] I was doing like I used to in Japan and then my [clinical] educator said 'You have to be a bit more open-minded and talk to the patient, talk to the nurses. You are too quiet. It means less communication skill'.

> So I realised oh, in Australia more like the person get involved...is more better, friendly. (Akiko, P1GI)

An experience of identity is not only a process of becoming a certain kind of person, but also the ability to avoid becoming a certain kind of person (Wenger, 1998a). For Akiko, learning was a response to a challenge to her identity, and an ability, defined by Wenger (1998a) as the capability and legitimacy to recognise and negotiate differences in the roles and expectations of nursing students as learners in Australia as compared to Japan. Thus, meaningful learning in the form of being challenged by an old-timer contributed to a shift in identity and suggested a trajectory in terms of becoming a learner in the context of an Australian CoNP.

The experience of mutual engagement described by Akiko entailed a mutual negotiation of social relationships with an old-timer. Thus, the role of the old-timer could be interpreted as one of broker (Wenger, 1998a), engaging Akiko in a process of negotiation to enable mutual understanding of the expectation of more full participation within the particular CoNP. In the absence of such brokering, Akiko's experience could well have remained one of sociocultural discord manifested by saying nothing and doing nothing (Brown, 2005).

This theme *Relationships are different* has highlighted cultural difference as a factor in influencing mutual engagement between ICALD nursing students and old-timers when participating in an Australian CoNP for the first time. The experiences described by these OQNs illustrates the ways in which perceptions of hierarchy, power and authority from one's previous life experiences can and do influence mutual engagement in ways that are not considered by Wenger (1998a). However, it is because of the lens of mutual engagement afforded by CoP that such differences can be explored and can inform this research study. Thus, being cognisant of the finding as illustrated by this theme, there is a need to provide ICALD nursing students with experiences prior to the clinical placement. This is done in order to reveal a potential mismatch in expectations of social relationships, as well as to

explore these issues in order to develop mutual understanding and capabilities to anticipate, negotiate and potentially reconcile such differences.

It is significant to note as illustrated in Theme One, the ways in which the participants participated with members of an Australian CoNP revealed issues of hierarchy, power and authority. As has been shown, these issues may have been perceptions based upon their previous life experiences, or may have been manifestations of an Australian CoNP. However, what this finding suggests is that if the desired outcome of immersive simulation is to facilitate ICALD nursing students' capability to engage in social relationships based on mutuality, such simulation experiences should be designed to reveal issues of hierarchy, power and authority, prior to the clinical placement. Table 10 highlights the salient points from Theme One, and represents these in relation to Wenger's (1998a) dimensions of his learning architecture. In doing so, questions are posed as considerations for immersive simulation design with the aim of developing the capability of ICALD nursing students to participate within an Australian CoNP.

Table 10

Theme One Summary of Considerations for Immersive Simulation Design

Dimensions of learning architecture	Theme One salient points	Questions for immersive simulation design
Participation / reification	Authentic roles of ICALD student. Authentic members of CoNP. Opportunities for participation.	What activities of nursing practice require a social relation to "make something happen"?
Designed / emergent	Affordances to explore cultural difference informing social relationships.	What balance is required between prescription and minimalism in design to enable emergent responses to a designed social interaction?
Local / global	Negotiation of the role of the nurse as a broker. Discovering socially appropriate ways of mutual engagement.	What situations require ICALD nursing students to negotiate mutual engagement as an identity of participation?
Identification / negotiability	Need for legitimacy to afford participation. Opportunities to explore cultural and social constructs of power, hierarchy and authority as informing perceptions of social relationships.	What situations might reveal cultural and social values, beliefs and expectations in terms of power and authority in the negotiation of social relationships?

I have explored and interpreted the theme *Relationships are different*, where I have described the experiences of the Phase One participants interacting with an Australian CoNP through Wenger's (1998a) lens of mutual engagement. In the following section I explore Theme Two, *Community and practice is different* through the lens of joint enterprise as articulated by Wenger (1998a).

6.2 Community and Practice is Different

As discussed in Chapter Three, joint enterprise relates to a particular and indigenous practice of a CoP. The enterprise evolves as members collectively negotiate their response to the context within which mutual engagement occurs. In this way, the enterprise belongs to a community in a profound way. For the Phase One participants, participating in an Australian CoNP for the first time revealed for them the complexities of multimembership. These complexities of multimembership are emphasised for nursing students coming from a university CoP whose enterprise is learning, having to interact with a CoNP whose enterprise is patient care. Theme Two comprises two sub-themes:

- Finding yourself within an unfamiliar community; and
- Negotiating multimembership.

6.2.1 Finding yourself within an unfamiliar community.

Interacting with an Australian CoNP was identified as a challenge by all of the Phase One participants, albeit in different ways. For three of them, this challenge came from locating themselves in the multidisciplinary healthcare team. They reported this as an inability to determine who was who, within the CoNP, owing to the wearing of similar or even an absence of uniforms. In counties such as Korea and Japan, different healthcare disciplines were reported as easily distinguishable by their uniforms. In Australia however, the similarity or indeed lack of uniforms posed a significant source of confusion for Eun-jung and Akiko. Akiko explained that whilst nurses were easily identifiable because of their uniforms, the similarities between "Div One [registered nurse] and Div Two [enrolled nurse]" (Akiko, P1GI) proved a source of confusion. However, Akiko also reported that in the absence of uniforms "like doctors and dietitians wearing like normal clothes...I couldn't really distinguish which one is which one" (Akiko, P1GI). Difficulty distinguishing members of the multidisciplinary healthcare team contributed to one occasion of misunderstanding. Akiko continued:

> So when I wanted to talk to the doctor, I was talking to the dietitian because that person was writing something on that patient's notes so I was misunderstanding. So I went back to the doctor. And that small things I think I could check first of all but I didn't check, I forgot to check and I got confused. (Akiko, P1GI)

Learning as an evolving form of mutual engagement involves developing a feeling of accountability to the enterprise (Wenger, 1998a). Akiko's initiative in seeking out the doctor reflected such accountability however, her experience also reflects the challenge such accountability can present to ICALD nursing students when moving from peripheral to more

full participation. The inability to readily distinguish between nurses, doctors and dietitians, whilst seemingly an easy mistake to make, can prove a disincentive for ICALD nursing students' participation within a CoNP.

For ICALD nursing students, accepting affordances to participate in the practice of a CoNP presents a potential challenge to their self-concept and identity in terms of "loss of face" (Cope et al., 2000; Melincavage, 2011). In Chapter Two, discussion focussed on the considerable concern of ICALD nursing students, particularly from south-east Asian countries, about loss of face to people in positions of authority; the very people from whom these students seek acceptance (Brown, 2005; Dickson, 2013). Grealish and Trevitt (2005) highlighted that underpinning such concern is a fear of being perceived as lacking competence and provides sufficient disincentive for nursing students, be they international or domestic, and thus, they avoid what are perceived as challenging situations altogether.

Akiko's recollection of her misunderstanding suggests a misjudgement (Hager & Halliday, 2006) of the situation and did not yield the outcome she desired. On reflection during the focus group interview, Akiko discovered a solution to her own dilemma by identifying an alternative approach to initiating social interactions. Importantly for Akiko, the legitimacy afforded to her "stumbling" as a newcomer, by confusing the dietitian as the doctor, meant that this simple misunderstanding served as a facility of learning. However, Wenger (1998a) warned that in the absence of legitimacy, learning and in-turn identity can be negatively influenced when newcomers invariably make such "stumblings" (p. 101).

Caixia, Eiko and Eun-jung faced a different challenge when participating within an Australian CoNP. For these participants, encountering different constellations of nursing practice challenged their ability to make meaning of their place within the joint enterprise. Caixia, Eiko and Eun-jung recounted their experience of being buddied with enrolled nurses during the clinical placement; nurses with a Certificate-level qualification and different scope of practice than the registered nurses that these students were learning to become. Being

buddied with enrolled nurses from the first day of the clinical placement was unexpected. Neither Caixia or Eun-jung had worked with enrolled nurses previously with Caixia reporting a complete lack of awareness of the role of an enrolled nurse as "In China, nurses didn't divide into Div 1 [registered nurse] or Div 2 [enrolled nurse]. Exactly the same" (Caixia, P1GI).

Wenger (1998a) described different disciplines within a CoP as constellations of a practice. In this example, learning took the form of gaining an understanding of the different constellations that comprise an Australian CoNP. However, the experiences of these two participants represent a type of encounter not explicitly discussed by Lave and Wenger (1991) or Wenger (1998a). Learning through the process of legitimate peripheral participation positions newcomers as understanding who is involved in day-to-day practice, and what they do (Lave & Wenger, 1991). However, Lave and Wenger (1991) also contend that such learning is based upon an opportunity for newcomers to observe "how masters talk, walk, work, and generally conduct their lives" (p.95). An assumption of working alongside and learning from "masters" assumes working alongside members of a CoP which newcomers aspire to become. Not understanding the role of enrolled nurses and by participating in the enterprise of nursing with members who do not represent "masters", whilst affording access to practice, did not contribute to the kinds of learning and identity construction that is represented by the theoretical perspective of CoP. Caixia and Eun-jung expressed their frustration about being buddied with enrolled nurses as not learning the tasks they perceived as representative of nursing practice; in other words, "how Division 1 [registered] nurses work in general hospitals" (Eun-jung, P1GI). By comparison, Eiko reported concerns that related to issues of accountability to the enterprise of nursing practice. Eiko explained:

> I didn't have any idea about what Division 2 [enrolled] nurses do in hospital, legally I mean. So I was just wondering if you have some problem with some observations

> [patient assessment findings performed by an enrolled nurse], how can we deal with that and who is going to be responsible? (Eiko, P1GI)

With 10 years nursing experience in Japan, Eiko's concerns related less to learning the tasks that were perceived to represent nursing practice, and more to her accountability to the joint enterprise. Eiko's reflection on her engagement with a constellation of practice in which she was unfamiliar, and illustrated the work of imagination (Wenger, 1998a) as she sought to understand accountability between different constellations.

Wenger (1998a) asserted that learning within a CoP involves: discovering how to engage; defining identities; aligning engagement to the enterprise; and learning to become accountable. Learning therefore refers not only to newcomers participating in practice with old-timers and whom these newcomers aspire to one day become, but to the nexus of communities that exist within and contribute to a coherent and sustainable practice. Such learning appears valuable, reflecting what Fuller and Unwin (2003) described as an expansive curriculum. However, such processes are complex and appear to present a significant challenge for first-year international nursing students already grappling with the complexity of learning how to learn in an unfamiliar social and cultural context.

6.2.2 Negotiating multimembership.

Participating in the enterprise of nursing practice raised concerns of legitimacy for all of the five Phase One participants. Whilst Eiko had previously voiced concerns about her accountability to the enterprise when buddied with enrolled nurses, Akiko reported concerns relating to her own scope of practice as a nursing student during the clinical placement. Akiko explained:

> What we shouldn’t do and what we should do I wasn’t really sure. Like, first day, orientation day, educator said we shouldn’t give any medications, we shouldn’t do any invasive care things like that but I couldn’t really find that (pause) papers which shows

> what we can do as a student nurse. And in the ward, some nurses said 'If you don't practice here, how are going to know when you become an RN [registered nurse]?' And I was like hmm (laugh). I don't know. I wasn't sure. (Akiko, P1GI)

Akiko's struggle to reconcile participation in multiple CoP suggests an experience of a "nexus of multimembership" (Wenger, 1998a, p. 158). Negotiating such boundaries present a common focus for nursing students during the clinical placement. The boundary encounters previously described by Caixia, Eiko and Eun-jung resembled those of apprentice midwives, tailors and naval quartermasters described by Lave and Wenger (1991) and claims processors at Alinsu (Wenger, 1998a). These boundaries are manifested as the stratification of work and they have evolved over time to achieve the joint enterprise. The type of boundary encounter, by contrast, as described by Akiko had resulted from the transfer of hospital-based nursing training in Australia, to university-based education some 25 years before. This particular boundary encounter, as described by Akiko was akin to those of apprentice butchers studied by Lave and Wenger (1991); a boundary encounter resulting from the separation of formal education from the practice. In both cases, such separation resulted in challenges to legitimacy, identity and membership, leading to problems ensuing with participation and learning that are not explored by Wenger (1998a). Akiko's experience of negotiating a nexus of multimembership by attempting to adhere to the ill-defined parameters set by the university illustrated an ambiguity particular to nursing students as transient learners (Newton et al., 2009) within a CoNP, during the clinical placement.

For nursing students, a significant source of ambiguity is represented by a kind of in-between membership; a transient newcomer to a CoNP, yet one that needs to observe the rules that govern being a student of a university. Crossing boundaries raises tensions between experience and competence (Wenger, 1998a). As has been discussed earlier when exploring this theme, accepting learning opportunities may represent a particular kind of social or professional competence (Cope et al., 2000; Grealish & Trevitt, 2005); one of a learner

willing to try things out. On the other hand, participating in practice deemed outside what a student is allowed to do may be perceived by the university as representing poor judgement or a lack of competence as a learner. It therefore appears prudent to provide ICALD nursing students with experiences of participation, through immersive simulation, that involves the negotiation of the nexus of multimembership prior to the clinical placement.

Communication was identified by all five of the participants as a particular concern during the clinical placement. The specific challenges reported by these nursing students reflected those issues described in Chapter Two including: the fast pace of speech (Mi-young, P1GI); "Aussie slang" (Caixia, P1GI; Eun-jung, P1GI); and interpreting written communication (AkikoP1GI; Eiko, P1GI; Mi-young, P1GI). Eun-jung recalled:

> ...I could not understand Aussie slang (pause) like 'rah rah rah', so I asked the Charge Nurse 'Can you (pause) could you mind er (pause) explain just for my language? Sorry about that, I could not understand Aussie slang'. Stuff like that so (pause) and then she was happy with that and then explained more slowly. (Eun-jung, P1GI)

The example of Eun-jung suggests an ability in terms of both capability and legitimacy (Wenger, 1998a) to seek clarification. Conversely, the fast pace of Australian speech left Mi-young confused. "Sometimes some staff they were talking to me. I didn't understand what they exactly said so sometimes I was just confused and they are speaking very quickly" (Mi-young, P1GI). Difficulties understanding and being understood through verbal communication illustrated one circumstance where ICALD nursing students experience a significant challenge when negotiating the nexus of multimembership.

In this theme *Community and practice is different* I have explored the experiences of the Phase One participants of their first clinical placement in Australia by using Wenger's (1998a) lens of joint enterprise. The sources of greatest challenge for the Phase One participants appeared to be the social dimensions of participation in the joint enterprise of

nursing practice. Engagement with the joint enterprise presented challenges to these participants in the following ways:

- approaching members of the multidisciplinary healthcare team;
- discovering a need to consider socially appropriate ways to initiate interactions when moving from peripheral to more full participation;
- learning as negotiating and reconciling "stumblings" as revealing boundaries to competence;
- locating themselves, their accountability and contribution as nursing students, and also as future registered nurses within the broader constellations of nursing practice; and finally,
- negotiating and reconciling an in-between membership in terms of an identity of participation, that straddles the communities of the university and those of nursing practice.

Many of the challenges reported by these participants related to communication including vernacular, discipline-specific terminology, understanding and being understood; challenges that are clearly reflected in the nursing literature as discussed throughout Chapter Two. However, by perceiving such challenges through Wenger's (1998a) lens of joint enterprise, these challenges can be understood to involve: recognising social and cultural norms in relation to participation; balancing the motivation to participate with a fear of losing face; and concerns about how the negotiation of these competing challenges may reflect on their judgement in terms of when and how to initiate participation and how such judgement may reflect on their social and professional competence as defined by a CoNP.

Through a lens of joint enterprise, negotiating an identity within the complex nexus of multimembership can be appreciated. In the case of the Phase One participants, such multimembership appeared to be represented as an intersection of an Australian CoNP, and the respective constellations of university student, Australian culture, and the indigenous

cultural heritage of each research participant. What also appeared as fundamental to learning within this complex milieu were their perceptions of legitimacy as newcomers.

The literature relating to ICALD nursing students learning during the clinical placement, as illustrated in Section 2.3.4, highlights similar challenges to those reported by these participants. However, this literature generally approaches the topic from an observational perspective. In this research study I have taken a more proactive approach based on the finding from Phase One of the study. Thus, in Phase Two of this study I provided immersive simulation experiences prior to ICALD nursing students' first clinical placement. This was done in an attempt to develop the capability of ICALD nursing students to negotiate identities of participation within an Australian CoNP. This is an approach which to date is reflected by a very small number of studies (for example, see: Rogan et al., 2006; San Miguel & Rogan, 2009; San Miguel et al., 2006).

In Table 11 the salient points from Theme Two are highlighted, and are presented in relation to Wenger's (1998a) dimensions of the learning architecture. In doing so, questions are posed about what needs to be taken into account when designing an immersive simulation program with the purpose of developing the capability of ICALD nursing students to participate within an Australian CoNP.

Table 11

Theme Two Summary of Considerations for Immersive Simulation Design

Dimensions of learning architecture	Theme Two salient points	Questions for immersive simulation design
Participation / reification	Being offered affordances to participate. Locating and accessing helpful people.	What activities require ICALD nursing students to locate and access members of a CoNP?
Designed / emergent	Responses to affordances cannot be predicted.	What balance is required between prescription and minimalism in design to enable emergent responses to a simulation of nursing practice?
Local / global	Negotiating one's contribution to a joint enterprise as a student. Discovering boundaries; what is permissible and what is not according to different membership. Locating one's self within the constellations of nursing practice.	What situations represent a nexus of multimembership? What activities reveal the interplay between membership as: university student; CoNP; and cultural heritage?
Identification / negotiability	Negotiating participation and non-participation. Experiencing challenges to social competence. Risk of losing-face. Experiencing what facilitates access and what does not (judgement).	What situations and activities affirm students' legitimacy as participants? What situations and activities contest students' legitimacy as participants?

In this theme I have explored, through the lens of joint enterprise, the experiences of interacting with an Australian CoNP as expressed by the Phase One participants. In the theme *Learning is different* I explore the experiences of learning reported by the participants through the lens of shared repertoire.

6.3 Learning is Different

Shared repertoire refers to the artifacts, stories, routines and ways of doing things that characterise a particular community of practice. Similar to joint enterprise, the shared repertoire is often unique to a particular CoP as these stories, artifacts and ways of doing, result from a continuous process of negotiation through mutual engagement in a joint enterprise over time (Wenger, 1998a). According to the Phase One participants, contexts and processes for learning were different from what they had previously experienced, in terms of the ways learning opportunities were afforded, and the time and space where learning

occurred. Learning took place during structured work but also within unstructured spaces such as during meal breaks. These reflections are illustrated in the two sub themes:

- Affordances are different; and
- Learning is different: Learning by joining in.

6.3.1 Affordances are different.

An invitation to attend meetings of the multidisciplinary healthcare team presented an unexpected learning opportunity for one participant. Such meetings have evolved in Australian healthcare as a response to the increasing complexity of patient care and the need for more effective coordination of care between disciplines. For Ciaxia, the opportunity to observe such a meeting provided insight into a shared repertoire of practice she did not know existed between disciplines. Caixia explained that the weekly meetings between the multidisciplinary team in Australia was quite different to China "when doctors have some meeting about a patient...nurses didn't join with them. But here [Australia] nurses, physio, doctors, nutritionist, everyone here" (Caixia, P1GI). Remaining at the periphery enabled Caixia to develop new understandings about: the Australian healthcare system; the functions of the multidisciplinary healthcare team; the ways in which disciplines collaborate; and the patients for whom she had been providing care. However, how this understanding translated to Caixia's own style and discourse of practice is unknown.

Similarly, Mi-young described a situation where observing old-timers' use of the repertoire of practice did not contribute to her learning how to negotiate with a confrontational patient in a mental health facility. Mi-young explained:

> Some people, some client they just shout at me because they have a mental disorder. At that time, I was so nervous. How can we deal with that situation because it was really hard? How can I contact [connect] with the clients? Although I observe the nurses, I couldn't find exact how to deal with clients. (Mi-young, P1GI)

Clearly this quote illustrates Wenger's (1998a) contention that whilst observing, as a form of remaining (termed *lurking* by Wenger) at the periphery, can provide useful insights into practice, true learning can only result when peripheral participation provides access to all three dimensions: "to mutual engagement with other members, to their actions and their negotiation of the enterprise, and to their repertoire in use" (Wenger, 1998a, p. 100). Whilst remaining at the periphery as an observer instilled in Mi-young a sense of safety, without mutual engagement in terms of negotiating the observed repertoire with old-timers, learning how to interact and negotiate with challenging clients had not been realised.

In contrast, Eun-jung described quite a different experience in a very similar context. Eu-jung explained:

> Always he [the patient] saw me and yelled 'Gimme a cigarette, GIMME A CIGARETTE'. At that time, I was so nervous and one nurse come to me and says 'Come outside and talk to me. At this situation you to do something like blah blah blah...'. I learned how can I deal with the patient. So is more useful, the skill for me. (Eun-jung, P1GI)

This example illustrates a process of negotiation of the shared repertoire of a practice; a process described by Wenger (1998a) as "epistemologically correct" (p.101), with a "match between knowing and learning, between the nature of competence and the process by which it is acquired, shared, and extended" (Wenger, 1998a, p. 101). Workplace learning as an epistemology of practice, as suggested by Eraut (2004a, 2007), reflects work processes where learning is a by-product. However, as shown by the experience of Eun-jung, learning in the workplace is largely dependent upon the affordances provided to nursing students by members of a CoP (Newton et al., 2009). As illustrated by the example of Mi-young, Eun-jung may not have learned how to "deal" with the patient were it not for mutual engagement with the member of the CoNP; a process of negotiating a particular repertoire of nursing practice. As it happened, an interplay between an opportunity for more full participation and

the legitimacy afforded by the member of the CoNP, allowed access to and thus understanding of practice was provided through mutual engagement, a feeling of accountability to the enterprise, and an opportunity to negotiate the shared repertoire.

6.3.2 Learning is different: Learning by joining in.

Significantly for the Phase One participants, being OQNs provided an opportunity to explore the informal times and spaces such as meal breaks where negotiability of the enterprise took place within an Australian CoNP. Factors such as heavy workloads in China, Japan and Korea were reported as inhibiting such learning opportunities. According to Mi-young, "The hospital [in Korea] does not observe break time. In Australia, they [nurses] always have their lunch time and their break time. It is really good" (Mi-young, P1GI). Unstructured social interactions during meal breaks in Australia were characterised by the sharing of repertoire in the stories that were told, illuminating understanding into the historical dimensions Australian nursing practice. For Eiko, learning took the form of understanding the value of joining in these informal conversations as a way to understand the repertoire. Eiko explained:

> At first I didn’t talk to my buddy nurse at cafeteria because this I thought that talking too much is rude (laugh). But my buddy nurse told me so 'You can talk a lot and you can share story, join our story'. I thought 'Oh I should get involved'. So I tried to talk...just I tried to enjoy having conversation with my buddy nurse. (Eiko, P1GI)

Being granted legitimacy to join in the cafeteria conversations enabled Eiko to explore differences in terminology and legislation between Australian States; processes of learning that were described as more meaningful than the formal lectures at university. Rather than talking about practice, Eiko participated in stories situated in the practice (Wenger, 1998a). However, such processes did not come easily for Eiko, with joining in the shared repertoire requiring the role of the broker to legitimise her access and participation.

A similar experience was reported by Caixia whilst travelling between client visits during a community health placement. For Caixia, seeking access to the repertoire of nursing practice involved negotiating the expectations members of a CoNP held of her as a student. Caixia discovered that driving between client visits was "a good time for talking" (Caixia, P1GI) with nurses as "They give us lots of information" (Caixia, P1GI). One such opportunity defined Caixia's identity as a legitimate participant when told by a nurse "You are a nursing student. You are not supposed to know everything. But you have to learning in this placement" (Caixia, P1GI). A reified identity as a nursing student as defined by the old-timer legitimised Caixia asking questions. This contrasted significantly to China where "maybe my buddy nurse will feel 'You have to know this. You have to know that. You have to know everything because you have already studied this stuff'. I think it is quite different" (Caixia, P1GI).

The experiences reported by Caixia, Eiko and Mi-young suggest an emergent perception of learning as a social enterprise. Furthermore, the ways in which learning in the informal times and spaces such as meal breaks and travelling during community health visits was noteworthy for these participants. Indeed, this suggests that strategies for accessing such learning processes were not part of their existing repertoire as learners. Solomon et al. (2006) wrote of "hybrid learning spaces" (p. 7) when describing the ways in which the structures and processes of work provide valuable opportunities to form relationships. According to these authors, hybrid spaces include: overlap periods such as refreshment breaks; actual spaces designated as productive or non-productive work spaces; and talking spaces where talk about work occur such as when driving between community visits. Solomon et al. (2006) argued that the implication of hybrid spaces, is that significant learning opportunities exist in the absence of a formal facilitator or broker. In these spaces, newcomers are dependent upon members of a CoNP to fulfil the role of making connections between communities. However,

these authors go further, arguing that access to hybrid spaces is reliant on the personal agency of the individual nursing student (Solomon et al., 2006).

It can therefore be argued that developing the ability for ICALD nursing students to participate within an Australian CoNP involves facilitating strategies for these students to access learning opportunities in these hybrid spaces as part of their shared repertoire of *learning*. This claim is supported by the way the participants who, through their reflections, consistently emphasised the importance of social relationships, as opposed to technical skill, across the three dimensions of practice; mutual engagement, joint enterprise and shared repertoire. This highlights a significant impetus and justification for immersive simulation design that emphasises the role of social relationships as an essential component of learning through participation. Such an emphasis, it appears, is not well represented in many Australian Bachelor of Nursing curricula.

Table 12 highlights the salient points in Theme Three, and these are presented in relation to Wenger's (1998a) dimensions of the learning architecture. In doing so, questions are posed about what needs to be taken into account when designing an immersive simulation program with the purpose of developing the capability of ICALD nursing students to participate within an Australian CoNP.

Table 12

Theme Three Summary of Considerations for Immersive Simulation Design

Dimensions of learning architecture	Theme Three salient points	Questions for immersive simulation design
Participation / reification	A different repertoire for learning in hybrid spaces. Hybrid spaces provide useful spaces to explore the shared repertoire in a more informal way. Authentic language, tools, processes of practice are essential to provide focal points for negotiation of meaning.	What contexts and activities represent the authentic processes of participation with the shared repertoire of nursing practice?
Designed / emergent	Repertoire of learning differs between individuals. Hence responses to learning in hybrid spaces will differ.	In what ways can immersive simulation be designed to provide opportunities for ICALD nursing students try out their own styles, discourses and use of the repertoire of nursing practice?
Local / global	Valuable learning happens in hybrid spaces, not just through participation in work.	What situations represent authentic hybrid spaces ICALD nursing students would encounter during the clinical placement?
Identification / negotiability	Experiencing the difference between learning through non-participation and participation.	In what ways can immersive simulation be designed to provide experiences of both participation and non-participation?

In this first part of Chapter Six I have presented the findings from Phase One, analysed and structured according to Wenger's (1998a) three dimensions of practice. To summarise each theme, the salient points of each have been presented according to Wenger's (1998a) four dualities as *dimensions* of his learning architecture. As the content and meaning of these themes were explored, they led me to reflect on what strategies could be included in the immersive simulation program to develop the capability of ICALD nursing students to participate within an Australian CoNP.

As described in Section 3.4, in addition to *dimensions*, Wenger's (1998a) learning architecture comprised *components* in the form of the three modes of belonging; engagement, imagination and alignment. In the second part of Chapter Six I present a second level of analysis where the Phase One data and the questions for immersive simulation raised are interpreted according to Wenger's (1998a) conceptualisations of engagement, imagination and alignment. These interpretations were synthesised with the principles of Herrington and

Oliver (2000), Eraut (2004a, 2007) and the nursing education and simulation literature, to form propositions in the form of eight design elements for immersive simulation design. The intent being that these eight propositions reflect Wenger's (1998a) components of the learning architecture as facilities of engagement, imagination and alignment and as such, provide the preliminary design framework for the immersive simulations for this research study.

6.4 Eight Design Elements for Immersive Simulation

The intent of the design of the immersive simulation program for this research study was to provide ICALD nursing students with contexts and processes that replicated authentic learning within an Australian CoNP. This intent is reflected in the research questions:

1. In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?
2. In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

As described in Section 3.4, Wenger's (1998a) learning architecture comprises of two parts: four dualities as dimensions representing the basic challenges when designing a "space" for learning; and the three modes of belonging as basic components of a learning design. The challenge for design according to Wenger (1998a), is to support the work of these three modes of belonging in terms of: facilities of engagement; facilities of imagination; and facilities of alignment. The processes undertaken to develop the eight design elements which would serve as facilities of engagement, imagination and alignment are now presented.

6.4.1 Design Element One: Authentic roles.

In Phase One the data from the focus group interview highlighted the ways in which social and cultural values, beliefs and norms influenced the research participants' perceptions of hierarchy, power and authority when participating with an Australian CoNP for the first time. Subsequently, such perceptions impeded mutual engagement with old-timers as well as their identities of participation in nursing practice. Supporting learning within a CoP means to enable learners to invest themselves in the process of learning (Wenger, 1998a). Learning as an evolving form of mutual engagement includes: learning the institutional roles of community members; identifying people who can facilitate learning; and forming relationships with these people in ways that are defined by a community as socially appropriate (Cope et al., 2000; Grealish & Trevitt, 2005; Wenger, 1998a). Accordingly, in Design Element One I propose that in order to support learning through facilities of engagement, imagination and alignment, a designed learning space that constitutes authentic roles of old-timer and newcomer is required.

Authentic old-timer roles.

Constructs such as power, hierarchy and authority are inherent in all CoP; to exclude these when designing authentic learning spaces may be considered naive. Thus replicating these constructs is required in order to bring to the fore learners' perceptions of power in order to explore and negotiate these in terms of identities of participation. The proposition here is that exploring social relationships within a CoNP as a requisite for mutual engagement can only be simulated through involving authentic members of a CoNP as old-timers. A design that includes *Authentic old-timer roles* provides students access to experts as advocated in the situated learning literature (Brown et al., 1989; Herrington & Oliver, 2000) as well as the simulation literature (Gaba, 2004; Jeffries & Rogers, 2007). According to these authors, learning is an assumed outcome of exposure to: expert thinking and modelling processes; opportunities to observe real-life practice; and for sharing stories (Herrington & Oliver,

2000). However, such perspectives do not account for issues of power (Wenger, 1998a) and do not take into consideration the learners' capability to or developing capability for gaining access to workplace learning opportunities (Boud, 2010; Newton et al., 2009).

Authentic student roles.

From a CoP perspective, learning as evolving forms of engagement (Wenger, 1998a) requires a design for learning that reflects learners' particular learning trajectory. Recommendations from the healthcare simulation literature call for consideration of learners' level of knowledge and experience, in order to design simulation experiences that reflect an appropriate level of complexity (for example, see: Arthur et al., 2013; Issenberg et al., 2005; Jeffries & Rogers, 2007; Lioce et al., 2013; Motola et al., 2013). However, implicit within these guidelines is a definition of complexity that refers to the technology of the simulator, or the demonstration of cognitive and behavioural attributes required for the *doing* of practice (Groom et al., 2014) as opposed to representing the social dynamic of learning (Berragan, 2011; Dieckmann et al., 2007). Therefore, exploration and negotiation of identities of participation that are immediately relevant to ICALD nursing students is essential. This is important because it facilitates a mutual understanding of learning as evolving forms of engagement. Thus, I argue that immersive simulation experiences designed to replicate authentic interactions within an Australian CoNP require authentic student roles. In Table 13 I present propositions of immersive simulation design characteristics for Design Element One.

Table 13

Design Element One: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Authentic student roles. Authentic members of CoNP.	There is a need for: -simulation design to facilitate identity formation as a student nurse (Berragan, 2011; Bligh & Bleakley, 2006) -simulation design that represents the social dynamic of practice (Berragan, 2011; Dieckmann et al., 2007).	Opportunities for engagement between ICALD nursing students and actual members of a CoNP. Old-timer roles may include: -clinical facilitator -buddy nurse (registered nurse or enrolled nurse).
Facilities of imagination	Student roles consider learners' location on a learning trajectory at a specific point in time. Opportunities to reflect and explore identities of participation.	Design for immersive simulation to consider all three phases: brief, scenario, debrief (Boud, 2010). Debrief engages reflection in action, on action (Schön, 1983) and beyond action (Dreifuerst, 2009).	Roles of student and nurse explicitly stated in simulation briefing Designed activities and processes authentically reflect roles. Debriefing explores issues that impact on mutual engagement: -social and cultural beliefs, values, norms -power, hierarchy, authority.
Facilities of alignment	Opportunities for learners to: -negotiate a shared understanding; -demonstrate leadership and followship.	Working alongside others; trying things out; being supervised; being coached Eraut (2004a, 2007). Provide access to expert performances; multiple roles and perspectives (Herrington & Oliver, 2000).	Designed immersive simulations provide opportunities to: -explore different perspectives through negotiation of differences; and -reconciliation in the form of mutual understanding.

6.4.2 Design Element Two: Activities purposefully engage students in learner identity construction.

Design Element Two complements Design Element One by focusing on the processes that contribute to identities of participation in simulated nursing practice. The emphasis of this design element are the processes by which newcomers negotiate access to learning opportunities in terms of participation and non-participation as a contributor to one's

construction of an identity of membership (Greeno, 1997; Wenger, 1998a). Phase One participants reported an uncertainty about the rules and expectations of members of an Australian CoNP. What was clear was that there was a mismatch between the students' perceptions and the expectations of members of an Australian CoNP in terms of participation in the enterprise of nursing practice, and this was a common feature. Thus, meaningful learning was impeded (Barab, Squire, & Dueber, 2000).

Challenges to participation reported by the Phase One participants included: strategies to access learning opportunities by moving from peripheral to more full participation; that is, understanding what is defined as socially and culturally appropriate and what is not for a nursing student, and ways to make use of the repertoire of nursing practice when seeking access to nursing practice. Accordingly, in Design Element Two I consider the question posited by Greeno (1997); what kinds of social interactions can be designed to bring together newcomers and old-timers when considering learning as participation, social relationships and identity construction?

Learning in terms of supporting the construction of identities of participation within a CoNP may be designed *for* by bringing together newcomers and old-timers with the purpose of learning how to engage as an experience of identity. Wenger (1998a) identified two critical aspects required for an experience of identity; a process and a place. An experience of identity "entails a process of transforming knowledge as well as a context in which to define an identity of participation" (Wenger, 1998a, p. 215). In terms of Design Element Two, the "place" refers to the designed space for interaction between ICALD nursing students and members of an Australian CoNP. This concept of place differs significantly to the various constructs of fidelity (Beaubien & Baker, 2004; Chiniara et al., 2013; Gross, 1999; Ker & Bradley, 2010; Maran & Glavin, 2003; Meakim et al., 2013; Seropian et al., 2004); these constructs which, as identified in Chapter Four, focus on the "surface realism" (Berragan,

2011, p. 663) of a clinical situation rather than replicating an experience of identity through participation and non-participation.

Accordingly, in Design Element Two I make explicit the need to design immersive simulation experiences that reflect authentic contexts, but more so authentic processes of learning; processes that require active negotiation of identities of participation within an Australian CoNP. In Table 14 I present propositions of immersive simulation design characteristics for Design Element Two.

Table 14

Design Element Two: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Designed activities: -bring together ICALD nursing students and members of CoNP in authentic roles -require interaction between ICALD nursing students and members of an Australian CoNP -represent opportunities to be included in what matters to the CoNP -must be perceived as relevant by ICALD nursing students.	Authentic context; authentic activities; support collaborative construction of knowledge; promote articulation to enable tacit knowledge to be made explicit (Herrington & Oliver, 2000). Authentic processes (Hung & Chen, 2007). Participation in group processes; working alongside others; asking good questions; asking for help; getting information Eraut (2004a, 2007). Include opportunities for participation as well as non-participation (Greeno, 1997).	Immersive simulation design includes: -activities that require ICALD nursing supervision -activities that are unfamiliar and thus require negotiation of meaning -opportunities for ICALD nursing students to negotiate access to practice (but *requires* negotiation to access) -activities that at times require observation.
Facilities of imagination	Opportunities to reflect on past, present and future selves as a learning trajectory. Opportunities to try things out. Designed activities must be epistemologically correct (Raelin, 2007; Wenger, 1998a).	Design for immersive simulation to consider all three phases: brief, scenario, debrief (Boud, 2010). Simulation scenario design enables exploration of different perspectives of one's self and capabilities as learners (Dunleavy, Dede, & Mitchell, 2009).	Designed activities consider the authentic processes that represent learning through legitimate participation of ICALD nursing students with members of CoNP.
Facilities of alignment	Designed activities require ICALD nursing students to invest in the processes of learning. Discovering and negotiating boundaries formed by policy / legislation.	Activities that require learner agency (Billett & Somerville, 2004; Boud, 2010).	Designed immersive simulations provide opportunities to: -discover what is permissible and what is not as ICALD nursing students -negotiate different perspectives of participation.

6.4.3 Design Element Three: Activities reveal the complexity of multimembership.

ICALD nursing students need to straddle membership to multiple CoP during the clinical placement. These include but are not limited to a student's indigenous cultural heritage, community of nursing students, and a CoNP to which they aspire to belong. The Phase One participants described three types of boundary encounters as opportunities for learning; *one-on-one* encounters when consulting with doctors, dietitians and nurses, and *delegations* when participating with constellations of practice such as enrolled nurses. The clinical placement itself represented an *immersion* boundary encounter in terms of visiting a coherent and cohesive practice. In doing so, this contributed to an understanding of how members of a CoP relate to one another (Wenger, 1998a). A characteristic of an immersion encounter is a need for newcomers to "background their home membership" to advance the social relation between newcomer and old-timer in order to "maximise exposure to...the practice of the visited community" (Wenger, 1998a, p. 112).

Recognising the need for ICALD nursing students to negotiate each of these different boundary encounters in order to participate in the joint enterprise and engage with the repertoire of nursing practice demonstrates the complexity of learning within a nexus of multimembership (Wenger, 1996). Such negotiation to facilitate an identity of participation requires judgement about what to background, when to background and how to background different membership. These processes are complex and require skilled negotiation that according to the literature, neither domestic nursing students (for example, see: Andrew et al., 2009; Grealish & Trevitt, 2005; Spouse, 2001) nor those of ICALD backgrounds (for example, see: Edgecombe et al., 2013; Woodward-Kron et al., 2007) are prepared for through existing pre-registration nursing programs.

The importance of judgement is well represented in the nursing education and simulation literature in terms of *clinical* judgement as a process of decision-making when

providing patient care (for example, see: Dillard et al., 2009; Kelly, 2014; Lasater, 2007a; Mariani et al., 2013; Tanner, 2006). Within the healthcare simulation literature, judgement also refers to that exercised by experienced practitioners when employing Socratic questioning during simulation debriefing to explore learners' decision-making processes (for example, see: Rudolph, Simon, Dufresne, & Raemer, 2006; Rudolph, Simon, Raemer, & Eppich, 2008). However, there is a paucity of literature where designed immersive simulations focus on enhancing nursing students' capability in terms of judgement or process of decision-making when seeking access to learning opportunities within a CoNP.

From the sociocultural perspective of CoP and hence in the context of Design Element Three, judgement relates less to the newcomers' ability to execute a technical or procedural skill, and is more concerned with the ways in which ICALD nursing students attempt to access and participate in learning opportunities in ways that are defined as socially or professionally acceptable by an Australian CoNP (Hager & Halliday, 2006). Rather than using the term judgement, Greeno (1997) refers to the term *reasoning* in relation to situated learning as the ability to navigate new and uncertain activities and situations by making use of resources that support engagement in practice, and thus learning.

The ambiguous nature of what is permissible and what is not during the clinical placement provides this research study with an opportunity to provide ICALD nursing students with immersive simulation experiences to explore socially appropriate ways of negotiating participation and therefore, provides an opportunity to demonstrate social and professional competence. The contention here is not which account of judgement or reasoning has greater importance for nursing education, rather that there is a need to focus simulation design on the sociocultural elements of judgement to so as to empower students to negotiate a nexus of multimembership as preparation for the clinical placement.

Considerations for immersive simulations designed to model learning within a real CoP is the need to replicate the processes of engagement, imagination and alignment within

different types of boundary encounters. Consequently, the focus of such boundary encounters must emphasise boundary processes of negotiating social relationships between old-timers and ICALD nursing students. In Design Element Three I therefore recommend designing immersive simulation activities that create boundary encounters. Such designed activity involves bringing together members of different CoNP for a meaningful purpose as an experience of: engagement in meaningful activity; imagination of viewing one's identity as what it currently is and what it might become; and alignment as a form of negotiation and possibly reconciliation of different identities of membership. The intent of Design Element Three is to enable ICALD nursing students to invest themselves in an Australian CoNP by developing capability to negotiate multimembership within the different constellations of practice that may be encountered during the clinical placement. In Table 15 I present propositions for immersive simulation design characteristics for Design Element Three.

Table 15

Design Element Three: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Reason for engagement must be meaningful. Activities require participation between members of different CoP to create boundaries. Designed activities allow ICALD nursing students demonstrate their judgement / reasoning in terms of demonstrating: -initiative -accountability to the enterprise of practice -accountability to their own enterprise of learning -choosing participation or non-participation.	Designed learning experiences reflect an epistemology of practice (Raelin, 2007). Contexts and processes of learning are authentic and meaningful to both CoP and students (Hager, 2011). Learning across different constellations as an expansive-restrictive continuum (Fuller & Unwin, 2003; Fuller & Unwin, 2004).	Immersive simulation design includes: -activities that require ICALD nursing students to ask questions / seek clarification from members of a CoNP -activities that are represented in formal curriculum prior to simulation experience (thus are somewhat familiar to learners) -an ability to accommodate a range of learner responses including full participation to non-participation.
Facilities of imagination	Opportunities to reflect on past, present and future selves as a learning trajectory. Presenting challenges by pushing boundaries, taking students out of their comfort zone.	Reflect on responses to own actions that are provided by members of a CoNP (Grealish & Trevitt, 2005).	Designed and emergent learning processes must be authentic. Debrief explores issues pertaining to learner interactions, actions and old-timer reactions to learners.
Facilities of alignment	Designed activities: -provide support from old-timers scaffolded in authentic ways -provide opportunities to reflect on issues of multimembership during the simulation debrief.	Old-timer support is scaffolded and faded with coaching provided only at critical times (Herrington & Oliver, 2000).	Designed immersive simulation experiences must provide sufficient time for learners to explore different ways to participate.

6.4.4 Design Element Four: Activities that affirm as well as challenge legitimacy.

In Design Element Four I propose that by designing immersive simulations as an immersive/immersion boundary encounter (Boud, 2010; Wenger, 1998a) that this may provide ICALD nursing students with experiences that illuminate for them, possible trajectories including participation, non-participation and marginality. This is done by providing challenges to legitimacy and competence which can be designed as different levels

of complexity within one simulation. As illustrated in Theme Two, the Phase One participants required sufficient legitimacy afforded by members of a CoNP to move from peripheral to more full (yet still peripheral) participation. For "Only with enough legitimacy can all their inevitable stumblings and violations become opportunities for learning rather than cause for dismissal, neglect, or exclusion" (Wenger, 1998a, p. 101). For ICALD nursing students, revealing to members of an Australian CoNP their short-comings in language, communication, and social and professional competence requires: a degree of confidence on behalf of the student; student capability in terms of competence to communicate and negotiate such short-comings; and resilience to cope with the potential implications of revealing these.

Acknowledging short-comings and revealing these to members of a CoNP requires mutual recognition between old-timer and student. As has been seen in Chapter Two and throughout this chapter, ICALD nursing students from south-east Asian countries are reluctant to reveal such short-comings for fear of losing face (Brown, 2005; Kawi & Xu, 2009; Rogan et al., 2006). As seen in Section 2.3.5, programs such as *Clinically Speaking* (Rogan et al., 2006; San Miguel & Rogan, 2009; San Miguel et al., 2006) have demonstrated success with education programs aimed to empower ICALD nursing students by developing strategies to communicate confidently and effectively through simple role-play. There appears an absence of strategies to empower ICALD nursing students with strategies to negotiate challenges to their perceptions of legitimacy.

Designing immersive simulations to reveal such challenges may be perceived as unreasonable or unfair to these students. However, of significance is an understanding that first year nursing students are not on a trajectory to become full members of the local CoNP during the clinical placement. Thus, different experiences of legitimacy are proposed as necessary to develop an understanding of a kind of belonging that exists from being a transient visitor, participating via varying degrees of peripherality. This view of affirming as

well as challenging legitimacy is supported by the principles of situated learning and contrasts to recommended practice in simulation design.

Guidelines for the design of simulation in healthcare education recommend scaffolding simulation experiences from simple to more complex depending on the experience level of learners (Arthur et al., 2013; Gaba, 2004; Issenberg et al., 2005; Jeffries & Rogers, 2007); recommendations based upon behaviourist or cognitivist perspectives. Greeno (1997) contends that when designing situated learning experiences to represent a learning trajectory, it is appropriate to provide newcomers with experiences that represent the authentic complexity of practice. In Design Element Four I argue that exposing ICALD nursing students to the complexity of practice creates an experience of identity that is more personally and socially meaningful, enabling students to foresee their possible trajectories of participation within a real CoNP (Greeno, 1997). Challenging legitimacy through immersive simulation may not only serve as a mechanism for providing feedback to ICALD nursing students in terms of the social and cultural norms, values and beliefs of a specific CoP, but also provide a locus for reflecting upon and exploring challenges to identity as an essential component of learning. In Table 16 I present propositions of immersive simulation design characteristics for Design Element Four.

Table 16

Design Element Four: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Designed experiences: -require participation -afford participation -require non-participation. Designed activities include those that reveal limitations of competence. Designed experiences present varying challenge to legitimacy as peripheral participants and may include marginality.	Tensions exist between the enterprise of practice and individuals' enterprise of learning (Billett, 2002). Learning is dependent upon: -access to experts (Herrington & Oliver, 2000; Hung et al., 2005). -the invitational qualities of workplaces (Billett, 2002; Newton et al., 2009).	Immersive simulation design includes: -activities that students can participate -constraints such as time to complete activities -varying degrees of support from members of a CoNP.
Facilities of imagination	Experiences that challenge students' translation of codified knowledge to practice. Experiences that require students' judgement / reasoning in terms of locating and accessing useful resources of the enterprise including people. Experiences that require students' engagement with the repertoire of practice.	Learning experiences need to reflect the complexity of authentic practice (Greeno, 1997). Negotiating multiple perspectives (Herrington & Oliver, 2000). A need for learners to explore, develop and engage learner agency (Billett & Somerville, 2004; Boud, 2010).	Designed responses by members of CoNP must be authentic. Designed activities need to challenge ICALD nursing students yet reflect realistic expectations. Debriefing explores issues pertaining to learner interactions, actions and old-timer reactions to learners.
Facilities of alignment	Discovering and exploring tensions that exist due to: -enterprise of the practice -learners' enterprise of learning -opportunities to participate afforded by the workplace with limitations of policy and legislation that govern students' participation.	Promote articulation to enable tacit knowledge to be made explicit; include authentic forms of feedback during simulation scenario; negotiating multiple perspectives (Herrington & Oliver, 2000). Being supervised; locating resource people; tackling challenging roles and tasks Eraut (2004a, 2007).	Designed immersive simulations provide opportunities to: -explore different perspectives through negotiation -explore possible strategies to negotiate and potentially reconcile differing priorities and perspectives.

6.4.5 Design Element Five: Authentic learning processes.

Learning from a CoP perspective requires learners to invest themselves in a CoP in terms of approaching learning opportunities (Wenger, 1998a). According to a situated learning perspective, designing learning experiences requires an authentic replication of the contexts where knowledge exists and how knowledge it is used in real life (Brown et al., 1989; Lave & Wenger, 1991; Wenger, 1998a). Hence, designed learning experiences must replicate authentic processes (Hung & Chen, 2007) as well as authentic contexts for learning (Herrington & Oliver, 2000). Authentic processes involves collaboration between old-timers and newcomers in authentic activities where tacit knowledge and processes of practice are made explicit through a process of negotiation (Herrington & Oliver, 2000). *Authentic learning processes* differs to recommendations for collaboration purely between students as students cannot discover for themselves the tacit knowledge and processes of both learning and practice. In Design Element Five I aim to enhance ICALD nursing student capability as learners by making tacit knowledge explicit in terms of understanding the various spaces that present as valuable learning opportunities within an Australian CoNP.

Immersive simulations designed to model learning processes that exist within a real CoNP need to make explicit to learners: the different spaces where leaning occurs; the distinct ways in which learning occurs; and the unique t skills required to participate within the profession as well as social practices that contribute to learning. The Phase One participants described their initial perceptions of learning during their first clinical placement as being involved in tasks. Through opportunities for mutual engagement with members of Australian CoNP in hybrid spaces, the participants came to understand that valuable learning opportunities existed in the everyday social encounters such as joining in conversations during meal breaks or whilst travelling between community visits. Designing immersive simulation experiences that replicate authentic situated learning in hybrid or in-between learning spaces (Solomon et al., 2006) represents a significantly different focus of simulation

design to the more common replication of clinical encounters. Therefore in Design Element Five I refer to designing immersive simulation experiences that represent the diverse spaces where learning opportunities arise including in-between or hybrid spaces such as lunch rooms (Solomon et al., 2006). By designing immersive simulation activities in this way, I propose that ICALD nursing students can be afforded opportunities to listen and participate in the talk of practice away from the pressures of direct patient care. Furthermore, such experiences may provide opportunities for mutual engagement, potentially serving as a venue for being invited to share their stories (Eiko, P1GI), earn social acceptance, and to capitalise on social acceptance as a precursor to professional acceptance (Cope et al., 2000). In Table 17 I present propositions of immersive simulation design characteristics for Design Element Five.

Table 17

Design Element Five: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Opportunities for participation and mutual engagement occur in a variety of work-related contexts including: -physical spaces -communication technologies other than face to face. Opportunities for social conversations.	Designed activities are situated in authentic spaces including: -formal work spaces -hybrid in-between spaces (Solomon et al., 2006) -physical spaces (Herrington & Oliver, 2000).	Opportunities for mutual engagement in formal spaces: -clinical bedside -medication rooms -community settings. Opportunities for mutual engagement in hybrid spaces: -meal break rooms -meeting rooms. Opportunities to communicate via ICT: -telephone conversations.
Facilities of imagination	Designed providing opportunities that extend beyond the repertoire of technical or procedural skill.	Trying things out, consolidating, extending, refining Eraut (2004a, 2007). Learning as individual and social (Hager, 2011; Wenger, 1998a). Learning as social and cultural (Boud et al., 1993). Promote articulation to enable tacit knowledge to be made explicit (Herrington & Oliver, 2000).	Designed and emergent responses need to be authentic. Designed immersive simulations provide opportunities for: -work related and personal conversations -conversations with clinical supervisors, staff nurses, managers -conversations with clients. Debrief explores enablers and barriers to communication: -social and cultural beliefs, values, norms -power, hierarchy, authority.
Facilities of alignment	Focus and purpose of opportunities for mutual engagement are of relevance and have some meaning to ICALD nursing students.	Promote articulation to enable tacit knowledge to be made explicit; include authentic forms of feedback during simulation scenario; negotiating multiple perspectives (Herrington & Oliver, 2000).	Designed immersive simulations provide opportunities to: -explore different perspectives through negotiation of differences; and -reconciliation in the form of mutual understanding.

6.4.6 Design Element Six: Authentic tools and artifacts.

Immersive simulation activities which are designed to replicate learning within a real CoP require the inclusion of authentic reified tools and artifacts. *Authentic tools and artifacts* is both complementary and essential to the preceding design elements; one cannot be excluded without compromising the others. In terms of establishing and maintaining simulation fidelity, authentic tools and artifacts refers to the authentic sights, sounds and smells of a real situation (Beaubien & Baker, 2004; Chiniara et al., 2013; Ker & Bradley, 2010; Maran & Glavin, 2003; Seropian et al., 2004). From a CoP perspective, engagement with the repertoire of practice provides newcomers with an understanding of how such reified tools and artifacts contribute to the enterprise and the ways in which these constitute the shared repertoire of practice. According to the Phase One participants, a particular challenge was the pace, tone, medical jargon and "Aussie slang" (Dickson, 2013; Gilligan & Outram, 2012). In Table 18 I present propositions of immersive simulation design characteristics for Design Element Six.

Table 18

Design Element Six: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Designed activities include everyday artifacts of nursing practice that are of immediate relevance to the context.	Authentic context (Herrington & Oliver, 2000; Hung & Chen, 2007). Providing authentic sources of information Eraut (2004a, 2007).	Designed space for learning reflects level of experience of first-year ICALD nursing students. Sources of information include people, reference books, databases, medical records.
Facilities of imagination	Designed activities enable reflection on the different ways artifacts are brought together as a coherent practice, as compared to being taught in isolation at university.	Environmental, physical and psychological fidelity (Beaubien & Baker, 2004; Chiniara et al., 2013; Ker & Bradley, 2010; Maran & Glavin, 2003).	Designed space for learning looks and feels like the context being replicated.
Facilities of alignment	Opportunities to try out and explore how artifacts are used in practice; reflecting in and on action (Dreifuerst, 2009; Schön, 1983).	Include authentic forms of feedback during simulation scenario (Herrington & Oliver, 2000).	Debriefing explores issues pertaining to use of artifacts as a coherent practice.

6.4.7 Design Element Seven: Learning outcomes focus on student identity construction.

Best practice guidelines in nursing simulation recommend alignment of designed simulation activity with curriculum, driven by learning outcomes (Arthur et al., 2013; Lioce et al., 2013). Whilst these recommendations reflect sound educational practice, it must be acknowledged that in the context of nursing education, learning outcomes for immersive simulation focus largely on the acquisition and application of codified, procedural knowledge rather than developing an identity of participation as a first-year nursing student (Andrew et al., 2009; Berragan, 2013). Hence, designing immersive simulation experiences that are underpinned by learning outcomes that focus on student identity construction provide an important distinction. Preparing students for authentic learning in the workplace requires

preparing students to handle problems that will confront them in the real world (Gulikers, Bastiaens, & Martens, 2005; Herrington & Oliver, 2000). From the analysis of the Phase One data, significant sources of challenge during the first clinical placement in Australia were not related to technical or procedural skills, but rather problems that related to the negotiation of social relationships and reconciling an identity of participation as a student nurse; a focus that as suggested by a review of the literature as a part of this research study, has not been a prominent focus of healthcare simulation.

In the nursing education literature, immersive simulation activities tend to focus on technical, procedural and cognitive skill, with a small number of extra-curricular programs employing role-play to enhance ICALD nursing students' communication, negotiation and assertiveness skills during the clinical placement (for example, see: Hussin, 1999; Rogan et al., 2006; San Miguel & Rogan, 2009; San Miguel et al., 2006). At the time of this research study, there is an increased interest in immersive simulation designed to enhance learning within different members of a healthcare team (for example, see: Gough, Hellaby, Jones, & MacKinnon, 2012; Zhang, Thompson, & Miller, 2011). However, the focus of such interprofessional education is on the function of multidisciplinary teams in the context of patient safety (Chiniara et al., 2013; Motola et al., 2013) rather than on developing student nurses' identities of participation within the overlapping boundaries of a CoNP.

In nursing education research, transition periods that present significant challenges to nursing student identities include the transition from first year nursing student to the clinical placement have been identified (for example, see: Cooper, Courtney-Pratt, & Fitzgerald, 2015; Grealish & Ranse, 2009; Jonsén, Melender, & Hilli, 2013) and the transition of student nurse to the role of registered nurse (for example, see: Andrew et al., 2009; Goh & Watt, 2003; McKenna & Green, 2004; Thrysoe et al., 2012). There are however few examples of immersive simulation programs designed to facilitate such transitions. Kelly (2014) in her doctoral research employed immersive simulations focusing on the deteriorating patient as a

means of enhancing clinical judgement skills. This program, however, was designed as a strategy to facilitate final-year nursing students' transition to the role of the role of registered nurse. Whilst Hussin (1999) and San Miguel et al. (2006) focussed on enhancing capability of ICALD nursing students to participate with members of a CoNP using immersive simulation or role-play, these authors used situated learning theory mainly as a lens through which to analyse their findings rather than as a conceptual framework for immersive simulation design.

In Design Element Seven I propose that by focusing on learning outcomes as an aspect of student identity construction, this provides a point of reference for simulation design (including the scenario), implementation and for the post-simulation debrief as a cohesive and coherent experience of identity (Wenger, 1998a). This is relevant and meaningful for ICALD nursing students prior to their first clinical placement in Australia. In Design Element Seven I aim to support learning through the development of learning outcomes that focus on construction of identities of participation and non-participation in terms of: evolving forms of mutual engagement; understanding and tuning their enterprise; and developing their repertoire, styles and discourses (Wenger, 1998a, p. 95). In Table 19 I present propositions of immersive simulation design characteristics for Design Element Seven.

Table 19

Design Element Seven: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	Learning outcomes focus immersive simulation design on activities and processes that facilitate construction of identities of participation and non-participation.	Learning outcomes inform immersive simulation design (Arthur et al., 2013; Issenberg et al., 2005; Jeffries & Rogers, 2007; Lioce et al., 2013). Potential for simulation focuses on student identity formation (Berragan, 2013).	Learning outcomes incorporate context however process of identities of participation are implicit and provide basis for design. Learning outcomes must inform: -briefing -*scenario design* -approach to and focus of debriefing.
Facilities of imagination	Opportunities to reflect on past, present and future selves as a learning trajectory.	Learning outcomes are framed as a process of becoming: -identities of participation and non-participation -evolving forms of mutual engagement -understanding and tuning their enterprise -developing their repertoire, styles and discourses (Wenger, 1998a, p. 95).	Learning outcomes focus on learning and competence as a process of becoming rather than defined codified knowledge and skills.
Facilities of alignment	Engaging processes of negotiation of mutual understanding that reveals the ways ICALD nursing students can influence their own trajectories as learners.	Learning theory informs learning outcomes and aligns the three phases of simulation design: -brief -*scenario design* -debrief, with the aim of -transference to practice (Doerr & Bosseau Murray, 2008).	Learning outcomes need to balance prescription with minimalism to accommodate emergent responses to design.

6.4.8 Design Element Eight: Focus debriefing on learning outcomes of student identity construction.

Best practice guidelines for nursing simulation recommend focusing the post-simulation debrief on learning outcomes (Arthur et al., 2013; Decker et al., 2013; Jeffries & Rogers, 2007). Design Element Eight therefore complements and builds on Design Element Seven.

The perceived value of post-simulation debriefing is based on psychological theories of reflective learning. In her concept analysis of debriefing, Dreifuerst (2009) by citing Warrick, Hunsaker, Cook & Altman (1979) asserted the attributes of reflection, emotion, reception, integration, and assimilation defined as attributes of experiential learning, also represent the defining attributes of post-simulation debriefing. Post-simulation debriefing is a facilitated process intended to provide participants with feedback, actively explore misinterpretations and negotiate mutual understanding (Decker et al., 2013; Dreifuerst, 2009). Focusing debriefing on student identity construction provides an opportunity to engage educational imagination, facilitating new ways for ICALD nursing students to identify themselves as learners within an Australian CoNP. It enables them to explore new trajectories as learners, as well as exploring new possibilities and ways of belonging to a CoNP, not as full members, but as transient visitors. Furthermore, focusing debriefing on student identity construction provides an opportunity to engage in educational alignment. It allows for the exploration of issues of negotiating participation within boundaries, making personal meaning of experiences of multimembership, and engaging in the styles and discourses of nursing practice in a non-threatening environment. In this way, the simulation debrief provides a facility educational engagement, imagination and alignment that workplace learning may not afford.

In summary, the significance of debriefing in relation to this research study, is to provide ICALD nursing students with a forum for negotiating mutual understanding of pedagogical difference in relation to the expectations of learning in the workplace, the university classroom, and the influences of students' cultural heritage. In Table 20 I present propositions of immersive simulation design characteristics for Design Element Eight.

Table 20

Design Element Eight: Proposed Characteristics

Components of design	Dimensions of design	Literature	Possible design characteristics for immersive simulation
Facilities of engagement	The combination of engagement of and alignment enables the exploration of boundaries, expanding possibilities for learning and identity (Wenger, 1998a).	Establish an environment that is psychologically and culturally safe (Rudolph, Raemer, & Simon, 2014).	Debriefing involves a processes of active negotiation of learning and identity by facilitating: -shared understandings -shared values -shared beliefs, and provide valuable sources of reflection: -during the simulation scenario -during the debrief -in future practice.
Facilities of imagination	Opportunity to explore multiple forms of reflection. The combination of engagement and imagination results in a reflective practice (as distinct from reflective learning) (Wenger, 1998a).	Promote reflection to enable abstractions to be formed (Herrington & Oliver, 2000). Reflection *in* and *on action* as a characteristic of a reflective practitioner (Schön, 1983). Structured debriefing engages reflection on, in and beyond action (Dreifuerst, 2009).	Engage in dialogue about: -beliefs and identities as learners (Errington, 2011) -issues that impact on mutual engagement including: social and cultural beliefs, values, norms; power, hierarchy, authority -learner interactions, actions and old-timer reactions to learners.
Facilities of alignment	The combination of imagination and alignment facilitation of understanding of how and where we "fit" in the world (Wenger, 1998a).	Reflection as a learning activity located in work Eraut (2004a, 2007). Reflection before, during and after single as well as across multiple immersive experiences (Boud, 2010).	Debriefing explores enablers and barriers to mutual engagement: -social and cultural beliefs, values, norms -power, hierarchy, authority. Debriefing explores issues pertaining to use of artifacts as a coherent practice.

In the second part of Chapter Seven I have demonstrated the processes undertaken to conceptualise the eight design elements for immersive simulation design. In doing so I have aimed to extend Wenger's (1998a) learning architecture by proposing a way to operationalise CoP for the design of immersive simulation. Further, I have aimed to extend the learning architecture by interpreting CoP in a way to facilitate ICALD nursing students' understanding

and development of identities of legitimate yet transient peripheral participants to an Australian CoNP as distinct to becoming full members.

In the third and final section of this chapter I show how the eight design elements were used as a preliminary design framework for three immersive simulations that constituted the immersive simulation program for this research study.

6.5 The Immersive Simulation Program

The potential of simulation as a learning and teaching method rests in its ability to help students get up-close to a particular issue or problem in order to understand how to apply knowledge and skills in the real world (Errington, 2011). Berragan (2011) emphasised the potential use of immersive simulation to explore the sociocultural dimensions of learning in practice by offering an environment (a designed learning space) where collaboration and participation can be practiced alongside skill acquisition and development; a fundamental proposition which underpins this research study. The design of each immersive simulation for this research study was based upon a fundamental question that underpins design for situated learning, which is, what kinds of social engagement provide the proper context and process to facilitate learning as an experience of identity (Greeno, 1997; Hanks, 1991)?

A key design feature of this immersive simulation program was the use of actual nurse educators in the role of old-timers. The intent of using nurse educators, experienced in the clinical supervision of ICALD nursing students, was to provide an authentic replication of participation between newcomer and old-timer as was likely to occur during the clinical placement. As described in Design Element One (Section 6.4.1), it was anticipated that bringing together newcomers and old-timers in their authentic roles, would enable an exploration of the sociocultural dimensions of learning during the post-simulation debrief. Nurse educators were recruited from a local hospital. Prior to the simulation program, each nurse educator was briefed on their role; a buddy nurse working alongside first-year nursing

students. The role of the buddy nurse was that of a confederate. Nestel, Mobley, Hunt and Eppich (2014) describe the role of a confederate in healthcare simulation as one used to enhance realism and maintain the educational integrity of a simulation activity "through the information they provide explicitly as well as the affect they present" (p. 612). Accordingly, the role of the old-timer (buddy nurse) was a facilitator of learning in clinical practice, rather than as a facilitator of the simulation.

6.5.1 Immersive simulation program structure.

As described in Section 5.3.4, the immersive simulation program was scheduled over three consecutive weeks preceding the Phase Two participants' first clinical placement in Australia. By conducting the immersive simulation program immediately prior to the clinical placement, I aimed to provide continuity and proximity of the simulation experience to actual practice; an approach suggested to aid transfer of what is learned from simulation to practice (Boud, 2010; Doerr & Bosseau Murray, 2008). Further, by adopting this approach it represented a form of curriculum alignment discussed in Section 4.4.3 where the immersive simulation program as an otherwise extra-curricular activity, was conceptualised as contributing to a scaffolded approach to preparation for authentic, situated learning in the clinical placement.

The simulation program comprised one different simulation per week for three weeks. In order to maintain a nursing student-to-nurse ratio that reflected authentic practice, student numbers participating in each simulation were limited to no more than three students in each simulation. To maintain this ratio, each simulation was conducted twice in one week; Mondays (Case One) and Wednesdays (Case Two). The simulation schedule is presented in Table 21.

Table 21

Immersive Simulation Program Schedule

Sim week	Day	Simulation	Participant	Old-timer
Week one	Monday	One	Cheng Hui	RN1
		One Variant	Kwan Jiao	RN1
Week one	Wednesday	One	Jae-Sun Cai	RN2
		One Variant	Hyo	RN2
Week two	Monday	Two	Cheng Jiao	RN1
Week two	Wednesday	Two	Hyo Jae-Sun Cai	RN2
Week three	Monday	Three	Cheng Kwan	RN3 PA1
Week three	Wednesday	Three	Hyo Jae-Sun Cai	RN4 RN5

6.5.2 Simulation phases.

Each simulation followed a three-phase format of brief, scenario, and debrief (Arthur et al., 2010; Cant & Cooper, 2010; Doerr & Bosseau Murray, 2008; Jeffries & Rogers, 2007); an approach coincidently reflected in Boud's (2010) model of experience-based learning.

Each scenario underwent a three-stage validation process prior to implementation as advocated by Waxman (2010). The purpose of validation was to ensure authenticity of the context portrayed. This included accuracy of the members of the CoNP represented, artifacts of practice made available, the practice being simulated, and the duration of the experience. Firstly, draft simulation plans were peer reviewed by an academic who had recent experience as a clinical facilitator of first-year international nursing students. Secondly, each simulation plan was reviewed by a clinical expert; an experienced clinical nurse educator with extensive experience with mentoring international nursing students during the clinical placement. Additionally, each simulation was piloted. Although it would have been preferred to pilot the simulations with nursing students as participants, time constraints required academics to fulfil the role of participants.

6.5.2.1 Pre-simulation brief.

Each simulation commenced with the simulation facilitator, myself, providing a pre-simulation brief (Appendix B). This first phase of each simulation was approximately 5 minutes in duration. Each briefing provided the *conditions* of the simulation including privacy, confidentiality, and the use of recording as indicated in the research participant consent form (Appendix K). Simulation One, was conducted twice in one day with the aim of maintaining a low student-to-nurse ratio. Thus, for Simulation One, the Phase Two participants were invited to self-select, who would participate in the simulation first and who would participate second. In addition, the Simulation One briefing included the provision of an orientation to the simulation environment used for Simulation One and Simulation Two. The briefing concluded with a statement of the learning outcomes for the simulation.

At the conclusion of the brief, I escorted the Phase Two participants to the entrance to the simulation environment, introduced the participants to the "nurse" as a member of an Australian CoNP, and provided them with a verbal statement of the context of the simulation in the form of a nursing handover. I, along with participants who were observing the simulation, went to a simulation control room adjacent to the simulation environment to observe and record the simulation.

6.5.2.2 Simulation scenario.

Each immersive simulation was approximately 20 minutes in duration. The three simulation scenarios are described in the following sections and are presented according to the eight design elements of immersive simulation design.

6.5.2.3 Post-simulation debrief

Immediately following the simulation scenario, I facilitated a debrief of 90 minutes in duration in the simulation environment. The debrief was structured according to the Phase Two focus group interview guide (Appendix B) and the recommended practices at the time

(Cantrell, 2008; Fanning & Gaba, 2007; Jeffries & Rogers, 2007). The nurses educators did not participate in the post-simulation debrief.

6.5.3 Simulation One: Medication administration.

Simulation One simulated the everyday nursing practice of medication administration in an acute care hospital setting. The designed learning space anticipated engagement between a member of a CoNP (old-timer) and the participants (newcomers) as although the Phase Two participants had practised medication administration as a part of their pre-registration nursing program, Australian legislation requires nursing students to be supervised by qualified nurses. Thus, this design afforded peripheral as well as more full participation depending on the capability of the research participants to negotiate access to the practice.

Approximately 10 minutes into the scenario, an intravenous infusion pump connected to the patient sounded an alarm, indicating the infusion was complete. It was anticipated that the Phase Two participants would have had minimal exposure to intravenous therapy, requiring these students to take a more peripheral position of participation either as being coached by the old-timer or by observing. A further designed affordance for participation took the form of contacting a doctor via telephone for the purpose of clarifying whether further fluid orders were required. In Table 22 I outline the design of Simulation One according to the eight design elements.

Table 22

Simulation One Outline

Design element	Proposed intent of design element	Design characteristic
DE One:	Authentic roles	Authentic student roles as ICALD nursing students. Authentic old-timer role as a supportive buddy nurse.
DE Two:	Activities purposefully engage students in learner identity construction	Medication administration: familiar to students however legislation requires nursing students to be supervised by qualified nurse. Intravenous fluid administration: unfamiliar to students. Communication with a doctor (the researcher): process of communication familiar but would not have been practiced.
DE Three:	Activities reveal the complexity of multimembership	A need for students to negotiate access to the simulated practices (what is permissible and what is not). Opportunities for peripheral and more full participation.
DE Four:	Activities that affirm as well as challenge legitimacy	Opportunities to choose peripheral or more full participation. Opportunities to discover boundaries of competence, bringing isolated skills together as a coherent practice. An opportunity to negotiate expectations of the old-timer.
DE Five:	Authentic learning processes	Working alongside others. Asking questions, seeking clarification. Being supervised, being coached, shadowing. Locating and making use of sources of information (human, documentation, medication reference guides). Consultation with a doctor (the researcher) via telephone.
DE Six:	Authentic tools and artifacts	High-technology manikin (patient). Acute care hospital furnishings. Telephone (communicating to the control room). Standard patient monitoring equipment. Patient medical record. Fully stocked medication trolley. Intravenous infusion connected to the patient (infusion almost complete).
DE Seven:	Learning outcomes focus on student identity construction	1. Administer prescribed oral medications. 2. Participate in nursing practice with the registered nurse within the scope of a first-year nursing student.
DE Eight:	Focus debriefing on learning outcomes of student identity construction	Explore learner interactions, actions and old-timer reactions to learners. Explore and negotiate identities of participation and non-participation in terms of past, present and future selves.

Simulation One Variant.

In order to provide a personal learning experience for the Phase Two participants who first observed Simulation One, a variant was introduced for these students. Simulation One Variant required the old-timer to adopt a role of an impatient buddy nurse, hurrying the students through the practice of medication administration. Simulation One Variant did not include the practice of intravenous therapy or telephone communication. Figure 6 provides a snapshot of Simulation One.

Figure 6. A snapshot of Simulation One.

6.5.4 Simulation Two: Patient assessment.

Simulation Two simulated the nursing practice of patient assessment in the context of an aged care facility. In the design of Simulation Two I aimed to facilitate engagement between the old-timer and the newcomers by simulating a patient who has experienced a fall. The Phase Two participants had practised the requisite skills for patient assessment during their pre-registration nursing program. However, they would not have experienced a situation that required the consolidation of these skills into a coherent practice. In Table 23 I outline the design of Simulation Two according to the eight design elements.

Table 23

Simulation Two Outline

Design element	Proposed intent of design element	Design characteristic
DE One:	Authentic roles	Authentic student roles as ICALD nursing students. Authentic old-timer role as an experienced nurse. Old-timer role to provide assistance: -only when assistance is sought from students -when deemed critical to maintain buy-in from students -to progress the simulation.
DE Two:	Activities purposefully engage students in learner identity construction	Individual skills of patient assessment: familiar to students however would not have employed these as a coherent practice. Opportunities for locating resource people, asking for help, asking good questions. Opportunities to communicate with clients / patients.
DE Three:	Activities reveal the complexity of multimembership	Opportunities to choose peripheral or more full participation. Opportunities to discover and negotiate boundaries of being a nursing student: what is permissible and what is not.
DE Four:	Activities that affirm as well as challenge legitimacy	Opportunities to choose peripheral or more full participation. Opportunities to discover boundaries of competence: bringing isolated skills together as a coherent practice. An opportunity to negotiate expectations of the old-timer.
DE Five:	Authentic learning processes	Working alongside others. Asking questions, seeking clarification. Being supervised, being coached, shadowing. Locating and making use of sources of information (human, documentation, assessment data).
DE Six:	Authentic tools and artifacts	High-technology manikin (patient lying on floor, face down, small amount of blood visible under patient's head). Acute care hospital furnishings including bed with bedside rails raised[7]. Standard patient monitoring equipment. Patient medical record.
DE Seven:	Learning outcomes focus on student identity construction	1. Conduct a physical assessment. 2. Participate in nursing practice with the registered nurse within the scope of a first-year nursing student.
DE Eight:	Focus debriefing on learning outcomes of student identity construction	Explore learner interactions, actions and old-timer reactions to learners. Explore and negotiate identities of participation and non-participation in terms of past, present and future selves.

[7] The use of bedside rails was being phased out at the time of this simulation program and is no longer standard practice in Australia.

Figure 7 provides a snapshot of Simulation Two.

Figure 7. A snapshot of Simulation Two.

6.5.5 Simulation Three: Meal break.

Simulation Three simulated an informal yet valuable opportunity for learning; a hybrid learning space (Solomon et al., 2006) of a coffee break. The design of this simulated practice aimed to facilitate engagement between old-timers and the newcomers in the form of conversation. The designed topic of conversation between the old-timers was familiar to the Phase Two participants having recently focussed on this in class and thus affording access to participate. However, the designed conversation commenced with a private conversation between old-timers, the topic of which whilst related to nursing practice, and that would not be familiar to the students. This design therefore provided opportunities for more full

participation as well as peripheral participation. In Table 24 I outline the design of Simulation Three according to the eight design elements.

Table 24

Simulation Three Outline

Design element	Proposed intent of design element	Design characteristic
DE One:	Authentic roles	Authentic student roles as ICALD nursing students Authentic old-timer roles: -ward nurses (Case One and Case Two) -paramedic (Case One)
DE Two:	Activities purposefully engage students in learner identity construction	An opportunity to demonstrate learner agency. Opportunities to engage knowledge. Opportunities to ask good questions.
DE Three:	Activities reveal the complexity of multimembership	Opportunities to choose peripheral or more full participation. Opportunities for mutual engagement with different constellations of practice.
DE Four:	Activities that affirm as well as challenge legitimacy	An opportunity to experience being an outsider. Opportunities to choose peripheral or more full participation. Opportunities to discover boundaries of competence, accessing conversations in socially appropriate ways. An opportunity to negotiate expectations of old-timers.
DE Five:	Authentic learning processes	Asking questions, seeking clarification. Negotiating what is defined as socially acceptable ways of accessing conversations.
DE Six:	Authentic tools and artifacts	Context: actual hospital cafeteria (old-timers seated around a table during meal break). Authentic repertoire (language) of practice.
DE Seven:	Learning outcomes focus on student identity construction	1. Participate in a conversation with members of a community of nursing practice.
DE Eight:	Focus debriefing on learning outcomes of student identity construction	Explore learner interactions, actions and old-timer reactions to learners. Explore and negotiate identities of participation in terms of enablers and barriers to mutual engagement: -social and cultural beliefs, values, norms -power, hierarchy, authority.

6.6 Summary

In this chapter I have described in detail the four distinct processes undertaken to develop the preliminary design framework to address the first research question:

In what ways may the concept of Communities of Practice be used as a framework for the design of immersive simulation?

Firstly I provided a thematic analysis of the Phase One data according to Wenger's (1998a) three dimensions of practice; mutual engagement, joint enterprise and shared

repertoire and these dimensions provided the focus of the three major themes. These findings were then interpreted and summarised through the lenses of: participation and reification; designed and emergent; local and global; and identification and negotiability as the dimensions of Wenger's (1998a) learning architecture.

A second level of analysis comprised a synthesis of Phase One data with Herrington and Oliver's (2000) elements of authentic learning environments, Eraut's (2004a, 2007) typology of early career learning, and the workplace learning, nursing and simulation literature. The outcome of this second level of analysis led to the development of eight propositions in the form of eight design elements for immersive simulation. Each design element comprised design characteristics proposed as facilities of engagement, imagination and alignment; propositions that formed the preliminary design framework for immersive simulation as a designed learning space (Wenger, 1998a), informing the contexts and processes for the three immersive simulations implemented in Phase Two.

In the final section of this chapter I demonstrated the ways in which the preliminary design framework was used in the design of the immersive simulations for Phase Two of this research study.

In Chapter Seven and Chapter Eight I present Phase Two of this research study. This involves an exploration of the Phase Two participants' perceptions and experiences of learning through participation with members of an Australian CoNP during the immersive simulation program. In Chapter Seven and Chapter Eight I describe and explore Case Study One and Case Study Two respectively. The findings presented in these two chapters contribute towards addressing the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

Chapter Seven: Case Study One

The participation of nursing students in the practices of nursing is a basic assumption of the clinical placement. According to Wenger (1998a), participation within a CoP is an essential condition for learning, meaning and identity construction. From a CoP perspective, mutual engagement between newcomers and old-timers is a requisite for participating in the joint enterprise whilst making use of the shared repertoire of a practice. As has been shown in Chapter Six, a challenge to mutual engagement is the limited capability in nursing students with an ICALD background to negotiate cultural difference when establishing and managing social relations with members of an Australian community of nursing practice (CoNP).

This chapter presents Case Study One as an example of how immersive simulations reveals challenges to ICALD nursing students' participation with members of an Australian CoNP and how these challenges can be explored and negotiated during the post-simulation debrief. In doing so, this chapter begins to address the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

In Case Study One, exploration of data indicated the particular importance of developing ICALD nursing students' understanding of and strategies for facilitating mutual engagement. Thus, this exploration of the data provides insight into the ways in which a designed space for learning in the form of the immersive simulation program described in Chapter Six facilitated identities of participation in ICALD nursing students, when interacting with members of an Australian CoNP. Furthermore, examination of this data suggested the importance of Wenger's (1998a) conceptualisations of engagement and imagination, as modes of belonging. The data suggests that these conceptualisations provide an appropriate

framework for the post-simulation debrief enabling the exploration and negotiation of ICALD nursing students' identities with the aim of facilitating participation with members of an Australian CoNP.

Thematic analysis of video recordings, semi-structured focus group interviews (the post-simulation debrief) and contact summaries from each simulation, were interpreted through the lens of Wenger's (1998a) CoP, and this resulted in the development of three major themes and nine sub-themes that illuminated understandings of: ICALD nursing students' identities as learners in Australian nursing programs; the potential for CoP as a framework for immersive simulation design; as well as the processes of learning which took place within immersive simulation.

In Table 25 I present the major themes and sub-themes uncovered in Case Study One

Table 25

Case Study One Major Themes and Sub-Themes

Major theme	Sub-theme
Theme One: Expectations and perceptions of engagement.	• ICALD student identity and mutual recognition: An experience of alignment. • Identities of participation: Perceptions of power and authority. • Identities of non-participation: Culture, competence and legitimacy.
Theme Two: Response to designed invitations and affordances.	• Experiencing boundaries: Moving to a position of peripherality. • Non-participation as a strategy. • Waiting for guidance. • An enterprise of learning: Initiating mutual engagement.
Theme Three: Debriefing: A locus for negotiating identities of participation.	• The complexity of practice: Seeing one's self from a different perspective. • Aligning the enterprise of learning with the enterprise of practice.

In Chapter Seven I include an analysis and discussion of the eight design elements in light of the Case Study One findings. Recommendations are then made for the refinement of the eight design elements for immersive simulation, and these issues are explored in Case Study Two in Chapter Eight.

7.1 Expectations and Perceptions of Engagement

The central intent of the designed immersive simulation program was to bring together ICALD nursing students and members of an Australian CoNP in their authentic roles, in everyday, authentic, yet simulated contexts of nursing practice. In Chapter Six, I described how each simulation was designed to facilitate an experience of mutual engagement between the Phase Two participants and the old-timers within designed boundary encounters. Whilst there were undoubtedly a multitude of factors that influenced the ICALD nursing students' participation with members of an Australian CoNP, Theme One *Expectations and perceptions of engagement* focuses on the initial perceptions and interpretations of their identities as learners during the simulated practice.

Mutual engagement as one of Wenger's (1998a) three dimensions of practice provided insight into the Case Study One participants' identities as learners from their first experience of participation in the simulated practice. According to Wenger (1998a), identity cannot be considered static, but is instead a constant process of becoming. From a CoP perspective, identities are constantly changing in trajectories that "incorporate the past and the future in the very process of negotiating the present" (Wenger, 1998a, p. 155). To understand the learning trajectories of these participants, it was useful to understand the initial perceptions, expectations and identities of participation as learners that these ICALD nursing students experienced, when they undertook the immersive simulation program. Their identities of participation were influenced by: perceptions of power and authority that existed between the old-timer and the newcomer; and the individual participants' world views, informed by their cultural heritage, previous life experiences and personal attributes. These perceptions and interpretations are represented as three sub-themes:

- ICALD student identity and mutual recognition: An experience of alignment.
- Identities of participation: Perceptions of power and authority.
- Identities of non-participation: Culture, competence and legitimacy.

7.1.1 ICALD student identity and mutual recognition: An experience of alignment.

Participation in practice, from a CoP perspective, requires mutual engagement. Mutual engagement entails a certain way of interacting with others, acknowledging and negotiating expectations about participation, and understanding how people work together. For the Case Study One participants (presented in Section 5.3.6.3 Table 7), the experience of Simulation One and the identities of participation that ensued were influenced by: perceived expectations of social relationships based upon their previous life experiences and cultural heritage; as well as by the process of mutual engagement.

Jiao, was an overseas qualified nurse (OQN) of Chinese heritage with 12 months nursing post registration experience in China. Jiao's identification as a nursing student provided her with the legitimacy she needed to engage with a member of a CoNP. Jiao explained "I am a student, so I can ask whatever I want to her [RN1]" (Jiao, C1S1D[8]). A similar perception was reported by Hui, an OQN who had only recently completed her nursing studies in China. Whilst identifying as a student, Hui perceived her relationship with RN1 in terms of student and teacher, describing this relationship in the following way: "She [RN1] is just like a teacher, teach us how to do" (Hui, C1S1D). The perceptions of both Hui and Jiao represented a particular social relationship described by Lave and Wenger (1991) as a teacher/learner dyad; a social relation characterised by reified identities that defined expected roles and responsibilities of learning and teaching. In relation to these Case Study One participants, such identities were reified through a social discourse where the role of the nurse was to teach, rather than as a nurse whose accountability was to the enterprise of nursing practice. From this perspective, mutual engagement was dependent upon mutual recognition; a recognition by the old-timer of the students' expectation to be taught.

[8] C1 (Case One) S1 (Simulation One) D (Debrief)

A different perspective was provided by Cheng, an ICALD nursing student of Chinese heritage. Cheng described his relationship with the old-timer during Simulation One as "basically equal" (Cheng, C1S1D). In contrast to Hui and Jiao, Cheng's perception of the nurse was one of an expert resource who could provide clarification when needed. Cheng explained: "I feel basically equal, but I still need to ask her [RN1] for more information, and maybe ask (pause) confirm from her. That is what I need" (Cheng, C1S1D). In this example, Cheng demonstrated a sense of accountability to his own learning. In contrast to Hui and Jiao, Cheng did not consider himself as needing to be taught, rather there was an understanding that nurses, when asked, would make an attempt to answer questions.

Despite different identities of participation, of importance was the role of the old-timer in affording access to the simulated practice. As described in Section 6.5.3, Australian legislation requires nursing students to be supervised by qualified registered nurses when participating in medication administration and intravenous fluid management. Thus, the inclusion of these practices represented designed boundary encounters and served as intended facilities of engagement in the enterprise of nursing involving an authentic repertoire of practice. The interaction that ensued is illustrated through the following extract from the Simulation One contact summary.

> RN1 adopted a facilitative approach. Standing with hands clasped behind, employing Socratic questioning and using the word "we" signified an invitation for the ICALD nursing students to participate. Targeting questions to the participants and asking them to demonstrate their knowledge to the practice at hand suggested an insistence of participation. The pattern of participation that emerged took the form of a cue offered by RN1 followed by a response from the research participants. (C1S1, Contact Summary)

These participants' engagement during Simulation One was characterised by a particular pattern of participation where each response from a student elicited a further cue

from the old-timer; a pattern of participation that was repeated during the management of the intravenous infusion and communication with the doctor. Such a pattern was not a part of the designed simulation, but rather an emergent characteristic of mutual engagement. This pattern of participation was made possible through the simulation design elements of: authentic roles; authentic learning processes; and authentic tools and artifacts. Hence, this interaction suggests an authentic example of mutual engagement, joint enterprise and shared repertoire between nurse and student when participating within a CoNP.

These Case Study One examples suggest a response to Design Element One: Authentic Roles. Bringing together ICALD nursing students and a practising member of an Australian CoNP, exposed a social relation based upon assumed roles and expectations of teacher and student. These assumed roles present an interesting and unanticipated response to the designed simulation and as such require exploration.

Whilst the guiding cues and prompts afforded by the old-timer legitimised these participants' participation in an otherwise inaccessible repertoire of nursing practice, they did not reflect a formalised structure of teaching per se. Yet, these cues and prompts were perceived in this way by two of the participants, Jiao and Kwan. This perception is supported by the research of Adnams (2012) who found ICALD nursing students of Chinese, Indian and Korean heritage characterised learning during the clinical placement in terms of working with nurses who "will definitely tell you what you need to do" (p.101). The participants' perceptions of social relations of teacher and student highlighted perceptions of a relationship based on power. Assuming the role of a student, and waiting to be told what to do is also reflected in the finding of Woodward-Kron et al. (2007), where some ICALD students perceived initiating questions to be the role of an old-timer rather than student. These findings suggest that such perceptions should not be unexpected, as according to Andrew (2012), the way ICALD nursing students identify as learners during clinical placements in Australia, generally reflects the values, beliefs, roles and expectations of their cultural

heritage. It is also important to note the different perception of Cheng. According to this participant, the old-timer represented a resource from whom clarification could be sought. As would be disclosed at a later time during the Simulation Three debriefing, Cheng had at some time "decided to change" (Cheng, C1S3D[9]) his identity as a learner; a change that reflected a greater autonomy for his learning. This is explored further in Theme Three.

In the findings in this section I have highlighted the value of immersive simulation design that involves authentic roles of ICALD nursing students and old-timers. The emergent responses to such a design provide significant opportunities for facilitators of simulation activity and ICALD nursing students to explore and negotiate identities of participation within the psychologically safe learning environment of the post-simulation debrief.

7.1.2 Identities of participation: Perceptions of power and authority.

A poignant contrast to an experience of mutual engagement was demonstrated by Kwan, an ICALD nursing student of Korean heritage. As indicated in Table 21 (Section 6.5.1), Kwan and Jiao participated in Simulation One Variant (S1V) whereby the old-timer was briefed to adopt the role of an unsupportive buddy nurse. Having first observed Cheng and Hui's interaction with RN1, Kwan anticipated his experience would be similar. Kwan explained:

> When I observed the scenario [Simulation One] I thought it not so hard. Scenario One is very good because she [RN1] teaches how to [do the process], which one [step] is next. So I was expecting similar to the first scenario. But second scenario she was just bossy. 'What can you do?' 'Show me'. And she just push and push. (Kwan, C1S1D)

This example suggests Kwan anticipated an experience that involved mutual engagement as was the case for Cheng and Hui; an experience of being taught each step. However, his

[9] C1 (Case One) S3 (Simulation Three) D (Debrief)

interaction with an unsupportive buddy nurse quickly revealed a mismatch between what was anticipated and what was experienced. Kwan appeared to find it difficult to reconcile the mismatch between his expectation of an experience characterised by mutual engagement, and what was actually experienced. This is illustrated in the following extract from the Simulation One Variant contact summary.

> Observing the simulation, there was a feeling of powerlessness. Few questions were asked by Kwan or Jiao. The only words spoken by the students were single-word responses when questioned by RN1. At times the mood felt almost volatile. At one point I thought Kwan was going to walk out of the simulation. The trigger for this was RN1's rapid-fire of questioning and pressuring the students to 'get moving' rather than providing sufficient time to respond. (C1S1V, Contact Summary)

Clearly a single change to the simulation design (the nurse being unsupportive) can significantly influence identities of participation. The absence of mutual engagement effectively revoked a sense of legitimacy as a newcomer and this was interpreted as an experience where competence was perceived as being challenged.

Within the context of Australian nursing education, competence is defined according to professional competency standards (NMBA, 2006) or competency-based checklists (Cant et al., 2013; Wu et al., 2015). From a CoP perspective, "a community establishes what it is to be a competent participant, an outsider, or somewhere in between. In this regard, *a community of practice acts as a locally negotiated regime of competence"* (Wenger, 1998a, p. 137). Therefore, rather than formalised criteria, competence is defined by the three dimensions of practice: mutuality of engagement; accountability to the enterprise; and negotiability of the repertoire (Wenger, 1998a). For Kwan, a nurse-student relationship that was devoid of mutuality defined his limitations of competence in terms of mutuality of engagement and challenged his ability to engage in the repertoire of practice. As Kwan stated, "I know the process" (Kwan, C1S1D) of medication administration, yet without the

legitimacy to participate and the capability to negotiate the mismatch of mutuality of engagement, Kwan was "just worried that maybe real nurse in a real situation doesn't let us know [teach us] and just say 'He is not qualificate' or something like that" (Kwan, C1S1D). Here, competence was defined in terms of negotiation of an identity of participation rather than competence of technical skill. Kwan explained:

> I don't know which thing I can ask, which thing I can say. Like when she push us, I don't know [if] I can say 'Don't push us. We will do as much as we can'. Or just (pause) I don't know. (Kwan, C1S1D)

Through this example it is possible to gain insight into the ways in which, through the use of an immersive simulation design, ICALD nursing students' identity as a legitimate peripheral member to a CoNP can be challenged. In one way, Kwan's statement could be interpreted as lacking capability in the negotiability of the repertoire in order to engage with the practice. In another way, Kwan appeared to lack the legitimacy to engage in the process of negotiability for fear of being disrespectful to people in positions of power and authority; a particular source of concern for some ICALD nursing students.

In Section 2.3.4 I discussed the ways in which ICALD nursing students experience difficulties in negotiating challenging interpersonal relations with people in positions of authority (Brown, 2005; Xu, 2007). Underpinning such difficulties are concerns that such negotiation may be interpreted as a lack of respect or loss of self-control (Brown, 2005; Kawi & Xu, 2009). Whilst Kwan's uncertainty as to what he could say to an old-timer was not only consistent with these previous research findings, his reflections during the post-simulation debrief revealed the role of cultural norms, values and beliefs. This is explored further in the following section.

7.1.3 Identities of non-participation: Culture, competence and legitimacy.

During the Simulation One debriefing, Kwan described his relationship with the old-timer as "Unequal because that is my culture. Because teacher is in a higher position in our culture" (Kwan, C1S1D). Perceiving a nurse in a higher position based upon the values and beliefs of Korean culture revealed a social relation of power that differed to the other Case Study One participants. According to Kwan, the social norms, values and beliefs of his Korean cultural heritage instilled in him a need to demonstrate respect for figures of authority. Whilst the unsupportive nurse of Simulation One Variant provided the trigger for exploring perceptions of hierarchy, authority and power, such perceptions existed, albeit to a lesser degree, between this research participant and the researcher. As Kwan explained:

> You [the researcher] are in a higher position to me. So I am not talking like this to you [openly in the debrief] because this is my culture. To say something to someone in a higher position is a big change. Even when I speak to you, I don't know why I cannot speak properly. It is a bit hard to explain this part but this is how I feel. (Kwan, C1S1D)

This statement reveals the significant feelings of anxiety that can be experienced by ICALD nursing students when communicating with people in perceived positions of authority. For Kwan, participating in conversations with figures of authority, a fundamental requisite of social relations within a CoNP, presented a significant challenge. Wenger (1998a) acknowledged that mutual engagement does not necessarily entail social relations of equality or respect. However, the example provided by Kwan suggests that perceptions of hierarchy and the need to demonstrate respect to authority underpinned by the values and beliefs of Korean culture can be disabling. Although it could be argued that Kwan's is an extreme example, it does however, highlight the significant barriers confronting some ICALD nursing students when participating with members of an Australian CoNP.

Whilst the Simulation One scenario provided the trigger for participation, it was the post-simulation debriefing that provided the mechanism for exploring issues of legitimacy, competence and cultural heritage. Exploring the interplay between Kwan's experience and competence provided an opportunity for other research participants to reflect on their own cultural heritage, past experiences and future projections. Despite describing his relationship with the old-timer as "basically equal" (Cheng, C1S1D), Cheng concurred with Kwan's perception of a power differential between the old-timer and the newcomer. Cheng believed the need to respect hierarchical structures was not unique to Korean culture, but was true for many "Asian countries, [where] teachers are in a higher position" (Cheng, C1S1D). Of significance to this research were the ways in which the Case Study One participants spoke of the potential for future encounters with unsupportive old-timers and their need to accept this as part of their identity as nursing students. As Kwan explained: "I didn't want [to be treated badly by the nurse] but student have to do that even when real situation" (Kwan, C1S1D). Cheng, having observed Simulation One Variant elaborated:

> Even if she [the nurse] is treating me like that, if I can learn something I can tolerate. But deep inside my mind I am thinking 'Why is she doing this?' But I try to keep calm, calm down and try to move things smoothly. (Cheng, C1S1D)

Both Kwan and Cheng expressed acceptance at the real possibility of needing to tolerate being treated poorly by old-timers during the clinical placement. What was apparent from Cheng's comment was the need of nursing students to carefully consider the pros and cons of challenging versus enduring expressions of power by old-timers and the implications of choosing one over the other may have in terms of future learning. This finding is supported by research conducted by Levett-Jones and Lathlean (2009) and Nolan (1998) whereby nursing students during the clinical placement choose to keep a low profile and keeping quiet when experiencing challenging social relations with nurses so "not to rock the boat" (Levett-Jones & Lathlean, 2009, p. 346) for fear of jeopardising future learning opportunities.

The examples provided reflected Wenger's (1998a) assertion that identity is defined as a social discourse, constructed as "a layering of events of participation and reification by which our experiences and its social interpretation inform each other" (p.151). The insights provided by Kwan and Cheng not only represented an experience of participation in this simulation, but also reveal their sensitivity to how such experiences may impact on their socially constructed identity as newcomers within an Australian CoNP. For Cheng, this awareness was represented by not wanting to rock the boat and keeping quiet. Kwan on the other hand expressed a real concern that in the event of encountering a "bossy nurse", his competence and thus legitimacy as a learner was being questioned.

In Section 6.4.4, the proposition of Design Element Four was to design simulation activities that affirm as well as challenge legitimacy. The examples provided in this theme highlight the importance of legitimacy as a facility of participation. Thus, without a sense of legitimacy, participation and indeed mutual engagement can be impeded. However, this section I have also highlighted Wenger's (1998a) conceptualisation of practice as a socially defined regime of competence, and the ways the interplay between experience and competence may influence newcomers' socially constructed identities as legitimate peripheral participants. It is important to clarify at this point that designing immersive simulation activities that explore student identity construction as preparation for clinical placement is in stark contrast to the majority of nursing simulations where the focus remains on developing an identity as a registered nurse (for example, see: Disler, Rochester, Kelly, White, & Forber, 2013; Kelly, 2014; Lasater, 2007a). A concern that is only recently being highlighted as a potential source of mis-education by a small number of authors (for example, see: Andrew et al., 2009; Berragan, 2011; Bligh & Bleakley, 2006; Dunnington, 2014).

According to Wenger (1998a), learning to become a peripheral member of a community involves three dimensions of competence. Importantly, from this perspective, competence is represented as processes that contribute to an evolving form of identity. These

are: e*volving forms of mutual engagement*, discovering how to engage, what helps and what hinders, and developing mutual relationships; *understanding and tuning the enterprise*, aligning engagement with the enterprise and learning to be accountable to it; and *developing repertoire, styles and discourses*, renegotiating the meaning of the artifacts of practice, telling and re-telling stories (Wenger, 1998a, p. 95). Implicit across these three processes is participation. The examples from this sub-theme suggest that a sufficient challenge to ICALD nursing students' *competence* can be achieved through the simulation of everyday nursing practice involving authentic roles of ICALD nursing student and old-timer as interpreted through these three dimensions. Such a perspective illuminates the findings of existing research into ICALD nursing students' learning during the clinical placement where significant challenges to identities as legitimate peripheral participants exists through a lack of understanding about roles and expectations as learners and of learning, and difficulty forming social relations with members of a CoNP (for example, see: Brown, 2005; Edgecombe et al., 2013; Woodward-Kron et al., 2007).

Clearly the proposition here is one of designing immersive simulations that represent boundary encounters, with challenges to legitimacy represented in terms of revealing boundaries of competence. What is being argued, is that challenges to competence need not be threatening, but rather provide *just enough* challenge. The intent of the term *just enough* is not to challenge competence to the extent that challenges ICALD nursing students' identity leading to an extreme form of non-participation in terms of marginality, but rather to serve as a trigger for learning that is personally meaningful.

In summary, the experiences of the Case Study One participants suggest that bringing together ICALD nursing students and old-timers in their authentic roles *with the intent* of an experience of mutual engagement can provide sufficient challenge to competence. The outcome can be a positive and meaningful learning experience rather than an experience that is potentially negative and harmful. The implication for Design Element Four therefore is

rather than legitimacy, simulation experiences should be designed to affirm as well as challenge *competence* as defined by Wenger's (1998a) three dimensions of practice. This proposition also raises implications for and clarifies the design elements relating to student identity.

In Section 6.4.2, the proposition of Design Element Two was to design simulation activities that purposefully engage students in learner identity construction. However, what was meant by learner identity construction remained unclear. From a CoP perspective, Wenger (1998a) argued that identity is "an experience and display of competence" (p.152) within a specific community. In other words, identity is defined "not just through reified markers of membership, but more fundamentally through the form of competence that it entails" (Wenger, 1998a, p. 152). The implication for the three design elements relating to student identity construction, is to interpret student identity through Wenger's (1998a) three dimensions of competence when: designing learning outcomes; designing simulation activities; and when debriefing simulation activity that focuses on ICALD student identity construction. Accordingly, a recommendation for Design Elements Two, Seven and Eight is to make explicit Wenger's (1998a) three dimensions of competence in the respective design characteristics.

The three sub-themes that comprised Theme One have provided insight into the initial perceptions, expectations and identities of participation the four ICALD nursing students brought to the immersive simulation experience. The examples provided by the Case Study One participants illustrate the ways in which simulations that replicate everyday nursing practice designed according to the sociocultural perspective of CoP can reveal factors that contribute to, as well as impede mutual engagement; these being, issues of power, authority and culture that may otherwise remain invisible. Of significance has been the value of interpreting issues of legitimacy and the role of Wenger's (1998a) conceptualisation of

competence as a way to understand ICALD nursing students' identity construction. Further, it has been argued that such a perspective can provide a useful framework to engage in a process of negotiation of student identities during the post-simulation debrief.

In the following section I explore the responses of these participants to invitations and affordances during the immersive simulations.

7.2 Responses to Designed Invitations and Affordances

The previous examples provided by Case Study One participants were clear representations of boundary encounters. Indeed, as illustrated in Section 6.5, and as represented by Design Elements Two, Three and Four, boundary encounters served as an intentional design characteristic to reveal issues pertaining to identities of participation and non-participation. Having explored initial expectations and perceptions of engagement during the immersive simulation program of the participants, in Theme Two I explore these participants' *Responses to designed invitations and affordances.* Theme Two is comprised of four sub-themes:

- Experiencing boundaries: Moving to a position of peripherality.
- Non-participation as a strategy.
- Waiting for guidance.
- An enterprise of learning: Initiating mutual engagement.

7.2.1 Experiencing boundaries: Moving to a position of peripherality.

As has been discussed, according to CoP, learning to become a peripheral member of a community involves: *evolving forms of mutual engagement*; *understanding and tuning the enterprise*; and *developing repertoire, styles and discourses* (Wenger, 1998a, p. 95). Implicit across these three processes is participation. The benefit of immersive simulation as a learning and teaching method is its ability to accommodate emergent, often unpredictable

responses to the design. Such an emergent response was illustrated during Simulation One. The following extract from the Simulation One video transcript sets the scene.

> Hui walks to the intravenous infusion pump and identifies that the infusion is complete. Whilst Hui inspects the pump, Cheng stands back with hands clasped behind him. RN1 asks 'So we need to change the [intravenous fluids] bag. Yep? Have you had much practise with the pumps?' Hui replies 'Only twice' and giggles. Cheng states that he has not. RN1 asks Hui 'Do you know how to turn the pump off?' Hui presses the *Pause* button on the pump then opens the infusion pump door resulting in a second alarm to sound. RN1 reaches over Hui and closes the door. RN1 states 'We don't actually need to open it [the door] just yet. We just want to stop this from beeping. So press *Pause* and *Stop*. And this will turn it off.' Cheng remains observing with hands clasped behind. (C1S1, Video Transcript)

Clearly this example represents an experience of mutual engagement between Hui and RN1 in two ways. First, the inquiring cues from RN1 represented a strategy of evaluating the ICALD nursing students' competence by determining their level of understanding of infusion pumps prior to moving to the next step (Haitana & Bland, 2011). However, Hui's eagerness in responding to the question "Do you know how to turn the pump off" suggests a misunderstanding of the question as a direct invitation to turn off the pump. Whilst the basis of Hui’s misunderstanding is not known, the response from RN1 represents a second example of mutual engagement.

Hui's eagerness in accepting the opportunity to participate resulted in her opening the infusion pump door; an action that presented a potential threat to the integrity of nursing practice (introducing air into the intravenous line) and as such required the intervention of the old-timer. In order to maintain the integrity of nursing practice, RN1 recognised the boundary of Hui's competence, subsequently taking over. This response by RN1 effectively

demonstrated Hui's movement from a position of more full participation to one of a peripheral observer.

For ICALD nursing students, as for any nursing student during clinical placement, participation is legitimised by being supervised by old-timers. Trying things out as a process of learning invariably presents potential threats to the integrity of nursing practice as illustrated in the example of Hui. Thus, participation is contingent upon continued legitimacy afforded to newcomers by members of a CoP; in other words, an acceptance by members of a CoNP that such violations and “stumblings” will occur (Wenger, 1998a). It can be argued that Hui's example reflects an emergent response to Design Element Four in terms of an activity that affirmed as well as challenged legitimacy. This example also supports the earlier proposition where simulations designed to represent everyday nursing practice with the intent of mutual engagement between ICALD nursing students and old-timers, when interpreted through Wenger's (1998a) three dimensions of competence, can present sufficient challenge to ICALD nursing students, and serve as a source of meaningful learning. Further, this interaction reflects the intent of Design Element Three as an experience of multimembership; experiencing the complexity of being a member of a community of nursing students intersecting with a CoNP. Learning about practices such as intravenous fluid therapy in the de-contextualised environment of classroom tutorials or skills laboratories, whilst they can be considered as hybrid activities (Brown et al., 1989), lack the authentic context of, as in this case, considerations of patient safety. Whilst Hui's experience exposed her boundaries of competence, such experiences of being moved from positions of more full participation to one of peripherality may help shape ICALD nursing students' understanding of the enterprise, not only in terms of practice, but more so in terms of an enterprise of learning. The value of immersive simulation demonstrated here is not only that of being able to accommodate such emergent experiences, but the ways in which immersive simulation provides safety for

patients, as well as psychological safety for ICALD nursing students in relation to the potential of losing face whilst negotiating identities of participation.

7.2.2 Non-participation as a strategy.

For the Case Study One participants, non-participation appeared to be used as an intentional strategy for learning throughout each of the three simulations. Wenger (1998a) argued that that for newcomers whose trajectory as participants remains peripheral, non-participation acts as an "enabling aspect of their participation because full participation is not a goal to start with" (p.166). However as will be seen, whilst on some occasions non-participation provided a lookout post (Lave & Wenger, 1991) enabling observation as a form of learning, at other times non-participation impeded learning.

One way non-participation appeared to be employed by the Case Study One participants took the form of remaining at the periphery of practice. Revisiting the video transcript extract from the previous section, for Cheng, remaining at the periphery provided an opportunity to learn about intravenous fluid management; a position of peripherality that was legitimised by his stated inexperience as a first year nursing student. For Cheng, his identification as a student provided a legitimate viewpoint from which to observe the interaction between Hui and RN1 as they sought to determine the cause of the alarming intravenous infusion pump.

Clearly this example represented an experience of mutual engagement between Hui and the old-timer; an interaction that facilitated Cheng's ability to learn through observation. Cheng's conscious decision to remain on the periphery as an observer was demonstrated by declaring his lack of knowledge of the practice, standing back with his hands clasped behind his back. A position of non-participation was legitimised by the invitational phrasing of the affordance by RN1 as well as Hui's acceptance of the invitation to participate. A different example of remaining at the periphery as a strategy for learning was provided by Kwan.

During Simulation Three, an affordance to participate in the conversation with old-timers, a nurse and a paramedic, was a designed topic of conversation that related to recent university classes. In this example, Kwan employed non-participation as a strategy by remaining at the periphery of the conversation. Justification for this choice was a perception that "I think if I listen and understand it can also be learning" (Kwan, C1S3D). However, for Kwan, understanding was impeded as "I just catch some words, not whole sentences because they do not speak clearly" (Kwan, C1S3D). Here, Kwan attributed the pace and clarity of speech to his inability to follow the conversation.

Kwan's experience is reflected the nursing education literature where the fast pace of speech, Australian accents, the use of vernacular, and discipline-specific language present a barrier to ICALD nursing students' participation in conversations both in the Australian classroom, and during the clinical placement (Gilligan & Outram, 2012; Jeong et al., 2011; Shakya & Horsfall, 2000; Starr, 2007). These cited studies largely attribute English language proficiency as presenting a challenge that ICALD nursing students actively seek to avoid. However, whilst certainly a contributing factor, Kwan's strategy to remain at the periphery appeared to be compounded by his perceived lack of competence in the negotiability of the repertoire of practice. Kwan explained: "...at the time I thought I didn't have more knowledge to share with them [oldtimers] or something like that" (Kwan, C1S3D). This example illustrates the need for ICALD nursing students to be empowered, to feel they have the ability, the capability and legitimacy, to engage in the repertoire of nursing practice as learners; to be empowered to negotiate an identity of participation that moves beyond a perception of needing to know everything. Indeed Kwan expressed a desire for mutual engagement to learn about the role of the paramedic. Kwan explained:

> She [P1] is a paramedic people? I could ask, I wanted to ask (draws deep breath through clenched teeth)...but I [stay] still here because I don't know when can I start

> [to] ask or when can I interrupt or join their conversation. Is really hard to tell their face or I be worried is rude or not. (Kwan, C1S3D)

This example represents the trade-off of non-participation. Clearly for Kwan, remaining at the periphery provided the safety from what appeared to be his difficulty in initiating mutual engagement; knowing how and when to join in the conversation without being perceived as rude. However, the trade-off of non-participation resulted in a missed learning opportunity.

The sub-theme *Non-participation as a strategy* has been presented using two examples of the choices the Case Study One participants made in response to invitations and affordances to the designed, as well as emergent learning opportunities. Both examples reflect the intent of Design Element Five: Authentic Learning Processes; although from two quite different perspectives. In Section 6.4.5, the proposition of Design Element Five was to design simulation activities that represent authentic learning processes. The intent of this design element was to represent the more formal as well as informal spaces where learning occurs in the workplace. Cheng's legitimised position of peripherality as an observer represented what could be considered learning within the formalised practice of nursing; a learning activity located within work that characterised several of the process identified by Eraut (2004a, 2007) in his typology of early career learning. In contrast, the coffee break represented an informal, in-between learning space, described by Solomon et al. (2006) as a time and place where the social and professional overlap. Critical to learning within both of these learning spaces are choices of identity in terms of participation or non-participation. The ability of immersive simulation to accommodate emergent responses to the designed activities provided the valuable insights for the Case Study One participants as to the implications such choices may have on their own learning.

Within his learning architecture, Wenger (1998a) described participation and reification as "two complementary aspects of design that create two different kinds of affordances for the negotiation of meaning" (p.231). Wenger (1998a) illustrated this when he

said "One can make sure some artifacts are in place [reification]...One can also make sure that the right people are at the right place in the right kind of relation to make something happen [participation]" (pp.231-232). Of interest here is the dependency on having the right kind of relationship, and this highlights the contribution that this research study offers to theories of workplace learning.

Participation is a central tenet of workplace learning theory, as is the philosophy that underpins the clinical placement. However, this view is dependent on two conditions. The first is that workplaces will invite students (Billett, 2006), who are not "permanent residents" (Boud, 2010, p. 9) to participate in the practice. The second is that students have capability in terms of repertoire, adaptability and agility to respond to diverse and changing situational requirements (Billett & Henderson, 2011). The invitational nature of workplaces is largely dependent on members of a CoP and as such is outside the scope of this research study. However, by providing ICALD nursing students with immersive simulation activities that reflect the processes of learning in workplaces, this may at even a basic level, empower these students with an understanding and beginning repertoire to initiate a *right kind of relation* with old-timers to make something happen.

From this analysis, the emphasis on workplace learning within Design Element Five: Authentic Learning Processes becomes clear. A recommendation for Design Element Five is to re-word this title to "Authentic Learning Processes of Work" to make explicit the intent of this design element as a metaphorical bridge between classroom and workplace learning.

7.2.3 Waiting for guidance.

A second representation of the ways in which the Case Study One participants responded to affordances to participate, was that of waiting for guidance from an old-timer. Waiting for guidance referred to the ways in which the unstructured occurrences of practice were interpreted as being beyond the abilities of these ICALD nursing students.

Underpinning this interpretation was negotiating multimembership in terms of bringing together individual technical skills learnt at university into a coherent practice. This was particularly evident during Simulation Two.

Simulation Two (described in Section 6.5.4) represented a situation where a patient had experienced a fall. This simulation aligned with the Case Study One participants Bachelor of Nursing program, meaning these participants had an understanding of and some limited practice with the discrete skills of patient assessment required for this situation (assessment of consciousness, respirations, heart rate and blood pressure). However, what the participants would not have experienced was an opportunity to consolidate these individual skills as a coherent practice when working alongside a registered nurse.

According to the participants, their experiences of Simulation Two were characterised by feelings of uncertainty coupled with nervousness and anxiety. The need to make meaning of the situation appeared to present a significant challenge. For Cheng, the situation was "a bit beyond my expectation" (Cheng, C1S2D[10]). Cheng described "the normal routine is sort of disturbed. You cannot just follow your mind to do different steps [as] a sort of routine. But this routine is interrupted" (Cheng, C1S2D). From this example, it appears that Cheng's description of looking for a routine reflected an individual, cognitive process of negotiating meaning. The difficulty in finding some certainty in the form of a routine resulted in his feelings of nervousness. In addition, a lack of routine contributed to a perception that nothing was being done for the patient. Cheng continued:

> I was nervous and nobody was responding. We were all silent and there was sort of delay. That delay makes me a bit nervous because (pause) we cannot judge this patient's situation exactly or very accurately. The silent and nobody was responding or doing nothing. That's not good. (Cheng, C1S2D)

[10] C1 (Case One) S2 (Simulation Two) D (Debrief)

In this example, a perception of "doing nothing" is of particular interest. On review of the Simulation Two video recording, there was significant evidence of mutual engagement between participants and the old-timer. Actions such as retrieving gloves indicated an acknowledgement that the patient was bleeding, suggesting an awareness of infection control principles. Further, locating and retrieving the artifacts of practice required for patient assessment showed a recognition of the particular repertoire of the practice. Furthermore, discussion during the debriefing about their concern for the patient illustrated their immersion in the simulation. This is illustrated in the following extract from the Simulation Two debrief:

> For me I think I want to try to move the patient and I also feel scared. If I move she will ah (pause) he will become worse. I just don't know if (pause) I can't decide what I go to do. (Jiao, C1S2D)
>
> I'm not sure but because we know we shouldn't move the patient straight away. And I want to be sure when we can move and without causing more problems. So that part I also don't know, but I'm concerned about that. Like maybe some broken ribs, if we turn him around and can cause some other problems. (Cheng, C1S2D)

In terms of Wenger's (1998a) three dimensions of competence, the processes of assessment and evaluation of the situation, consideration of possible actions, and the evaluation of possible consequences of such actions suggests the Case Study One participants had ample understanding of the repertoire of practice to engage in it. However, the complexity and perceived messiness of the practice combined with waiting for guidance from the old-timer, revealed a lack of understanding regarding their accountability to the enterprise; a particular ability to consider certain possibilities, of which initiating mutual engagement with the old-timer was one. This uncertainty was described in terms of negotiating and clarifying roles and responsibilities within the nurse-student relationship. Cheng explained:

> I think she (RN1) was sort of waiting us to respond first so I think in the real scenario, in the real occasion, she might you know (pause) she might instruct us like tell us what

> to do to cooperate instead of just make decisions about ourselves first. (Cheng, C1S2D)

Here, Cheng's consideration of what happened and what might happen "in the real occasion" suggested his process of negotiating boundaries. In one way, Cheng's statement suggests that the simulated practice was not an authentic representation of the real occasion. This presents a challenge to those designing authentic immersive simulation activities and is represented within the healthcare simulation literature in relation to fidelity and realism. As indicated in Chapter Four, both fidelity and authenticity are best understood as responses to simulation design, defined from the perspective of the participant. In other words, as the designer of the simulations for this research, my perspective of what is an accurate replication of an actual situation as an experienced nurse, may not be perceived the same way by the novice ICALD nursing students.

Additionally, Cheng's statement suggested the potential influence of the Hawthorne effect (Patterson et al., 2008), where participants may modify their behaviour in response to an awareness of being observed; a potential issue with healthcare simulation. This raises an interesting point in terms of negotiating a nexus of multimembership in the context of designing immersive simulation from the situated learning perspective of CoP. The accounts of the participants suggests there was mutual engagement. For Jiao, interaction with the nurse "[made me] feel better 'cause I cannot check the blood pressure and she help me out" (Jiao, C1S2D). An experience of mutual engagement was supported by Cheng when he recounted "...and she [RN1] mentioned to take the vital signs first. So I missed something and the other two mentioned, kind of pointed out and we started to do that. I think that's a good way to cooperate" (Cheng, C1S2D). However, despite these perceptions of cooperation, there remained a feeling of "...if another nurse is around...I feel better because someone can help me to decide what to do" (Jiao, C1S2D). Indeed despite examples of mutuality of

engagement, accountability to the enterprise and negotiability of the repertoire, the case Study One participants expressed feelings of "Still I feel we did not do well" (Jiao, C1S2D).

These examples from Simulation Two represent a fundamental difference between structured learning in the example of medication administration (Simulation One), and the seemingly unstructured practice where learning entails developing one's own repertoire, styles and discourses (Wenger, 1998a). Here the participants' perceptions reflected the findings of Adnams (2012), where ICALD nursing students expected that they would be told what to do. Here the feeling of a need for the students to "Try our best" (Cheng, C1S2D) suggested a tension between a demonstration of competence by managing the situation, and engaging an identity as a legitimate peripheral participant in what could be perceived as an informal learning opportunity (Eraut, 2004b).

In Section 3.2.3, discourse surrounding workplaces as informal learning spaces was identified as a subject of contention (for example, see: Billett, 2006; Eraut, 2007; Hager & Halliday, 2006). For example, Billett (2002) argued that the routines, rituals and tasks of workplace practices possess inherent pedagogical qualities. Indeed for experienced nurses, the management of the situation represented in Simulation Two does comprise a routine; a defined sequence of tasks that culminate as patient assessment. However, for newcomers who may not have an experience of such practices, a routine may not be obvious. Therefore a tension exists for newcomers when negotiating participation within a CoNP; which activities are perceived as *learning* and which are perceived as *doing*. In other words, knowing how to navigate a nexus of multimembership in terms of applying formal, codified knowledge to the situation at hand (Spouse, 1998), and how such codified knowledge is reconstructed as a coherent practice.

In Section 6.4.3, the proposition of Design Element Three was to design activities that reveal the complexity of multimembership. In this design element, I proposed that designed boundary encounters in simulation activity focus less on the technical skill or

task, but rather focus on the social and cultural aspects of negotiating access to practice. The findings from this sub-theme support the intent of this design element by highlighting the need for learning socially appropriate ways of accessing learning opportunities within the workplace. Whilst Eraut's (2004a, 2007) typology of early career learning identifies conditions and processes that enhance learning in workplaces, processes such as participation in group processes and asking good questions, it could be argued that for ICALD nursing students, an appropriate focus of learning should include *how* to access learning opportunities and *how* to initiate mutual engagement through the framing of questions. Focusing learning on the processes of participation may contribute to the development of judgement, but not in terms of clinical judgement which is a considerable focus of pre-registration nursing education (Dillard et al., 2009; Kelly, 2014; Mariani et al., 2013; Tanner, 2006), but as one valuable quality in the repertoire of a sociocultural practice described by Hager and Halliday (2006) and Greeno (1997). Learning, from this perspective, would focus on *who* to ask questions of, *when* to ask questions and *what* questions to ask. The overall intent of such learning would be to contribute to ICALD nursing students' repertoire as learners in order to facilitate access to learning opportunities in ways that are defined by a particular CoNP as socially appropriate.

Exploring the Case Study One participants' perceptions and reported experiences of Simulation Two through a lens of multimembership has illuminated the tension between negotiating identities across communities of cultural heritage, university students and Australian CoNP experienced by these ICALD nursing students. Whilst the examples provided by Cheng and Jiao demonstrated engagement in making sense of the situation that confronted them, each of these participants' concerns and processes of problem solving were only made explicit and shared after the experience during the debriefing; a process Schön (1983) termed *reflection on action*. Reflective practice is represented in CoP as a combination of engagement and imagination (Wenger, 1998a); a process analogous with

reflection *in* action (Schön, 1983). Identity as a negotiated experience of participation and reification lends itself to reflection in action. This process of social negotiation *in* practice provides opportunities for learners to perceive situations differently and to try out alternative approaches during an encounter rather than solely relying on the post-simulation debrief. One strategy that may prove useful for negotiating the nexus of multimembership is that of *thinking aloud*; a verbalisation of thoughts particularly useful in the development of higher order problem framing and clinical reasoning skills (Banning, 2008; Heine, 2010; Vygotsky & Luria, 1994).

Thinking aloud may not only provide ICALD nursing students with a strategy for gaining access to nursing practice, but more significantly serve as a facility for mutual engagement by conveying to old-timers their perceptions, interpretations and potential responses to a situation. Such a process straddles the boundaries of learning paradigms, translating cognitive approaches to learning to social and cultural processes. A further and significant benefit of thinking aloud as a potential strategy may be that of providing ICALD nursing students with a purposeful and meaningful reason for engaging with, practising and refining the repertoire of nursing language (Heine, 2010). A recommendation for Design Element Three is to identify *thinking aloud* as a design characteristic; a strategy to facilitate mutual engagement as a mechanism for the construction of an identity as a legitimate participant.

In this section I have also revealed the need for caution when designing immersive simulation. Due to their limited exposure to actual practice, first-year ICALD nursing students may be distracted by assumptions that designed situations do not represent what would happen in the real world. The implications for designers of immersive simulation activities is therefore to temper the selection of actual situations to be simulated. Situations need to provide sufficient challenge as a stimulus for learning, yet must be perceived not only as believable, but relevant and meaningful to first-year students-year nursing students. This is

particularly pertinent for ICALD nursing students who may bring to immersive simulation activities, very different values, beliefs and expectations about learners and of learning, based upon different pedagogical assumptions to those who design simulations. Thus, careful consideration needs to be given when designing immersive simulation activities in terms of the designed, but also potential emergent responses to design. A recommendation for Design Element Six therefore is to extend the focus of this design element somewhat to represent authentic tools, artifacts *and practices.*

7.2.4 An enterprise of learning: Initiating mutual engagement.

For the Case Study One participants, mutual engagement with old-timers appeared to present a particular challenge throughout the immersive simulation program. Analysis of the Case Study One data through a lens of CoP, suggested that such challenges related to legitimacy; feelings of not having anything to contribute, for a need for guidance, and a perceived need to participate in the practice autonomously. However, as has been seen, examples of mutual engagement were evident between newcomers and old-timers as they engaged the repertoire of nursing during Simulation Two. There were, however, times during the immersive simulation program when the Case Study One participants initiated mutual engagement. An example of this could be seen, in Simulation One when Hui accepted the affordance to communicate with a doctor via telephone. The following extract from the Simulation One video transcript illustrates the interaction.

> Hui commences the telephone conversation by stating 'Hello Dr Thomas...I am student nurse'. Hui then turns to Cheng and states '...ummm....I don't know how to say that'. Cheng holds the IV order chart to Hui and points to where the patient name is written. Hui passes the telephone to Cheng stating 'You can do that'. (C1S1, Video Transcript)

In this example it appeared that Hui experienced a situation where her own boundaries of competence were not realised until participating in the actual activity. However, what is of

interest was not only Hui's recognition of the boundaries of her own competence, but her perceived competence of Cheng. Wenger (1998a) argued that as a dimension of membership to a community of practice "it is more important to know how to give and receive help than to try and know everything yourself" (p.76). An apparent experience of reaching the limitations to her perceived capability, whether these were related to proficiency with the English language or competence in the formalised structure of interprofessional communication. Thus, Hui's delegation of the task to Cheng reflected not only an accountability to the practice in terms of ensuring the task was completed, but an agility as a learner to recognise limitations to abilities and to do something about it; essential qualities for students when learning in workplaces (Billett & Henderson, 2011). Such an example reflects the ways in which immersive simulation can replicate, at least to some degree, and in-turn instil in ICALD nursing students, an understanding of the complexity of bringing together isolated skills into a coherent, albeit simulated practice, and the need for mutual engagement as a form of accountability to the enterprise.

Examples of the participants initiating mutual engagement were shown to exist in the quiet times of the simulated practice; periods after the focussed action of the simulation had drawn to a close. For example, after the telephone conversation, the final designed activity of Simulation One, Cheng and Hui initiated mutual engagement with the old-timer for the purposes of learning. The following extract from the Simulation One contact summary illustrates this interaction.

> At the conclusion of the telephone order, Hui and Cheng revisit the encounter with RN1. Hui draws on her observations of Cheng obtaining a telephone order from the doctor and clarifies each step of the process with RN1. RN1 explains the rationale for each step with both Hui and Cheng engaging in an active discussion. (C1S1, Contact Summary)

In this example, a challenge to Hui's competence provided her with an understanding of what she did not know. The example of mutual engagement that followed suggests her motivation to understand and improve. Whether having the opportunity to observe fellow newcomer Cheng's participation contributed to Hui's motivation is unknown. However, what this encounter suggests is that, as Kwan claimed in Simulation One, listening and observing can also be learning; a characteristic of informal learning in the workplace (Eraut, 2004a, 2004b, 2007) and one reportedly preferred by ICALD nursing students (Dickson, 2013; Kelly, 2014). However, as argued by Lave and Wenger (1991), observation best supports meaningful learning when immediately preceding participation. In this example, observation appeared to act as a precursor for mutual engagement between Cheng, Hui and RN1 in negotiating the use of the artifacts of practice (documentation and professional language), as well as developing their repertoire of practice in terms of how to conduct one's self when engaging in interprofessional communication and obtaining a medical order via telephone.

A second example of the participants initiating mutual engagement during the quiet times of the simulated practice was provided by Jiao. As seen in Section 7.2.3, Jiao stated her need for assistance from the old-timer when attempting to assess the patient's blood pressure during Simulation Two. Towards the end of Simulation Two, Cheng exited the simulation room in search of assistance, leaving Jiao and RN1 alone, crouching at the patient's head. Once alone, Jiao engaged RN1 in a dialogue about the process of patient assessment; the sequence of assessment, what questions to ask as a part of the assessment, and how to phrase the questions. This example of mutual engagement was characterised by RN1 coaching Jiao, providing opportunities to practice. Despite the poor clarity of the recorded dialogue, a period of what appeared to be focused mutual engagement was evident for 90 seconds; a period of mutual engagement that ceased on Cheng's return.

These Case Study One examples relate to and provide clarification for Design Element Five: Authentic Learning Processes. In previous sections of this chapter I have highlighted

that a strength of immersive simulation is in the ability to accommodate emergent responses to designed elements of practice. Examples of this strength have been demonstrated in the form of learning in the quiet times of simulation. Whilst Design Element Five focuses on authentic learning processes, it does not consider time. Whilst the examples provided demonstrate the ways Simulation One and Simulation Two afforded opportunistic, yet extremely meaningful times for learning, as emergent responses to the simulation design, these were not planned. Therefore, if each of these simulations were concluded according to the simulation plans, these learning opportunities may have been lost.

A recommendation for Design Element Five is therefore to *include time for emergent learning opportunities* as a design characteristic.

In Theme Two, *Responses to invitations and affordances*, I have explored ways in which the metaphorical boundaries that demarcate communities of university students and communities of nursing practice can be exploited as a design for learning as a simulated practice. In the case of ICALD nursing students, these diverse communities include: cultural heritage; university students; and an Australian CoNP to which the ICALD nursing students aspire to belong. An important dimension of identity construction as a negotiated experience of participation and reification, particularly for newcomers is learning how the community responds to their choices and actions (Wenger, 1998a). For these participants, examples of identity as a negotiated experience were encountered when accepting affordances to participate; affordances that at times involved experiences of mutual engagement.

In this theme I explored two perspectives of competence revealed through designed boundary encounters. Firstly, competence with a skill or task. Once the participants' boundaries of competence with a skill or task was revealed, a second type of competence was uncovered; that being social competence in the form of mutual engagement. Significantly for ICALD nursing students, negotiation of identities as newcomers to an Australian CoNP

requires the capability to initiate and manage the process of mutual engagement. The examples from the Case Study One participants provided throughout the discussion of Theme Two suggest that immersive simulation can provide a designed learning space to explore ICALD nursing students' capabilities to initiate mutual engagement with members of an Australian CoNP. In doing so I argue that such simulations provide a vehicle for revealing and exploring identities of participation.

However, what is significant in relation to this research study is an understanding of the importance of participants' emergent, unanticipated responses to designed immersive simulations. I argue, it is precisely because of the capacity of immersive simulation to provide a learning experience than can accommodate such emergent responses to design, that this contributes to learning experiences that are personally meaningful.

7.3 Debriefing: A Locus for Negotiating Identities of Participation

Wenger (1998a) argued that practice and identity are inseparable components of all CoP. Practice, from the perspective of CoP, is more than simply a way of doing things. Indeed, it encompasses the ways in which individuals perceive and interact with the environment within which they are situated. At the same time, the identity of individuals, is framed by how they perceive themselves. They are shaped by what is personally relevant and meaningful to them. This is achieved through a process of negotiation as they engage in participation in the practices of a CoP. Therefore, Wenger (1998a) argued that identity can be shaped by three modes of belonging; engagement imagination and alignment. This immersive simulation program served as a designed learning space where experiences of participation provided a locus for the negotiation of new experiences and new perspectives; a context for learning requiring the participants to *begin* a process of negotiation and re-shaping their identities as learners. The challenge of a designed space, according to Wenger (1998a) is to support the work of the three modes of belonging. Accordingly, a characteristic of the

eight design elements that I proposed in Chapter Six was to frame each design element in a way that aimed to facilitate engagement, imagination and alignment.

Wenger (1998a) argued that "Because learning transforms who we are and what we can do, it [learning] is an experience of identity" (p.215); a process of becoming or indeed to avoid becoming a certain kind of person. Whilst engagement, imagination and alignment, from a CoP perspective, are all important constituents to learning, different combinations of these contribute to learning at different times. Wenger (1998a) presented these combinations as: engagement and imagination; imagination and alignment; and engagement and alignment. Of particular interest in this research is the combination of engagement and imagination; a combination that according to Wenger (1998a), comprises a reflective practice. By focussing on this combination I aim to extend current understandings of simulation practice in relation to reflective learning and the process of post-simulation debriefing.

Throughout the healthcare simulation literature, post-simulation debriefing is consistently represented as the component of the simulation process where meaningful learning occurs (for example, see: Cant & Cooper, 2011; Raemer et al., 2011; Shinnick, Woo, Horwich, & Steadman, 2011). Current thinking in this area places emphasis on debriefing as an environment and mechanism for developing and enhancing reflective learning skills (Dreifuerst, 2009, 2012; Lapkin et al., 2010; Neill & Wotton, 2011; Parker & Myrick, 2010), with the intent, by extension, of facilitating the reflective practice skills of nursing students. Yet, as I argued in Chapter 4, there is an absence of examples within the healthcare simulation literature where simulation design aligns with scenario design and post-simulation debriefing from a sociocultural perspective of situated learning theory.

As a reflective practice, engagement and imagination "combines the ability both to engage and to distance – to identify with an enterprise as well as to view it in context, with the eyes of an outsider" (Wenger, 1998a, p. 217). Imagination enables the consideration of one's present, as well as considering possible futures. In turn engagement grounds

imagination, "to be negotiated in practice and realized into identities of participation" (Wenger, 1998a, p. 217). In this section I explore the Case Study One participants' perceptions and experiences of the three immersive simulations through a lens of reflective practice, and the ways in which such learning translated into the clinical placement in terms of identities of participation. Theme Three is comprised of two sub-themes:

- The complexity of practice: Seeing one's self from a different perspective.
- Aligning the enterprise of learning with the enterprise of practice.

7.3.1 The complexity of practice: Seeing one's self from a different perspective.

The immersive simulation program, from a CoP perspective, provided the Case Study One participants with an immersive experience, with the post-simulation debriefing provided a space where perceptions of participation and reification that stemmed from these experiences from each simulation could be negotiated. For the participants, such negotiation took the form of experiencing the complexity of practice.

According to Jiao, being an overseas qualified nurse (OQN) should have provided an advantage with the skill of medication administration during Simulation One, as "We know what to do, because in our country we always do this" (Jiao, C1S1D). However, a need for mutual engagement with a member of an Australian CoNP provided an unexpected challenge as "in the English language it feels different" (Jiao, C1S1D). Not only did English language contribute to the practice feeling different, for Cheng, the need to bring together a series of skills learned in isolation in skills laboratory classes into a coherent practice provided a different perspective to his perceived competence. Cheng explained:

> Maybe you are a good student and have mastered skills in the (skills) laboratories. But maybe in the real scenario, like the real work...you don't know what to do or do the wrong thing. It is not just the skill. It's important to be psychologically prepared I think. That's what I have learned. (Cheng, C1S2D)

These examples suggest that these two participants noticed a difference between the capabilities required for learning in the formalised context of the university classroom, and those required in a simulated practice. Through a lens of imagination, Cheng's feeling of needing to be "psychologically prepared" suggests a shift in perspective from one that was previously focused on skill, to an acknowledgement of the need for mutual engagement in order to ask for help when not knowing what to do. For example, during the Simulation Two debrief when exploring perspectives surrounding waiting for guidance, Cheng expressed an epiphany: "Then we should always communicate more! I think I might ask her [RN1] what I am thinking of doing, whether it is appropriate or not. 'Shall I do this, Shall I do that?'" (Cheng, C1S2D). Jiao concurred: "Should I take the blood pressure? Should I do something else? I should just ask her [RN1] to confirm whether it's the right step" (Jiao, C1S2D). Being able to reflect on the simulation experience demonstrated a shift in identities as learners. In one way, this shift was represented as a meaningful understanding of mutual engagement; that being a member of a CoNP means that it is more important to give and receive help rather than needing to know everything (Wenger, 1998a). In another way, the participants demonstrated a shift in identity as an experience of legitimate participants to the enterprise, however small.

In addition to skills feeling different when brought together as a coherent repertoire of practice, for one Case Study One participant, mutual engagement during the post-simulation debrief facilitated significant and personally meaningful learning. For Kwan, learning through immersive simulation was "not like the books or on the video" (Kwan, C1S3D). The difference, according to Kwan, was the experiential nature of immersive simulation. Kwan explained: "The simulations were really good for me. I felt wow, I've learned a lot. Because I could have an *experience* like this in a real situation" (Kwan, C1S3D) (emphasis added). As has been illustrated throughout Case Study One, Kwan expressed greatest reservation in communication with old-timers due in part to English language proficiency, but more

significantly to maintain concord by adhering to the norms, values and beliefs that defined a "good" student according to his Korean cultural heritage. Despite maintaining a position of non-participation in terms of listening and observing during the coffee break of Simulation Three, Kwan did learn a strategy he felt he could employ to broker access into conversations. Kwan explained:

> I think he [Cheng] ask in a very polite way. 'Can we join conversation? Do you want sugar [for coffee]?' They [old-timers] say 'No no', but this meant they turn their face [to us]. If he [Cheng] doesn't ask, I may sit there for a whole day like that. The first time [when interacting with new nurses] I may use his words. (Kwan, C2S3D)

Whilst the experience of engagement during the simulation scenario served as a facility of imagination, it was the debriefing that provided Kwan with the process for engaging reflective learning. Through a lens of imagination, this example suggests how non-participation can provide an observational lookout (Lave & Wenger, 1991) for learning from others who are mutually engaged in the repertoire of practice. However, whilst the simulation scenario enabled Kwan to observe Cheng's strategy for brokering into the conversation, it was the debriefing that revealed perspectives to broker access across boundaries. This was illustrated whilst Cheng described his personal trajectory as an ICALD nursing student studying in Australia.

> I was like that [reluctant to initiate mutual engagement] and now I decided to change. Sometimes a bit of courage but I think I make the first step. I think getting involved in their conversation I can learn something new and I think it might be useful for me. So I want to join in. I think it is necessary that if we want to cut in the conversation I think we need to know, at least get a rough idea about, what they are talking about. So if I know that I try to figure out what I know about this and I would join in at a certain time. (Cheng, C2S3D)

Clearly this example demonstrates the interplay between imagination and engagement. Cheng's ability to make sense of his past reluctance to participate and recognise a need for change suggests the work of imagination. Exploring boundaries in terms of thinking through ways to broker access through engagement represented reflective learning. The combination of engagement and alignment was significant. By considering the perspectives of the old-timers, and getting a "rough idea about what they are talking about" (Cheng, C1S3D), Cheng established alignment of perspectives, resulting in the negotiation of an identity of participation. The difference between these examples of Kwan and Cheng was the coordination of perspectives; in other words, the work of alignment. In contrast, the interplay of engagement and imagination represented in the example of Kwan, whilst suggesting reflective learning, without enacting such a strategy in terms of opening participation through further engagement, "imagination is just an escape...that merely reproduces current limitations and patterns of engagement" (Wenger, 1998a, p. 217).

In Section 6.4.8, I proposed Design Element Eight focus debriefing on learning outcomes, being student identity construction. Whilst the aim of this design element was to align the phases of simulation scenario and the debriefing with an epistemology of participation, what was not evident was a debriefing framework to focus learning in the form of negotiation of such identities. CoP appeared to contribute to this component of this immersive simulation program in the following ways; by incorporating and operationalising Wenger's (1998a) conceptualisation of competence, as well as his modes of belonging, engagement and imagination, as facilities of reflective learning. Exploring the Case Study One participants' perceptions and experiences, both past and present, provided insight into their personal histories, cultural values, beliefs and norms and how these influenced participation and mutual engagement. Furthermore, the debriefing provided a forum to engage in a process of mutual negotiation to make meaning not only of individual participants' experiences, but the experiences of others; potentially contributing to imagined

future trajectories. Therefore, a recommendation for Design Element Eight is to frame debriefing as an exploration of competence in terms of mutuality of engagement, accountability to an enterprise, and negotiability of a repertoire, and interpret these by exploring ICALD nursing students' personal histories, their cultural values, beliefs and norms, and in doing so, explore possible futures.

One of the aims of this research study was to explore the ways in which immersive simulation informed by CoP may develop the capability of ICALD nursing students to participate within an Australian CoNP. In the final section of this chapter, in order to explore this aim, I provide two contrasting examples of Case Study One participants' experiences of the clinical placement.

7.3.2 Aligning the enterprise of learning with the enterprise of practice.

As Wenger (1998a) articulated, the primary focus of CoP as a social theory of learning is participation...

> ...not just to local events of engagement in certain activities with certain people, but to a more encompassing process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities....Such participation shapes not only what we do, but also who we are and how we interpret what we do. (p.4)

In Section 6.5.1 I explained that the immersive simulation program was conducted in the three weeks preceding the participants' first clinical placement in Australia. The intent of this strategy was not only pedagogical, but to strengthen exploration of the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and

linguistically diverse backgrounds to participate within Australian communities of nursing practice?

Of the five Case Study One participants, only three made themselves available to be interviewed post-clinical placement. In the context of illuminating understanding of ICALD nursing students' participation with members of an Australian CoNP, the following section focuses on the experiences of Kwan and Cheng, and provides a glimpse into the translation of identities of participation from the immersive simulation program to the clinical placement.

According to Kwan, what was most valuable from his experience of the immersive simulation program was the need to consider relationships between nurses and students. Lectures, tutorials and skills laboratories were not perceived as preparing students to "react properly" (Kwan, C1I) in social situations "because in the School, we just concentrate on theory...not relationship with other nurse" (Kwan, C1I[11]). For Kwan, reacting properly to social relations during the clinical placement appeared to present a challenge. Kwan explained: "especially pretty old nurse, more than 40 years old and they are Australian. I could not access easily actually. I feel like I have to respect them" (Kwan, C1I). In this example, the clinical placement presented an additional challenge in the form of multimembership; a form Wenger (1998a) refers to as a generational encounter. An additional challenge was articulated in terms of differences in cultural heritage between student and nurse; a significant omission from Wenger's (1998a) conceptualisation of multimembership.

For Kwan, mutual engagement appeared to focus on social relations with nurses who were "a bit younger age and Asian" (Kwan, C1I). Generational encounters, from a CoP perspective, are important as they involve the transmission of cultural heritage of the practice, as well as mutual negotiation of identities. For Kwan, mutual engagement with "little girls" that he could "make a joke with" (Kwan, C1I) characterised a desire for a connection, but a

[11] C1 (Case One) I (Interview)

connection that suggests social acceptance rather than professional acceptance (Cope et al., 2000).

An apparent difficulty investing himself in the process of mutual engagement with senior nurses translated into difficulty in approaching learning opportunities when interacting with these nurses. Kwan explained:

> First I tried the 8am medications but later I couldn't do because someone complained it take a long time. I didn't know the medication. I tried to ask them but I could not ask at all because too much time spending. She [old nurse] ask me 'What is that medication?' I don't know. I don't know. 'So how can you give the medication?' After that I was not allowed to give. (Kwan, C1I)

This example shows a tension that exists between the enterprise of nursing practice and the enterprise of learning during the clinical placement. Within an Australian CoNP, the 8am medication round is a time consuming process during arguably the busiest time of the day, even for the most experienced and proficient of old-timers. Approaching the practice of medication administration with an expectation of being taught suggests Kwan's misunderstanding of the priorities of nursing practice and a lack of competence in terms of mutual engagement, shared repertoire and negotiating access into the enterprise of practice to satisfy his priority of the enterprise of learning. This is in stark contrast to the experience of Cheng.

According to Cheng, of greatest value from the immersive simulation program was "learning to cut in" (Cheng, C1I) in order to participate with members of a CoNP. For this participant "the most direct outcome of the three scenarios is a sort of precaution, as we have no idea what the placement will be like" (Cheng, C1I). Participating in experiences that Cheng described as "really close to what might happen in real life" (Cheng, C1I) appeared to provide a source of reflection that informed his understanding of how negotiate his enterprise of learning with the enterprise of nursing practice. As Cheng explained: "In the second week

I wanted to learn Clexane injection. I have read a lot and was prepared. I say 'I can do that' and they [nurses] say 'OK no problem'" (Cheng, C1I). Clearly this example shows how ICALD nursing students' insight into the tensions between nursing practice and learning during the clinical placement can facilitate learning. Recognising that "If they [nurses] are really busy...I will keep the question and ask them afterwards" (Cheng, C1I). This suggests a reflective practice of perceiving one's self as a learner within the broader CoNP; insight that reflects the combined energy of engagement, imagination and alignment.

The difference between these examples of Kwan and Cheng was the coordination of perspectives; in other words, the work of alignment. In the case of Kwan, he did not invest energy in terms of a strategy for negotiating the achievement of his desired learning needs. Instead, he displayed a lack of alignment with the enterprise of nursing practice, being patient care.

The examples provided in this theme have implications for two design elements: Design Element Three: Activities Reveal the Complexity of Multimembership; and Design Element Eight: Focus Debriefing on Learning Outcomes of Student Identity Construction.

The old-timers who were recruited in the immersive simulation program were of an age not dissimilar to that of the Case Study One participants. Further, the two nurses and one paramedic who performed the roles of old-timers had a background of clinical education and as such were accustomed to working with pre-registration nursing students. Issues of generational encounters explored earlier revealed a different way the complexity of multimembership may be designed for, by recruiting old-timers who represent significant tensions through a generational encounter (Newton et al., 2011; Newton et al., 2009; Weston, 2006). A recommendation for Design Element Three, therefore, is to include a design characteristic that includes old-timers of different generations, not only as a potential source of challenge, but rather, and particularly in the early years of pre-registration programs, that facilitate an experience of mutual engagement between generations. Further, Kwan's stated

difficulty in relating to older Australians, in contrast to young Asian nurses, suggests a further recommendation as a design characteristic for Design Element Three, is to include old-timers of varying cultural heritage.

The second implication is less related to the immersive simulation but, rather related to the debriefing that occurs during the clinical placement. Whilst debriefing is recommended as an important contributor to learning during the clinical placement (Levett-Jones & Bourgeois, 2011), Coyne and Needham (2012) suggest that buddy nurses and often clinical facilitators lack skills in facilitating meaningful debriefing. Whilst in Section 2.3 I highlighted the need for nursing students to feel a sense of belonging during the clinical placement, interpreting belonging and belongingness through a psychological lens as was the case in the cited literature, does not easily translate into developing one's capability to nurture such feelings and develop resilience. Framing debriefing according to Wenger's (1998a) sociocultural perspective of belonging, engagement, imagination and alignment, as I have suggested in Section 7.3.1, may provide a different way to explore issues of belonging during the clinical placement. This is not the scope of this research study and as such is an area for future inquiry.

In Theme Three I have suggested ways in which learning as participation and non-participation both in immersive simulation and clinical placement can be understood in terms of Wenger's (1998a) three modes of belonging; engagement, imagination and alignment. Underpinning the Case Study One participants' experiences of learning was the need for capability to engage in a process of mutual negotiation. From Case Study One data I suggest that such capability can be understood in terms of negotiating social relations in order to access learning opportunities. I have argued in this chapter that without an experience of mutual engagement, and the development of capability by ICALD nursing students to

participate in an active process of negotiating identities of participation, then meaningful learning will be significantly impeded. This raises two significant implications.

Firstly, that Wenger's (1998a) components of his learning architecture, particularly engagement and imagination, may form a suitable framework for post-simulation debriefing when the focus of immersive simulation is on learning, membership, and identities of participation. The potential, yet significant value of this approach is the ways in which conceptualisations of engagement and imagination represent reflective practice (Wenger, 1998a). This perspective suggests a significant departure from existing conceptualisations of learning within healthcare simulation where the focus of reflection is solely on the debriefing. It is important to note that to truly engage in *reflection in action* (Schön, 1983) in immersive simulation, as in clinical practice, requires mutual engagement for the thoughts and intent of learners to be made explicit to and therefore be a source of negotiability with others. In the case of this research study, using members of an Australian CoNP as old-timers contributed to the rich context of such discussions by revealing issues of culture, power, hierarchy and authority. The ways in which such characteristics could be revealed through students working together, or with university lecturers in the role as old-timers is unknown and as such requires further exploration.

A second and significant implication from this discussion relates to the ways in which interpreting issues of learning, membership, and identities of participation through the lenses of engagement, imagination and alignment during both the post-simulation debrief and the post-clinical placement interview raised very similar issues for the Case Study One participants. These issues appeared to relate primarily to making connections with old-timers and establishing mutual engagement as a precursor to gaining access to learning opportunities. No doubt there is a role here of individual learner agency (Boud, 2010; Eraut, 2010a). However, that does not detract from what appears to be a need for mutual engagement. Drawing parallels between the experiences and challenges described by the Case Study One

participants reveals the significance of designing immersive simulation programs that are underpinned by CoP. The findings of Case Study One suggest that designing immersive simulation experiences that focus on interaction, participation and potentially mutual engagement represents the processes of learning in workplaces. Central to this, is reflection in action; reflection that is implicitly represented by Wenger (1998a) as a process of negotiation between newcomer and old-timer through mutual engagement. Put simply, such processes of learning are not the same as learning from a book, a video or a skills laboratory class (Kwan, C1S3D).

7.4 Summary

In Case Study One I have shown how, where and when learning occurs when membership to different CoP intersect. These intersections represented boundary encounters that facilitated significant learning for the Case Study One participants in relation to: the implications of choosing more full, peripheral or non-participation; the need for mutuality of engagement; experiencing accountability to the enterprise of practice, each other and inadvertently the researcher; but more importantly, accountability to the enterprise of learning both individually and collectively.

Issues pertaining to the design of a learning space as an immersive simulation program, that include experiences of participation, non-participation and marginality have been explored. Simulation One Variant illustrated an experience of non-participation that could be considered marginality. An analysis and discussion of the Case Study One data has suggested that an experience of marginality impedes ICALD nursing students' sense of legitimacy and limits the learning experience. In contrast, emergent issues of competence as responses to designed boundary encounters were more frequent, less threatening to students, and provided much richer and personally meaningful learning experiences. In light of this, considerations of designing immersive simulation that challenges competence highlights

careful consideration for: alignment of designed activities with curricula; anticipating the emergent responses to designed challenges; the need to carefully balance the selection of an actual situation to be replicated that will be relevant and believable to first-year ICALD nursing students as what happens in the real world.

Finally, the analysis and discussion of Case Study One data suggests immersive simulation as a designed learning space can represent, in some ways, the complexity of learning during the clinical placement experienced by ICALD nursing students. It is clear that immersive simulation reveals the complexity for ICALD nursing students, whether these students are OQNs, or have no prior nursing experience. Further, the findings of this chapter suggest that immersive simulation can accommodate unpredictable, emergent responses to designed activities to represent the unpredictability of actual nursing practice. Furthermore, Wenger's (1998a) conceptual lenses of engagement, imagination and alignment may serve as an appropriate framework to explore issues of learning, engagement and identity as reflective learning for both immersive simulation, and the clinical placement; with reflective learning potentially a precursor to reflective practice.

In this chapter I have presented the data and findings of Case Study One. In order to strengthen the transferability and overall trustworthiness of this inquiry, these findings will be compared to data from Case Study Two which replicated the immersive simulation program and data collection methods with a separate group or research participants. The similarities and differences between the two case studies will be discussed providing further recommendations for the refinement of the eight design elements for immersive simulation.

Chapter Eight: Case Study Two

In this chapter I provide analyses of the Case Two participants' perspective and experiences of the immersive simulation program. This exploration builds on the findings from Case Study One which revealed the ways in which Wenger's (1998a) three regimes of competence, mutuality of engagement, accountability to the enterprise, and negotiability of the repertoire, provided a useful theoretical lens through which to explore and understand ICALD nursing students' participation with members of an Australian CoNP. In addition, I provide further analyses of the preliminary design framework for immersive simulation proposed in Chapter Six. I discuss the relevance of the findings from the Case Study Two, as they relate to the eight design elements and provide recommendations for further refinement of these. At the end of this chapter I further explore Wenger's (1998a) three modes of belonging, engagement, imagination and alignment as conceptual lenses for the post-simulation debrief, potentially enabling ICALD nursing students to make connections between university and workplace learning.

In order to strengthen the transferability and overall trustworthiness of this research study, Case Study Two was conducted in the same way as Case Study One. In both case studies I utilised: the same simulation program; physical locations; data collection methods and tools; with the same facilitator (myself as the researcher). There were however, three differences. Firstly, in contrast to the Case Study One participants, none of the Case Study Two participants were OQNs. Secondly, the registered nurses recruited into the role of authentic members of an Australian CoNP were not the same as those in Case Study One. However, it should be noted that within each case study, the ICALD nursing students experienced the same degree of continuity with the old-timers across the three immersive simulations. Additionally, the Simulation One Variant differed in Case Study Two compared to Case Study One. The decision to do this was made by myself on the day Simulation Two

was conducted due to only one student participating in Simulation One Variant, and a perceived risk to psychological safety for this participant. For Case Study Two, Simulation One Variant comprised the practice of medication administration only with a *supportive* buddy nurse.

In this chapter I focus on Case Study Two, I also highlight where Case Study Two converges with and diverges from Case Study One. In this way, in this chapter I provide further evidence required to address the second research question:

> In what way may immersive simulations informed by Communities of Practice develop the capability of international nursing students from culturally and linguistically diverse backgrounds to participate within Australian communities of nursing practice?

In order to clearly present the research findings, in this chapter I use the same major themes as for Case Study One however, the sub themes differ. In Table 26 I present the Case Study Two major themes and sub-themes.

Table 26

Case Study Two Major Themes and Sub-Themes

Major theme	Sub-theme
Theme One: Expectations and perceptions of engagement	• Perceptions and identities of participation. • Identities of participation: Perceptions of power and authority. • Expectations of an orientation.
Theme Two: Response to designed invitations and affordances	• Non-participation: A preference to first observe. • Non-participation: Culture and legitimacy. • Non-participation: A perception of marginality. • An enterprise of learning: Initiating mutual engagement.
Theme Three: Debriefing: A locus for negotiating identities of participation	• The complexity of practice: Seeing one's self from a different perspective • An emerging identity as a legitimate learner within the enterprise of practice

Further refinement of the eight design elements in light of the Case Study Two findings serves as a precursor to the development of the *Situated Learning Design Framework*

for Simulation which has been conceptualised as a result of this research study. This design framework is presented in Chapter Nine.

8.1 Expectations and Perceptions of Engagement

Mutual engagement is an essential mechanism of CoP. However, as Wenger (1998a) states, it is the reciprocal nature of mutuality, the ability of individuals "to engage with other members and respond in kind to their actions" (p.137) that transforms participation as an interaction to participation as an *identity* of participation. In Case Study One, mutuality of engagement was shown to be largely dependent upon mutuality afforded to the participants by old-timers; identities that suggested distinct social relationships of power and perceptions of authority. For the Case Study One participants, perceptions of power and authority that contributed to the identities of nurse-as-teacher and student, were informed by the norms, values and beliefs of each participants' cultural heritage.

The Case Study Two participants' perceptions of their social relations with the old-timer during Simulation One varied. However, similar to the Case Study One participants, affording mutuality of engagement was largely perceived by the Case Study Two participants as the responsibility of the old-timer. In Theme One, I explore the Case Study Two participants' initial expectations and perceptions of engagement with members of an Australian CoNP during the immersive simulation program. In contrast to the Case Study One participants, the Case Study Two participants focussed on trying to understand roles and expectations of the old-timer. These perceptions and expectations are represented as three sub-themes:

- Perceptions and identities of participation.
- Identities of participation: Perceptions of power and authority.
- Expectations of an orientation.

8.1.1 Perceptions and identities of participation.

Identity as a socially defined construct is in-part produced as a lived experience of participation in a social practice; one that is characteristic of a specific CoP (Wenger, 1998a). For the Case Study One participants, initial expectations of interactions with the old-timer were characterised by a social relation that represented a teacher/student dyad (Lave & Wenger, 1991). Whilst such relations may not be characteristic of CoP, mutual recognition of this social relationship facilitated mutual engagement in the form of identification; old-timers whose role it was to teach, and newcomers whose role it was to be taught. Hence, for Case Study One participants, mutual engagement entailed clearly defined identities of participation. Such clarity was not expressed by the Case Study Two participants.

According to Wenger (1998a), participation suggests "both and action and connection" (P.55). Participation is manifested as "a process of taking part and also to the relations with others that reflect this process" (Wenger, 1998a, p. 55). The Case Study Two participants, perceptions of social relationships between newcomer and old-timer differed considerably. Accordingly, differing perceptions reflected different responses in terms of participation. For example, during the Simulation One debriefing, Jae-Sun, an ICALD nursing student of Korean heritage reported his perception of the old-timer as someone who could facilitate his participation in medication administration, as he "assumed that she [RN2] has proper knowledge" (Jae-Sun, C2S1D[12]). For Jae-Sun, identification as a first-year nursing student legitimised his participation in the form of demonstrating his knowledge, as well as, revealing knowledge limitations in terms of seeking guidance from the old-timer. He explained:

> I was wondering about the side effects of the [medication] paracetamol 'cause I learned that we need to explain the side effects and indications. At the time I couldn't think [of the] answer. Then I thought "Yeah, she [RN2] is here so she might know that". (Jae-Sun, C2S1D)

[12] C2 (Case Two) S1 (Simulation One) D (Debrief)

This example suggests a relationship between the newcomer and the old-timer that represented some degree of mutuality. Indeed, the ability to engage with the old-timer in the form of asking questions with the intent of facilitating participation represented an example of Jae-Sun's regime of competence as a first-year nursing student. Here, mutuality of engagement in the form of seeking and receiving assistance legitimised Jae-Sun's identity of participation, describing his interaction with the nurse "[she] made me feel comfortable" (Jae-Sun, C2S1D).

A very different perspective was described by Cai, an ICALD nursing student of Chinese heritage. In contrast to Jae-Sun, Cai described her initial experience of Simulation One as one of uncertainty and anxiety where she felt "...very afraid to ask questions" (Cai, C2S1D) of the old-timer. Cai elaborated: "...you think you should know this knowledge before [participating in practice]. First you studied the theory and then you do the clinical placement" (Cai, C2S1D). Cai's statement suggests a perception of having studied the theory of medication administration as a part of her pre-registration nursing program and this meant for her, a need to demonstrate competence in the presence of an old-timer. In this example, accepting an affordance to participate required, from the perspective of Cai, an expectation to demonstrate competence in the skill of medication administration rather than perceiving participation as a social practice where learning is an outcome (Lave & Wenger, 1991).

The examples of Jae-Sun and Cai provide insight into two different interpretations of participation and social relations when considering ICALD nursing students' interacting with members of an Australian CoNP for the first time. Underpinning these differences are perceptions of competence as a characteristic of community membership. When defining community membership, Wenger (1998a) posited competence as a dimension of identity that translates to understanding "a certain way of being part of a whole" within a CoP (p.152). As discussed in Chapter Three, the concept of membership in relation to this research study has a different connotation to that provided by Wenger (1998a). This is because nursing students'

membership to a community of nursing practice is limited largely to an identity of a transient (Newton et al., 2009), temporary resident (Boud, 2010), remaining on a peripheral learning trajectory (Wenger, 1998a). In other words, nursing students could be considered one constellation of a greater CoNP where competence is defined as an ability to participate in a social practice of learning rather than to demonstrate proficiency in technical skill. This is particularly the case in relation to first-year nursing students. Wenger's (1998a) emphasis on the need for a two-way interaction between experience and competence as a source of learning illustrates this argument. For example, both Cai and Jae-Sun demonstrated sufficient ability to make use of the specific repertoire of practice at a fundamental level for them to engage with it. However, the capability and feeling of legitimacy of Jae-Sun to engage with the old-timer and establish a relationship that represented mutuality, defined his identity of participation.

A different perspective again was provided by Hyo, an ICALD nursing student of Korean heritage. Whilst reflecting on his experience of Simulation One, Hyo admitted "Yeah I was nervous. I don't know [why]" (Hyo, C2S1D). Hyo attributed his feeling of unease to the "different situation and place" (Hyo, C2S1D). Hyo clarified his meaning of situation and place by describing his uncertainty in terms of his relationship with the old-timer. Hyo continued: "Because it's not my lecturer. She [RN2] is just employed in the hospital and is not my facilitator" (Hyo, C2S1D). In this example, Hyo's confidence to participate was impeded due to an apparent difficulty to competently negotiate mutual engagement in an unfamiliar context. In addition, Hyo did not understand the expectations of the student/nurse relationship. Hyo went on to say: "I didn't realise I have the relationship with the RN like you [the researcher], lecturer and student" (Hyo, C2S1D). In this instance, participation not observation acted as the vehicle for negotiating meaning in terms of understanding the parameters of participation. However, central to this negotiation were the actions of the old-

timer in response to Hyo's reticence for mutual engagement. This is illustrated in the following extract from the Simulation One Variant contact summary.

> Hyo looks for the prescribed medication within the cluttered drug trolley. RN2 prompts Hyo by stating 'There are lots here'. After 30 seconds of searching the medication trolley, RN2 prompts Hyo again by asking 'What could you do to locate the medication?' Hyo does not respond but looks at the medication chart. RN2 asks 'Who could you ask?' and smiles at Hyo. After 10 seconds, Hyo responds 'The nurse? The registered nurse?' RN2 responds 'Is that me?' Both RN2 and Hyo laugh. (C2S1V, Contact Summary)

In this example, the coaching approach adopted by the old-timer, and her persistence in providing cues suggest an awareness by RN2 that Hyo was struggling. It can be suggested that it was because of the actions of the old-timer, an emergent response to the designed simulation, what could have been a negative experience for Hyo, translated to one that was personally meaningful and contributed to a mutual understanding of the parameters of the social relations between nurse and student.

The ability for immersive simulation to reveal and serve as a vehicle to explore perceptions and identities of participation described through this sub-theme is the domain of two of the proposed design elements; Design Element One: Authentic Roles, and Design Element Five: Authentic Learning Processes.

In Section 6.4.1 I highlighted that a central proposition of Design Element One was to design a space for learning that brings together ICALD nursing students and members of an Australian CoNP in authentic roles for the purpose of facilitating an experience of mutual engagement. The examples of Case Study Two participants cited above support the premise of this design element insofar as truly authentic learning experiences that focus on issues of participation and mutuality require authentic participant roles of ICALD nursing student and old-timer. Inherent within Design Element One, as supported by the Case Study One

findings, is the value authentic roles brings to immersive simulation by enabling perceptions of power imbalances that are inherent within such social relationships, be they actual or perceived. Issues of power are explored in greater detail in the following sub-theme.

In addition, the example of Hyo brings into question the value for ICALD nursing students to observe immersive simulations designed with the intention of developing capabilities to participate in a social practice. Hyo's position of peripherality when first observing Cai and Jae-Sun's experience of Simulation One did not appear to contribute to his understanding of the expectations of the simulation experience or of the social relations between nurse and student. It could be argued that Hyo's position of peripherality was not authentic. The implication here may be that the socio-emotional aspects of participation, the feelings and emotions of comfort, fear and nervousness reported by these participants, may contribute to significant learning, when learning outcomes focus on the tacit aspects of practice; a line of argument supported by Boud et al. (1993). However, it must also be acknowledged that as the role of the observer was not a line of inquiry nor designed for as a part of this research, this claim requires further investigation.

The underpinning tenet of Design Element Five: Authentic Learning Processes is to design learning opportunities that represent an epistemology of practice (Raelin, 2007); learning experiences that Wenger (1998a) termed "epistemologically correct" (p. 101). In other words, designing simulation experiences that replicate authentic learning processes of work; learning processes that emphasise constructionist and constructivist epistemologies (Raelin, 2007) and pedagogical approaches that align with participation approaches to learning, as opposed to formal education based on a philosophy that separates theory from practice (Greeno, 1997).

Accounts from the Case Study Two participants represent ways in which the designed simulation activity enabled a participatory approach to learning, as well as supporting the principles of Design Element One and Design Element Five. For example, Jae-Sun's

capability and perceived legitimacy to seek guidance from the old-timer represented an experience of engagement based upon mutuality (Wenger, 1998a). In contrast, the way Cai described the pressure and her perceived expectation to demonstrate competence to the old-timer after learning the theory in class, showed a mismatch in pedagogical expectation. Furthermore, Cai's account reflected the perils of separating theory and practice for the purposes of formal education; an approach cautioned by proponents of situated learning (Brown et al., 1989; Lave & Wenger, 1991). In addition, for Hyo, participating in the simulated practice alongside an old-timer provided a personally meaningful learning experience, illuminating understanding of learning as a social practice.

The initial perceptions of the Case Study Two participants reflect concerns within the nursing education literature that nursing students are not prepared with an understanding of what is required, nor the capability to facilitate their own learning when commencing the clinical placement (Andrew et al., 2009; Grealish & Ranse, 2009; Spouse, 1998). The perceptions described particularly by Cai and Hyo reinforce the concerns raised by a relatively small body of literature that ICALD nursing students are not equipped to initiate and negotiate social relations within the workplace (Brown, 2005; Rogan et al., 2006; San Miguel et al., 2006), particularly in terms of roles and expectations (Zhou et al., 2008). Furthermore, the examples within this sub-theme and the discussion that has ensued, suggest the need for ICALD nursing students, to understand the role of a student within an Australian CoNP as well as the need for processes of mutual engagement. These attributes cannot be considered inherent; a fundamental argument posited by Greeno (1997).

I acknowledge the need for capability to participate within an Australian CoNP in ways that are defined as socially appropriate by the community relates to domestic nursing students as well as ICALD nursing students. This need has been discussed in Section 2.3. However, exploring these issues from the perspectives of ICALD nursing students and the ways in which these issues are exacerbated through cultural difference, may serve as impetus

for future inquiry into the participation of domestic nursing students within an Australian CoNP.

Perceptions of power as a characteristic of social relations of practice were highlighted throughout Case Study One, and alluded to throughout the discussion of this sub-theme. Whilst in Case Study One (Section 7.1.2) a clear power imbalance existed between nurse and student, for the Case Study Two participants, perceptions of power were described in more subtle and unexpected ways. These are explored in the following sub-theme.

8.1.2 Identities of participation: Perceptions of power and authority.

Case Study One participants clearly articulated perceptions of a power imbalance between the social relations of nurse and student. Underpinning perceptions of power was a deep-seated desire to respect authority figures based upon the norms, values and beliefs of each Case Study One participants' cultural heritage. Perceptions of power were also shown to influence Case Study Two participants' participation in the simulated practice. However, for Case Study Two participants, the way power was perceived and interpreted took a more subtle and subjective form.

The Case Study Two participants each expressed a perception of being assessed. For instance, Hyo explained during the Simulation One debrief a "feeling like I was being tested" (Hyo, C2S1D) whilst interacting with the old-timer. Perceiving the interaction as a test represented for Hyo a particular power imbalance between old-timer and newcomer, and accordingly, expectations of behaviour: "I thought I get tested by RN (laughs), by the buddy nurse. That is why I could not ask her anything. During test I can't ask anything in a normal situation" (Hyo, C2S1D). This example suggests how participatory approaches to learning can be easily misinterpreted by ICALD nursing students when encountering learning as a social practice for the first time. Whilst such a misunderstanding could be dismissed as an anomaly, similar perspectives were reported by the other Case Study Two participants.

Whilst sharing Hyo's perception of being tested, Jae-Sun offered insight into the basis of this misunderstanding. He explained: "First time [Simulation One] I thought I was going to be watching what she [the nurse] will doing. But she asked me about my knowledge. So I thought 'Ah she is testing me, she is testing my knowledge'" (Jae-Sun, C2S1D). Through analysis of the video recordings of Simulation One, it became apparent that perceptions of being tested stemmed from the old-timers' use of Socratic questioning. Both registered nurses who fulfilled the role of old-timer in both Case Study One and Case Study Two employed Socratic questioning; a strategy of questioning using cues and prompts that Haitana and Bland (2011) identify as commonly used by registered nurses when buddied with nursing students during the clinical placement. In essence, such questioning serve as a form of evaluation of competence, enabling registered nurses to quickly understand where and when to target learning opportunities. Accordingly, such questioning as a form of social discourse was not in the simulation design and therefore appeared to be a part of these nurses' repertoire of practice. Whilst Hyo's interpretation of being tested contributed to an apparent lack of mutual engagement with the old-timer, Jae-Sun took a different approach.

Jae-Sun interpreted the old-timer's questioning as an opportunity to "answer the right question to give her [RN2] a good impression of me" (Jae-Sun, C2S1D). From this example, establishing credibility by answering questions took the form of projecting an identity as a competent newcomer; a projection that was aided by a process of mutual engagement. Here, being able to make a good impression provided the motivation for mutual engagement as "the first impression is the last impression" (Jae-Sun, C2S1D). In this example, it is clear that Jae-Sun sought, through making a good impression, to establish a feeling of fitting-in and belonging.

Power from a CoP perspective is less to do with conflict or domination, "but primarily as the ability to act in line with the enterprises we pursue and only secondly in terms of competing interest" (Wenger, 1998a, p. 189). These examples of Hyo and Jae-Sun reflect

Wenger's (1998a) representation of power as an element of social life whereby "a social concept of identity entails a social concept of power" (Wenger, 1998a, p. 190). Jae-Sun's perspective suggested a perception of a social concept of power represented by the old-timer's: knowledge of the practice; capability to share knowledge; authority to judge newcomers as competent or not; and the power to act as a gatekeeper, affording but also restricting access to the practice. Not understanding power as it exists and is represented by a specific community, such as an Australian CoNP, may amplify interpretations of power. This point was explained by Cai:

> Some people [nurses] really want to help you. But before you go on the clinical placement for the first time you are just confused. When you see her [the nurse], you don't realise that she want to help you or just want to test you. (Cai, C2S1D)

In this example, reconciling uncertainty as to the intent of social relations when interacting with members of Australian CoNP requires ICALD nursing students to invest energy, and as such, represents an additional manifestation of power. This is particularly problematic if the supposition made in this sub-theme is correct that Socratic dialogue may be interpreted by ICALD nursing students as "being tested".

In Chapter Two (Section 2.2.2) I discussed the issue that ICALD students of south-east Asian cultures may be more accustomed to Confucian philosophies of learning rather than a Socratic approach employed by many western systems of education (Adnams, 2012; Ballard, 1987; Brown, 2005; Seibold et al., 2007). Socratic questioning, or Socratic dialogue is believed to contribute to higher-order thinking processes and is an approach to learning recommended for healthcare simulation (for example, see: Dreifuerst, 2010; Husebø, Dieckmann, Rystedt, Søreide, & Friberg, 2013) and for the clinical placement (Haitana & Bland, 2011; Phillips & Duke, 2001). In this sub-theme I have highlighted that ICALD nursing students may not at first recognise Socratic dialogue as an approach to learning. As such this appears to be one example where immersive simulation may provide a learning

space where diversity in pedagogical difference and expectations can be negotiated between ICALD nursing students, nurses and academics as preparation for learning in workplaces.

In this sub-theme I reflect on the intent of Design Element Five: Activities to Purposefully Engage Students in Learner Identity Construction. In Section 6.4.2 I proposed this design element to provide a focus on the inclusion of activities that afford experiences of participation and non-participation. In this sub-theme I have shown that even at a most fundamental level, participation may be impeded due to cultural perceptions of power and authority; particularly when considering the potential for ICALD nursing students to misinterpret participative approaches to learning. In the context of this research, from a CoP perspective, learning as an outcome of participation requires ICALD nursing students to understand and tune *their* enterprise of practice in order to align *their* engagement with it (Wenger, 1998a). Accordingly, a recommendation for Design Element Two is to include, as a design characteristic, the exploration of students' perceptions of being questioned, during the post-simulation debriefing. Exploring these perceptions may facilitate, through negotiation, a mutual understanding of learning as an interactive and social practice (Greeno, 1997), and clarify the social relationships that this perspective of learning entails.

The ways in which different assumptions underpinning pedagogical expectations between ICALD nursing students and members of an Australian CoNP are explored further in the next sub-theme.

8.1.3 Expectations of an orientation.

Analysis of the Case Study Two participants' reports of uncertainty and confusion when commencing the immersive simulation program have been presented in the previous sections in terms of misunderstanding the social relations and expectations of participation between ICALD nursing students and old-timer. Therefore, there was an obvious absence of mutual engagement. Whilst the Case Study Two participants did not describe their social

relationship with the old-timer in terms of teacher and student, as was evident in Case Study One, the Case Study Two participants reported an expectation that establishing the parameters of engagement was the responsibility of the old-timer. For instance, Hyo explained the reason for his misunderstanding Simulation One as an assessment was "because we don't have orientation and we didn't receive any guideline" (Hyo, C2S1D) to the simulated practice.

As distinct from the orientation to the simulation environment and scenario that are generally inclusions of the simulation briefing (Doerr & Bosseau Murray, 2008; Jeffries, 2012; McNiesh, 2015), the orientation Hyo appeared to refer to was that of outlining parameters of mutual engagement between old-timer and newcomer. He went on to say: "If she [RN2] gave us guideline such as um [whether] we can ask anything about the procedure, like medication administration. 'You can ask us and feel free'. But I didn't have any like orientation guideline" (Hyo, C2S1D). As shown in Section 8.1.1 and 8.1.2, it is clear that Hyo was not expecting a social relation of mutual engagement with the nurse. Hyo's identification as a nursing student did not include the mutuality described earlier by Jae-Sun, or by Cheng (Case Study One Section 7.1.1). Indeed Hyo's expectation more closely reflected a relation characterised by disempowerment, and passivity; waiting to have his participation legitimised by being told what to do.

This perspective was shared by Cai who stated: "I think the RN [RN2] will like to state something like 'You can ask me question'" (Cai, C2S1D). Here it can be claimed that this invitation to ask questions represented the orientation to which Hyo referred. Drawing parallels between her experience of the four-hour observation visit at an Australian hospital the previous semester and Simulation One, Cai elaborated on her interpretation of an orientation:

> Last semester I went to the hospital and that RN is very kind and the first time I met her and he, she just make announcement to me that 'You should ask me anything to me any time. Just if you are confused, just direct ask me, no hesitate'. At that time I

> understand. I can ask her question so I am not afraid of that. I have courage to ask any question and she is very kind I find to answer my question. (Cai, C2S1D)

This example clarifies what Cai and Hyo perceived to be an orientation or indeed, an invitation for mutual engagement with the old-timer. In one way, this example shows a significant power imbalance that was not due to the unsupportive RN as was the experience of Kwan in Case Study One, but from perceptions of authority as interpreted by Cai. Here, having courage to ask questions was dependent upon perceptions of a "very kind" nurse providing the legitimacy to do so. In another way, Cai's example demonstrated her recognition of a strategy to broach accessing practice as a newcomer in a way that was socially appropriate to the community.

Reports of needing an orientation and the passivity illustrated by Cai and Hyo when interacting with a member of an Australian CoNP reinforce the proposition of Design Elements Two, Seven and Eight; design elements where the focus is on learning outcomes, activities, and debriefing that engage student identity construction. However, whilst these design elements highlight the need for bringing together ICALD nursing students and old-timers as an experience of mutual engagement, this theme thus far suggests a greater focus on learning strategies to facilitate ICALD nursing students' understanding of the need for, and strategies to initiate mutual engagement with members of a CoNP. Wenger (1998a) argued that mutuality forms the basis of identities of participation, with the development of identities of participation central to the aim of the design elements that focus on student identity construction.

In Theme One *Expectations and perceptions of engagement*, I have provided insight into the ways in which mutual engagement may be impeded between ICALD nursing students and members of an Australian CoNP. It is important to note the way in which misunderstandings of pedagogical expectations, as described in the literature (for example,

see: Omeri et al., 2003; Zhou et al., 2008) contribute to such impediments. Significantly, in this theme I have shown that by designing immersive simulation activities that are aligned with an epistemology of workplace learning, that this provides a learning space for negotiating pedagogical difference and expectations. In this section I have focused on mutuality of engagement as a regime of competence and in turn a characteristic of identity. This is essential for ICALD nursing students as newcomers to an Australian CoNP, since preparing these students for the initial clinical placement has more to do with making meaning of workplace learning than the enterprise of a CoNP. To consider CoP in this way, shifts ICALD nursing students' expectations from one of full engagement with the enterprise and competence in the use of repertoire, to one of understanding what is considered as competence as a student, as defined by a CoNP. The findings of this theme suggest that immersive simulation can provide ICALD nursing students with an experience to explore this difference. This need not be difficult, with Simulation One demonstrating one simple yet effective approach.

8.2 Responses to Designed Invitations and Affordances

The boundaries that form a metaphorical link between different communities to which old-timers and newcomers are members, and the practices of these respective communities, were pivotal to the designed learning space that was the immersive simulation program. The design of this program capitalised on what Wenger (1998a) described as a tension between competence and experience that result from boundary encounters that provide the experiences that serve as the locus for learning. In Chapter Six, I described that some boundary encounters were designed; for example, the inclusion of elements of nursing practice about which ICALD students would have minimal or no knowledge. Other examples, shown in Case Study One and the preceding sub-themes of Case Study Two, were emergent responses resulting from the interplay between competence and experience.

In Case Study One, boundary encounters were represented in terms of limitations to codified knowledge, legislative requirements that govern nursing practice, and technical competence. Furthermore, significant boundary encounters were described by the Case Study One participants in terms of their perceptions of capability, experiences of social and cultural difference, and feelings of legitimacy when interacting with members of an Australian CoNP. Similar issues resulting from cultural difference, legitimacy and learning were reported by the Case Study Two participants. Theme Two is comprised of four sub-themes:

- Non-participation: A preference to first observe.
- Non-participation: Culture and legitimacy.
- Non-participation: A perception of marginality.
- An enterprise of learning: Initiating mutual engagement.

8.2.1 Non-participation: A preference to first observe.

Case Study One participants were shown to have employed non-participation as a strategy for learning in three ways. Firstly, remaining at the periphery of the simulated practice as an observer provided a lookout post with learning an anticipated outcome. Secondly, non-participation was employed as a self-imposed strategy to mask deficits in English proficiency or lack of competence with the repertoire of nursing practice. Additionally, non-participation represented an approach to say nothing and do nothing so as not to appear rude to old-timers; a response to deep-seated norms, values and beliefs informed by participants' cultural heritage.

In contrast to Case Study One, the facilitative approach of RN2 was such that the Case Study Two participants were essentially guided through Simulation One and to a lesser extent Simulation Two. In essence, a degree of participation was assured. However, two Case Study Two participants clearly felt that participation in the simulated practice presented a potential challenge to their identity in the form of revealing boundaries of their competence to

the old-timer. For example, Hyo felt something was amiss when participating in the simulated practice of medication administration as "the nurse [RN2] didn't show anything" (Hyo, C2S1D) as preparation. This concern was based upon his belief that as a nursing student during the clinical placement "the first time in the ward the nurses show us what they doing and they let us do the same things after [being shown]" (Hyo, C2S1D). A preference to first observe the practice suggested a strategy for learning. From his perspective, Hyo felt it "helpful if she shows us first time whole procedure...we can re-check and write down and remind us of subject contents [from class]" (Hyo, C2S1D).

In this example, Hyo's apparent uncertainty with the repertoire practice, in this instance medication administration, contributed to his perceived need to first observe. Whilst in one way this expressed need could be interpreted as a strategy for learning, his acknowledgement of having learned medication administration in class suggests his strategy to first observe was to see how the practice was performed by the member of an Australian CoNP. Hyo's proposed strategy of writing down the steps suggested a desire to reify the practice in an attempt to demonstrate competence to the old-timer. He went on to say:

> Maybe some student forgot one of the contents [steps of medication administration]. In my case I forgot the 'right route' [for administration]. If she [RN2] shows us every skill and check us, then we can improve, we can do better. (Hyo, C2S1D)

A desire to be shown every skill illustrated the concern this ICALD nursing student had of making a mistake. Hyo's statements reflected an absence of understanding of mutual engagement between old-timer and newcomer as a process to facilitate learning. Furthermore, Hyo's understanding of the simulated enterprise comprised a perceived need for the demonstration of competence in the skill of medication as opposed to competence as a legitimate peripheral participant; an observation congruent with Theme One.

A concern about demonstrating competence was also shared by Jae-Sun who believed that watching the old-timer first "could be very helpful for us, because we are not convinced

of our [pause] what we can do or the knowledge we have" (Jae-Sun, C2S1D). According to Jae-Sun, a strategy to first observe would provide certainty as "we know exactly then we can be confident and we [will be] willing to practice" [Jae-Sun, C2S1D). Non-participation in the form of observation was perceived to offer some space to think, by affording a degree of disengagement from the codified, procedural repertoire of practice that was taught at university; a strategy that was perceived as simplifying an otherwise "very difficult situation, because I have to think about many things that I learn in the classes" (Jae-Sun, C2S1D).

Through this example, greater clarity was provided into what was meant by Hyo and Jae-Sun when calling for an "orientation" or "guidelines" as described in Section 8.1.3. A strategy to first observe *was* the orientation, with an expectation of participation soon after. As Jae-Sun explained: "Just watching is not helpful. But for the first time I think watching is more helpful for me. We can then practice and we can learn" (Jae-Sun, C2S1D). The trade-off of an identity of non-participation in the form of an observational lookout, as discovered by Kwan in Case Study One, was the way observation limited mutual engagement and would not have provided these ICALD nursing students with an understanding of or informed their identities of participation.

These examples reinforce the assertion made in Section 8.1.1 that perceptions of competence held by ICALD nursing students are more closely aligned with demonstration of technical proficiency and practicing autonomously than participation characterised by Wenger's (1998a) three regimes of competence; mutuality of engagement, accountability to the enterprise, and negotiability of the repertoire. However, in the context of ICALD nursing students, the examples from this sub-theme raise two important issues in relation to Wenger's (1998a) three regimes of competence.

Firstly, as discussed in Case Study One, Wenger's (1998a) sociocultural approach to competence, and in-turn identity, can provide ICALD nursing students with a suitable alternative lens with which to be able to view competence when attempting to orientate these

students to pedagogies of participation. Such an alternative view need not substitute the competency-based approach to skills teaching and assessment that predominates pre-registration nursing programs (Cant et al., 2013; Wu et al., 2015). Rather, there is the potential to enhance competence by broadening what is otherwise a narrow interpretation to one where learning is understood as a process of developing a holistic repertoire of practice.

Secondly, when considering strategies to develop capability of ICALD nursing students to participate as learners within an Australian CoNP, particularly for early-years pre-registration students, learning to be accountable the enterprise of a CoNP must include instilling in nursing students, a cognisance of balancing their enterprise of learning with the enterprise of nursing care during the clinical placement.

Whilst these Case Study Two examples have shown that immersive simulation can serve as a locus to raise tensions between perspectives of learning and of competence, it was the debriefing where the negotiation of such tensions took place and meaningful learning occurred. In Section 6.4.8 I described the proposition of Design Element Eight which was for the debriefing to focus on student identity construction. From this sub-theme, a recommendation for Design Element Eight is to include a design characteristic that prompts the exploration of competence as defined by Wenger (1998a). Emphasising competence in this way may contribute to shifting ICALD nursing students' focus from a perceived need to demonstrate competence of a skill, to that of competence as a legitimate learner, participating in the social practice of nursing. This may be particularly pertinent in early-years pre-registration nursing programs.

8.2.2 Non-participation: Culture and legitimacy.

Each of the Case Study Two participants clearly felt the prospect of accessing the conversation between old-timers during the coffee break of Simulation Three posed a threat to their legitimacy as peripheral participants. This threat was described in terms of social

acceptance. For instance, Cai explained that despite wanting to learn more about the topic of conversation being discussed by old-timers, Cai opted to "just sit here and listen what they [old-timers] are talking about" (Cai, C2S3D). In one way, joining in the conversation represented concerns of timing, as "it is very hard to find a suitable time to interrupt their conversation" (Cai, C2S3D). Indeed, weighing up the potential challenge accessing the conversation instilled a fear that the old-timers "will get angry at me" (Cai, C2S3D). The prospect of attempting to broker access to the conversation appeared to challenge Cai's identification as a respectful nursing student, considering it "not very polite to interrupt their conversation" (Cai, C2S3D). Rather than attempting to broach this challenge, Cai hoped for an invitation to participate; finding herself "waiting for the nurse to say that I can join in the conversation" (Cai, C2S3D). As such, Cai chose to remain on the periphery; an indicator of the significant tension between a desire to participate in the conversation, and the desire to be accepted.

This same concern of avoiding a challenge to identity was shared by Jae-Sun who stated:

> There was uncertainty for their treatment or care for the patient. They [the old-timers] discuss whether it is appropriate to measure radial pulse for checking blood pressure for the patient. I can't state my opinion to them because I am still learning and they finish their study. (Jae-Sun, C2S3D)

In contrast to Cai, this example suggests that Jae-Sun's concern was based upon his identification as "just a student" in a "lower position" within the hierarchy of "professional" community members with whom he was seated (Jae-Sun, C2S3D). His identification as a nursing student suggests Jae-Sun did not feel a sense of legitimacy in terms of his knowledge to join in the conversation. This was despite Jae-Sun demonstrating a very clear understanding of the topic during the debriefing. Such identification as a nursing student, and feelings of lacking legitimacy to join in conversations with members of a CoNP appear to

relate to novice domestic nursing students (Newton et al., 2009; Solomon et al., 2006) as well as ICALD nursing students. However, a reluctance to participate based on the need to respect hierarchical structures appears particularly pertinent to ICALD nursing students.

Possibly due to a lack of previous interaction with members of an Australian CoNP, Jae-Sun found it difficult to judge ways of accessing conversations that could be deemed socially appropriate by the old-timers. He went on to say: "Maybe I can ask 'Can I say something?' Maybe [pause] I am not sure. Because of my culture or my country, interrupting the conversation isn't very polite" (Jae-Sun, C2S3D).

In this example, the tension between wanting to participate and feeling the need to be a polite and respectful student, reflected Kwan's descriptions in Case Study One almost word-for-word. Whilst the contexts of these two students' encounters were quite different, and whilst each student described very different degrees of awareness and knowledge about the old-timers' conversation, common to both Kwan and Jae-Sun was a strong association with and influence of their Korean cultural heritage about their perceptions of hierarchy, power, and expectations of behaviour; perceptions that clearly informed choices concerning moving from a position of peripheral to one of more full participation.

Lave and Wenger (1991) contend that learning to become a legitimate peripheral participant within a CoP involves learning how to talk, and how to be silent in socially acceptable ways as defined by a specific community. For Cai, Jae-Sun and Kwan, uncertainty about what was defined as acceptable by the community and what was not, prevented participation. Choices to participate or to remain on the periphery were therefore based on norms, values and beliefs of their cultural heritage; a culture where it would be "absolutely inappropriate" (Jae-Sun, C2S3D) for newcomers to interrupt old-timers. The interaction during the coffee break represented what Solomon et al. (2006) refer to as an in-between learning space; a workplace situation where legitimate participation involves an overlap between *social* and *work* relationships. These in-between spaces emphasise issues of

legitimacy, competence and social acceptance (Cope et al., 2000; Smedley & Morey, 2010) and highlight issues pertaining to understanding and negotiating interpersonal relationships, and identities of participation as facilities or barriers to engagement. From a CoP perspective, it is possible to interpret these Case Study Two participants' participation as a regime of competence. Whilst recognising and understanding what mattered to the enterprise of the community, there was, during the debriefing, an expressed desire to participate. Yet meaningful engagement was impeded due to in-part a lack of ability to use a repertoire of practice, and in-part a perceived lack of legitimacy to participate. For the Case Study Two participants, Simulation Three challenged these students' legitimacy in an additional way, by challenging the legitimacy of knowledge gained at university.

In Section 6.5.5, I described Simulation Three which comprised of two topics of conversation. One topic that ICALD nursing students were not familiar with, and one that they were. The latter was intended to serve as an opportunity for the ICALD nursing students to access the conversation as the old-timers discussed the technique of measuring blood pressure that contradicted what had been taught at university. The following extract from the Simulation Three debrief transcript illustrates the spirited dialogue:

> We learned to check the radial pulse to identify the exact [blood] pressure. They [the old-timers] talk to each other like they seem not to know the reason. So I really wanted to ask them 'Ah is studying in the uni really important to working in the hospital?' (Jae-Sun, C2S3D)
>
> Yeah yeah, they never seen [university advocated approach] when they checking the blood pressure (Hyo, C2S3D).
>
> They mention that especially for the emergency department this is a waste of time (Cai, C2S3D).
>
> But they say they hadn't done like that to check the blood pressure. So I was very curious about maybe what I'm learning at the moment is not important for what I will

practice in the clinical setting. Maybe we were all curious but we didn't ask. (Jae-Sun, C2S3D)

Clearly the Case Study Two participants were aware of the repertoire of practice being discussed, and there was sufficient knowledge to contribute. However, their identification as nursing students manifested as a self-imposed barrier to participation. Here, wanting to be accepted by the old-timers, by projecting an identity as a polite and respectful student, created a tension between a desire for belonging by demonstrating knowledge, and projecting an identity of an engaged and curious student. From this example it can be seen that the Case Study Two participants lacked the ability, the capability and perceived legitimacy, to control their identification with members of an Australian CoNP.

From a CoP perspective, the previous dialogue reflects the challenge of negotiating an identity of participation within the nexus of multimembership. When visiting a practice, Wenger (1998a) proposed that visitors (as distinct from newcomers) "must 'background' their home membership in order to advance the relation" (p.39). The findings of Levett-Jones and Lathlean (2009) demonstrate that such backgrounding occurs during the clinical placement for domestic students. These authors found that nursing students who felt insecure, isolated or ostracised were less likely to question the nurses they worked alongside even if they knew what was being said or done was incorrect. Reasons provided for such silence or conformity has been expressed as a desire to seek concord (Brown, 2005), to feel a part of the group, and to belong (Levett-Jones & Lathlean, 2009). For the Case Study Two participants, the norms, values and belief of their cultural heritage represented additional boundaries which required negotiation, or needed backgrounding. As Zhou et al. (2008) argued, such backgrounding is necessary to advance relations across boundaries and as such may not be avoidable. Providing a facility to negotiate such issues in the form of debriefing can facilitate mutual understanding of this tension, reduce feelings of sociocultural discord (Brown, 2005), cultural dissonance (Woodward-Kron et al., 2007), and culture shock (Omeri et al., 2003; Zhou et al.,

2008). This claim is supported by Hyo, who at the end of the Simulation Three debrief tried out an approach to initiate mutual engagement with the old-timers; "'I was just thinking, not curious, just wonder about why you [nurses] don't check the blood pressure like we learn in university'. I don't know why I didn't ask" (Hyo, C2S3D).

These Case Study Two examples reflect the intent of Design Element Three: Activities Reveal the Complexity of Multimembership, and Design Element Four: Activities That Affirm as well as Challenge Legitimacy. In Section 6.4.3, I described the intent of Design Element Three which was to provide ICALD nursing students with an experience of multimembership through immersive simulation. The Case Study Two participants' perceptions and experiences explored during the debriefing, represented a process of negotiating multimembership between communities of cultural heritage, the university, and Australian nursing practice. An emphasis on negotiating identities of participation that are socially appropriate as defined by an Australian CoNP has raised issues of competence, legitimacy and power; issues that relate to Design Element Four. Whilst the examples provided in this sub-theme suggest the challenge of reconciling the discomfort and uncertainty the Case Study Two participants described in Simulation Three, it is noteworthy to emphasise the role of debriefing as a facility of negotiating an identity of participation within such complex social and cultural interactions.

In Design Element Four (Section 6.4.4) I posited the need to affirm as well as challenge legitimacy in order to reveal boundaries of competence as a catalyst for exploring multimembership. What has been shown is that unlike Simulation One Variant in Case Study One, where a challenge to legitimacy was a designed feature, issues of power, legitimacy and competence featured just as heavily in Case Study Two as an emergent response to the designed activities that revealed the complexity of multimembership. This supports the proposition suggested in Case Study One (Section 7.1.3) that Design Element Four should provide a focus on activities that challenge *competence* rather than legitimacy, with such

emergent responses to design potentially representing a more authentic and meaningful learning experience. It is also important to note the need for perceiving competence according to Wenger's (1998a) interpretation in the context of sociocultural learning as distinct to competence of language, codified knowledge or technical skill.

Clinical competence in the context of Australian pre-registration nursing programs often draws connotations of competency-based assessment. Indeed, competency and the assessment of competence in relation to knowledge and skill remains a significant focus of the clinical placement for many Australian pre-registration programs (Brown, Crookes, & Iverson, 2015; Cant et al., 2013). Recalling Kwan's fear (in Case Study One) of being perceived as "not qualificate" (Kwan, C1S1D) implied a focus on competence in terms of technical skill. For Case Two participants, reported perceptions of being assessed during Simulation One suggested how assessment and being assessed by figures of authority presents a significant source of anxiety for ICALD nursing students. Perceiving competence according Wenger's (1998a) three regimes of mutuality of engagement, accountability to the enterprise, and negotiability of the repertoire, provides a valuable mechanism to move beyond a dominant emphasis on competence of technical skill. Significantly, exploring competence from this perspective during the simulation debrief may assist ICALD nursing students to shift their feelings from a need to demonstrate proficiency of skill to old-timers and getting it right the first time, to an understanding that competence is defined as an evolving identity of participation, based on mutual engagement. In other words, perceiving competence as a learning trajectory. This supports the recommendation for Design Element Four in Section 8.2.1 to explicitly explore competence as defined by Wenger's (1998a) three regimes of competence during the simulation debriefing, when the aim of immersive simulation activity is to develop the capability of ICALD nursing students to participate within an Australian CoNP. Such an approach is currently not represented in the nursing education or healthcare simulation literature.

In this section I have discussed the reported perceptions and experiences of the Case Study Two participants in terms of cultural heritage and legitimacy. My emphasis on the need to shift the focus of simulation design from presenting a challenge to legitimacy to a challenge of competence as proposed in Chapter Seven has been supported. In the following section I further explore the relationship between challenges to legitimacy by focusing on the Case Study Two participants' reported experiences of marginality and the effect that this had on their participation, learning and identity.

8.2.3 Non-participation: A perception of marginality.

Case Study One participants' descriptions of their experiences of participation during the simulation program showed an ability to discern between non-participation as an empowering strategy for learning, and non-participation as uncertainty of what to do. The ability of immersive simulation to accommodate emergent responses to design resulted in Case Study Two participants, Cai and Hyo, identifying a third form of non-participation; a disempowering position of marginality.

As has been discussed in the previous section, issues of legitimacy emerged as a focal point for the Case Study Two participants during Simulation Three. According to Hyo, initial perceptions from sitting with the old-timers who were engaged in conversation were that "They [the nurses] didn't seem interest[ed] in us. They just um, talk with each other" (Hyo, C2S3D). This perception was shared by Cai, who noticed cues such as "single word answers, upset facial expression, not looking at you, no eye contact" (Cai, C2S3D). For Hyo, the initial impression conveyed a message that "They [the old-timers] are busy and given break time they just want to relax. They just want to be left alone" (Hyo, C2S3D).

These examples clearly show that verbal and non-verbal cues contributed to perceptions of exclusion; a form of non-participation referred to by Wenger (1998a) as

marginality, which the ICALD nursing students were powerless to control. However, discussing this experience of marginality during the Simulation Three debrief highlighted the value that the Case Study Two participants placed on the social relationship they felt that they had established with RN2 as a result of participating in Simulation One and Simulation Two. Hyo explained: "This is the first time [meeting these old-timers]. If we met buddy nurse (RN2 from Simulation One and Simulation Two) in this situation, maybe we give more questions, have a chat. We don't know them in this situation" (Hyo, C2S3D). This opinion was shared by Cai who added: "I think if we met the nurse from before, we have more confidence to listen and join in" (Cai, C2S3D).

This example highlights three points of interest. Firstly, and importantly, this example suggests that immersive simulations designed according to a sociocultural perspective of situated learning can facilitate social relationships between ICALD nursing students and members of an Australian CoNP within a very short period. Secondly, the immediacy in which the Case Study Two participants became attuned to perceptions of exclusion. Thirdly, how emergent responses to simulation design (the old-timers engaged in a conversation) can potentially yet significantly influence participants' perceptions of legitimacy and in-turn participation. What these examples suggest is that feelings of exclusion and marginality are difficult for ICALD students to reconcile.

Whilst not a desirable characteristic of a CoNP, experiences of marginality are commonly reported by domestic pre-registration nursing students during the clinical placement (for example, see: Curtis et al., 2007; Levett-Jones & Lathlean, 2009; Myrick et al., 2006). The examples provided in this and previous sections, as well as those from Case Study One participants demonstrate the ease in which experiences of marginality can be designed for by presenting challenges to student legitimacy. This claim is supported by Wenger's (1998a) assertion that to feel a sense of membership to a community, newcomers must have the capability and legitimacy to contribute to the pursuit of the enterprise. Thus, capability

and legitimacy to contribute provides the fundamental basis of participation in terms of competence. Furthermore, the examples draw on to clarify this point through Case Study One and Case Study Two suggest that for first-year ICALD nursing students such a challenge to legitimacy presents too great a challenge and has little value for learning.

This confirms the recommendations made throughout the two case studies, that according to Design Element Four: Affirm as Well as Challenge Legitimacy, the focus should be on *competence* rather than legitimacy. Indeed, given the focus of Research Question Two is to explore the ways immersive simulations informed by CoP develop the capability of ICALD nursing students' *capability* to participate within Australian CoNP, challenging legitimacy appears counter-intuitive. In other words, whilst it does appear possible to design immersive simulations that challenge legitimacy, and that such simulations could be justified as replicating real nursing student experiences of the clinical placement, such a focus is not the intent of this research study.

8.2.4 An enterprise of learning: Initiating mutual engagement.

For the Case Study One participants mutual engagement with old-timers appeared to present a particular challenge in terms of legitimacy and competence; feelings of not having anything to contribute, a perceived need to wait for guidance, and a need to demonstrate autonomy when participating in the simulated practice. However, in Case Study One there were a small number of examples where these participants initiated mutual engagement with old-timers as well as with each other.

Analysis of the Case Study Two data through a lens of CoP suggested similar challenges to legitimacy as to those of Case Study One. Whilst Case Study Two participants also showed a capability to initiate mutual engagement, this was largely between each other.

In contrast to the Case Study One participants, when confronted with the patient who had experienced a fall in Simulation Two, the Case Study Two participants did not wait for

guidance from the old-timer. Indeed, these novice nursing students initiated mutual engagement by drawing on the knowledge of each other in order to seek clarification. This point was captured by Jae-Sun when he explained:

> We learned that [patient assessment]. But I'm not sure what we learned about this, so I can ask about the treatment to another student with comfortable mind because I learned that and maybe they learned that as well. So even though I am not sure, they can give me advice...because they learned that as well. I think that my assumption that we have already learned about this situation can make me comfortable about talking with each other I think. (Jae-Sun, C2S2D)

Being able to negotiate the practice with peers provided a particular source of comfort for Jae-Sun. Jae-Sun's consideration of what Cai and Hyo could offer to the situation suggests a recognition of the need for mutual engagement as a strategy for managing the perceived complexity of Simulation Two. When discussing participation in practice, Wenger (1998a) argued that "Mutual engagement involves not only our own competence, but also the competence of others" (p.76). This interpretation is supported by Jae-Sun's acknowledgement that "There were not one person near this patient, there were...three nurses, so we need to take each part" (Jae-Sun, C2S2D). Of interest in this statement is Jae-Sun's identification of himself, Cai and Hyo as nurses rather than students. Furthermore, this statement indicates that Jae-Sun's account of nurses did not include the old-timer.

Recognition of the ways in which individual contributions come together in achieving the enterprise of a practice was noteworthy for these research participants, and as an outcome of this simulation. However, when considering simulation in terms of replicating authentic practice, relying on mutual engagement between students without accessing old-timers for confirmation, represents a form of mis-education (Dunnington, 2014), and presents a potential risk to patient safety. However, rather than an intentional exclusion of the old-timer, potential reasons for this exclusion may have been the degree of immersion experienced by the Case

Study Two participants, and the perceived need to perform, to "show something" (Hyo, C2S2D) to the researcher.

An experience of immersion in Simulation Two was illustrated by Cai's feeling of "I don't know how to deal with that situation. [I] Just think about 'what should I do, what should I do'" (Cai, C2S2D). Further, the intensity of the immersive experience appeared to contribute to Hyo missing some possible sources for support. According to Hyo: "I knew that the buddy nurse was standing beside us but I just focussed on the patient" (Hyo, C2S2D). These examples illustrate the intense emotional responses immersive simulation can evoke. These examples suggest that such emotional responses may impede participation. However, the Case Study Two data also suggested that after an initial period of feeling "quite stressed" (Jae-Sun, C2S2D), "lacking confidence" (Hyo, C2S2D) and being overwhelmed with feelings of "what should I do" (Cai, C2S2D), these emotions subside, allowing clearer judgement. For example, Cai recalled during the Simulation Two debrief "after he [Hyo] ask the buddy nurse 'Oh! You are there!' (laughter). And so I continue to ask her [RN2] question like 'what should we do?' And she told me..." (Cai, C2S2D).

Clearly the Case Study Two participants had the desire and ability to initiate mutual engagement; both the capability and the legitimacy to participate in the repertoire of the simulated practice. Whilst these examples suggest initial emotional responses contributed to these participants focused engagement between each other, a further reason is that it could be attributed to the Hawthorne effect (Patterson et al., 2008).

The potential of the Hawthorne effect to influence participants' behaviour in response to being observed, was raised as a potential issue for Simulation Two in Case Study One (Section 7.2.3). The discussion of the Hawthorne effect in Case Study One highlighted a challenge to designers of simulation to carefully consider the replication of a real situation to present just enough realism so not to confuse learners, particularly novice students. The risk is that a highly realistic simulation of a real situation as perceived by experienced healthcare

professionals, may distract novice nursing students from what it is they are intended to do. According to the Case Study Two participants, an awareness of being observed and recorded did influence their actions during Simulation Two.

For example, "knowing that the simulation was videotaped" (Jae-Sun, C2S2D) provided a source of distraction for this Case Study Two participant. At the same time, the knowledge of being videotaped served as a source of motivation. Jae-Sun continued: "...so I have to do my best to show my level of knowledge is quite enough. It is my desire" (Jae-Sun, C2S2D). This example reflects Jae-Sun's earlier expressed desire in Simulation One to demonstrate his knowledge in order to "give her [RN2] a good impression of me" (Jae-Sun, C2S2D). These examples suggest that it was not only being recorded that influenced Jae-Sun's behaviour, but a motivation to gain acceptance by people in perceived positions of authority. However, a different perspective was provided by Hyo:

> Because we are engaging in the experiment and we have to do something and we have to show something to [the researcher] like that. So, so yeah I didn't think we need help, we didn't ask any help to the buddy nurse. (Hyo, C2S2D)

This example could be interpreted as a fundamental problem with the design of Simulation Two, and indeed could have broader implications for immersive simulation as a learning and teaching method. However, by embedding this immersive simulation program within the sociocultural context of CoP, issues of initiating interaction with old-timers were able to be explored during the post-simulation debrief; a strategy that engendered a mutual understanding of the importance "to know how to give and receive help" (Wenger, 1998a, p. 76) as being more important than trying to know everything as a nursing student.

These Case Study Two examples relate to and provide clarification for Design Element Six: Authentic Tools and Artifacts. A recommendation from Case Study One was for Design Element Six be extended to Authentic, Tools, Artifacts and *Practices*. Analysis of the Case Study Two data supports this recommendation. There is no doubt that simulation

fidelity and the replication of actual clinical situations contributes to the immersive experience of simulation. However, caution must be exercised when choosing a situation to simulate, and the degree of fidelity in terms of the tools and artifacts to be included. The concern here is that if the challenge *appears* to ICALD nursing students to be beyond their capabilities, learning, and more importantly development of identities as legitimate peripheral participants will be impeded. Accordingly, a recommendation for Design Element Six is to include two design characteristics: activities represent practices that provide just enough challenge to participation; and the simulation environment is designed to provide just enough fidelity to enable suspension of disbelief.

The Case Study Two findings also reinforce the design characteristic of Design Element Three: Activities that Reveal the Complexity of Multimembership. The intent of Design Element Three was to enable ICALD nursing students to engage in and to reveal their judgement in terms of negotiating boundary encounters, choosing participation over non-participation, and initiating mutual engagement. Examples from findings of Case Study Two suggest there is value in designing immersive simulation activities for early-years ICALD nursing students that require their initiation of mutual engagement. Whilst Design Element Three includes a design characteristic for the inclusion of activities that require ICALD nursing students to ask questions and seek clarification from old-timers, asking for guidance is not explicit. Thus, a recommendation for Design Element Three is to include a specific design characteristic that calls for everyday nursing activities that require ICALD nursing students to ask for guidance.

In Theme Two *Responses to invitations and affordances*, I have further explored ways in which the metaphorical boundaries that demarcate communities of university students and Australian CoNP can be exploited as a design for learning as a simulated practice. Underpinning this approach to design are calls for strategies to assist ICALD nursing students

to understand the pedagogy of workplace learning including the cultural expectations of learners and of learning in Australia (Adnams, 2012; Gilligan & Outram, 2012; Jeong et al., 2011). Examples provided by the Case Study Two participants reflect this identified need. In Theme Two I have highlighted the value of immersive simulations in revealing the perceptions and expectations ICALD nursing students have as learners and of learning. Further, in Theme Two I have demonstrated the ways in which both immersive simulation design and the post-simulation debriefing can be informed by the sociocultural perspective of CoP. This approach can facilitate an exploration of social and cultural values, beliefs, norms and expectations of both ICALD nursing students and an Australian CoNP in order to develop identities of participation as nursing students.

8.3 Debriefing: A Locus for Negotiating Identities of Participation

Learning as a trajectory involves discovering: what matters, what does not; and what affords participation and what does not (Wenger, 1998a). Both Case Study One and Case Study Two findings suggest that designing immersive simulations that required participation between ICALD nursing students and members of an Australian CoNP, exposed issues pertaining to identities of participation as a process of negotiation. This negotiation took the form of reflection in action (during the simulation scenario) and reflection on action (during debriefing). For the Case Study One Participants, debriefing provided an opportunity to explore the ways in which participating in the immersive simulations revealed the complexity of nursing practice. For example, according to Case Study One participant Jiao, practices perceived as routine in China felt different when performed in English. From the perspective of Cheng and Hui, the bringing together of individual skills into a coherent practice raised challenges not considered by these nursing students previously. Significantly, learning focussed on the need for mutual engagement between each other and members of an Australian CoNP, with the debrief serving as a facility of engagement and imagination

through the sharing of stories, perspectives and the negotiation of strategies as enablers of participation.

Case Study Two participants reported that participation in the immersive simulation program revealed a complexity of practice that they had not previously experienced or anticipated during their first year of their Bachelor of Nursing program. Unanticipated challenges were expressed in terms of needing to: consolidate previous semester's knowledge and skill; engagement with old-timers; engagement with each other; and consideration of their relationships with patients. It is important to highlight the role of debriefing post-simulation in providing the Case Study Two participants with an opportunity to explore and make meaning of these challenges.

In Case Study One I explored the debrief as a locus for reflective learning by exploring the participants' experiences and perceptions through two of Wenger's (1998a) modes of belonging, engagement and imagination, as facilities of a reflective practice. In this section I explore the Case Study Two participants' perceptions of what was most meaningful to them from the immersive simulation program in terms of developing their capability to participate within an Australian CoNP during the clinical placement. These findings were consolidated into Theme Three which comprised of two sub-themes:

- The complexity of practice: Seeing one's self from a different perspective.
- An emerging identity as a legitimate learner within the enterprise of practice.

8.3.1 The complexity of practice: Seeing one's self from a different perspective.

In Case Study One I highlighted the ways in which the immersive simulations revealed the complexity of participation for the participants in terms of realising the complexity of participating in everyday nursing practice. Similarly, the Case Study Two participants described the need to bring together the propositional knowledge from university classes in the simulated practice provided a significant source of challenge, and in-turn, an

opportunity for learning. Factors which contributed to these challenges related to a need to negotiate cultural, linguistic and social elements that came from engagement with nurses, patients and each other. In this sub-theme, the participants spoke of the ways in which everyday nursing work elicited an appreciation of the complexity of participation in nursing practice.

According to the Case Study Two participants, the immersive simulations provided insights into their own capabilities in terms of learning as a process of participation. Cai explained: "...when participating, your mind is working. If you just observation, just watching what is going on, no questions. You won't think 'is this right or not'?" (Cai, C2S1D). This example suggests that despite expressing a desire to first observe as earlier described, the Case Study Two participants valued participation over observation for learning for it was through participation, different types of questions emerged that may not be considered from a position of a peripheral observer.

The need to bring together multiple elements of practice in each simulation revealed the complexity of practice for these ICALD students. As Jae-Sun explained: "I have the knowledge but difficulty is putting my knowledge into practice for this simple medication administration" (Jae-Sun, C2S1D). Consolidation in the form of "Put[ting] two semester knowledge together. From the last semester and from this semester all the information together to look after this patient" (Cai, C2S1D) provided an understanding of what an experience of participation in nursing practice may be like. These examples suggest that whilst part of the challenge was the consolidation of knowledge, a significant focus of learning was on the need to consider others; including the patient.

A high-technology manikin was used in both Simulation One and Simulation Two. The features of this manikin included chest rise and fall signifying the patient was breathing, blood pressure, heart rate, and patient voice in the form of myself speaking through an in-built speaker. It must be emphasised that these simulations did not require a high-technology

manikin. Yet the manikin's ability to talk was identified by two of the research participants as a feature that contributed to their learning. Jae-Sun explained:

> First of all, I was surprised that the patient [manikin] can talk, can react. It is not like the patient in the labs [skills laboratory classes]. Quickly I thought about um introduction [introducing] myself and what I am going to do and why I am going to do that procedure [medication administration]. Yeah, just thinking about that makes me kind of like (pause) confusing? Not exactly confusing but I don't know what I have to do. (Jae-Sun, C2S1D)

Clearly, needing to consider the patient suggested a shift of an identity of participation where the practice is an individual endeavour, to an identity that needed to consider how one appears from the perspective of others; in this case, the patient. Hyo concurred with Jae-Sun:

> I haven't thought the patient would say anything or ask me because like Jae-Sun said we always do just the model [in the skills classes]. So I didn't think anything about the patient. So maybe I ignore the patient [in the] real situation. I had a relationship [in Simulation One] just with the RN [the nurse]. I didn't ask [the patient] anything. Because I thought it was a model. (Hyo, C2S1D)

In this example, an experience of participation in immersive simulation not only highlighted the need for a relationship with the nurse, but the need to consider the patient; an understanding whilst taught, did not appear to be conveyed through skills laboratory classes. These examples suggest the ways these immersive simulations facilitated learning in terms of the Case Study Two participants tuning their enterprise through a greater understanding of accountability (Wenger, 1998a).

Case Study One participant Jiao described participation in practice in English as feeling different (Section 7.3.1). For Case Study Two participant Cai, the fast pace of spoken English, the Australian accent and the use of professional terminology called her to question

her ability to fulfil her accountability to the enterprise. This was particularly apparent when communicating with a doctor via the telephone. Cai explained:

> When you are talking on the phone and you are just thinking 'What should I say' and the doctor response you cannot understand. What does that mean? What medication? I don't know that medication. Just misunderstanding. This is very difficult to write down English names. If you cannot make out the patient name you can make a mistake I think. (Cai, C2S1D)

This example suggests the interplay between engagement and imagination. An experience of engagement revealed the complexity of what may have been perceived as a relatively simple process; telephone communication. However, whilst negotiating the repertoire of practice through a low-context medium such as telephone communication highlighted issues of English language proficiency, it was an understanding of the repertoire in terms of the ease of making a mistake through misunderstanding and the potential detrimental outcomes of such mistakes that suggests personally meaningful learning. Whilst the immersive simulation scenario provided the experience, debriefing post-simulation facilitated learning by exploring simple strategies to employ in actual practice.

For Case Study One participant Cheng, an experience of participating in the immersive simulation program provided insight into the capabilities required for practice; an insight that Cheng described as being "psychologically prepared" (Cheng, C1S2D). A similar insight was described by Case Study Two participant Jae-Sun when reflecting on his experience of Simulation Two:

> I think this opportunity can be very effective in terms of giving that kind of situation to the students 'cause they feel like...they might feel they know quite a lot. But when the people be in the situation, maybe they could have...they feel like they don't know what they have to do. 'Cause as I said before I was confused and don't know how

> organising idea in my brain and looking patient and organising and hesitate my um...my role or what I am going to do. (Jae-Sun, C2S2D)

This example suggests the ability of immersive simulation to facilitate an understanding of the capabilities required for learning in practice as distinct to the formalised context of the university classroom. Through a lens of imagination, Jae-Sun's experience of confusion when trying to make sense of patient assessment in Simulation Two, and his role within it suggests a shift in perspective from one that was previously focused on skill, to an acknowledgement of the need for mutual engagement in order to ask for help when not knowing what to do.

Thinking beyond one's self and learning that initiating mutual engagement with members of a CoNP appeared to be a focus of valuable learning for the Case Study Two participants. Specifically, these ICALD nursing students found that whilst initiating mutual engagement was not difficult, learning appeared to take the form of simply recognising the nurse was a resource to be accessed. During Simulation Two, Cai "knew that the buddy nurse was standing beside us. But I just focused on the patient" (Cai, C2S2D). It was not until Hyo initiated interaction with the old-timer "Oh you are there"! (Cai, C2S2D) that Cai felt legitimacy to "continue to ask her [RN2] question like 'What should we do?'" (Cai, C2S2D). Such seemingly obvious strategies appeared significant to the Case Study Two participants. During the Simulation One debriefing, Hyo recounted when he "couldn't find the vitamin D [in the medication trolley] and the buddy nurse says 'I am here'. I never think that I could ask the nurse. It was funny" (Hyo, C2S1D).

These examples show the ways in which simple everyday nursing practices can facilitate experiences of mutual engagement, but also an understanding for the need for mutual engagement when participating in the enterprise of nursing practice as a first-year nursing student. Being able to reflect on the simulation experience during the post-simulation debriefing not only provided insight into requisite capabilities, but served as an opportunity to negotiate the ways in which mutual engagement exists in actual practice. Such an example

was provided by Hyo; an example that illustrated the interplay between engagement in the simulation and imagination.

Wenger (1998a) proposed that imagination, as one mode of belonging, is a construct of personal as well as vicarious experiences. The vicarious nature of imagination was represented by Hyo when trying to make meaning of the role of mutual engagement in relation to experienced nurses when reflecting on his experience of Simulation Two. Hyo explained:

> Even if like you [the Researcher] are professional nurse need discuss? I have watched some [television] drama like Grey's Anatomy and Nurse Jackie and in their situation (laugh) in that drama, between the medical um between the doctor and nurse and between the nurses, they talk with each other during the procedure or during the situation. But in the real situation, I think um nurses and doctors and emergency team, they don't discuss about (pause) like we have discussed. They just doing the procedure and while they are doing, um treating patients, they discuss about their job like 'Can you check vital signs' and 'I'll clean the patient area', like this. (Hyo, C2S2D)

This example illustrated the work of imagination. On one hand, imagination provided a source of orientation for Hyo as he sought to explore a representation of nursing practice as perceived through representations on television programs. On another, imagination served as a source of reflection as Hyo considered his personal experience of Simulation Two in relation to the television dramas. In doing so, Hyo's statement suggests his shift in understanding his possible role as an identity of participation in that particular situation. Indeed, there was little comparison between the coherent practice Hyo described from Grey's Anatomy or Nurse Jackie. Yet through the work of imagination, Hyo could relate his experience of Simulation Two to that of what he had seen on television. This example suggests an understanding of the role of mutual engagement, thus creating a shift in his identity as a legitimate participant.

These Case Study Two examples reflect the essential characteristics of Design Element Six: Authentic Tools and Artifacts. As discussed in Section 7.2.3 and Section 8.2.4, a recommendation for Design Element Six was to include authentic *practices* as a more holistic representation of this design element. An implication for Design Element Six from this section is that such activities need not be complex. However, they require participants to discover a need for mutual engagement. To make this explicit, two recommendations for Design Element Six are to include as design characteristics: activities reflect everyday nursing practice; and activities require mutual engagement between student and nurse.

In addition, a recommendation from Case Study One was for Design Element Eight to frame debriefing as an exploration of *competence* as defined by Wenger (1998a); mutuality of engagement, accountability to an enterprise and negotiability of a repertoire. The Case Study Two findings supports this proposition. In addition, the findings of this sub-theme suggests the potential value of approaching post-simulation debriefing from Wenger's (1998a) perspectives of engagement and imagination as a facility of reflective practice. This has not been a focus of this research and as such presents an opportunity for future inquiry.

8.3.2 An emerging identity as a legitimate learner within the enterprise of practice.

In Chapter Seven I concluded with an exploration of what the Case Study One participants perceived as most meaningful from the immersive simulation program at the completion of the first clinical placement. Through a lens of Wenger's (1998a) modes of belonging, these students' reflections were interpreted in terms of alignment; their capability and legitimacy to insert themselves as learners into an Australian CoNP, and align their enterprise of learning into the enterprise of nursing practice. For the Case Study Two participants, what mattered most was developing an understanding of their legitimate role as students within an Australian CoNP during the first clinical placement.

Two of the three Case Study Two participants made themselves available to be interviewed post-clinical placement. It is important to highlight that the post-clinical placement interviews were individual rather than group interviews.

According to Jae-Sun, the most meaningful learning from the immersive simulation program was learning to negotiate "the personal interaction" (Jae-Sun, C2I) with old-timers. For Jae-Sun,

> ...the experience of interaction with staff [during the simulation] was quite helpful. Especially asking questions. If I hadn't done some simulations...I might have hesitated to ask something because I thought that bothering or interrupting. But I learnt through the simulation that I would be in clinical placement to ask some questions by means of learning something. (Jae-Sun, C2I[13])

This example suggests that simulating everyday interactions between ICALD nursing students and members of an Australian CoNP not only facilitated a sense of legitimacy for this student to ask questions of old-timers, it facilitated an understanding of the role of a CoP to support learning through the answering of questions.

A similar feeling of legitimacy to ask questions of old-timers was expressed by Hyo. He explained:

> I have thought about it and I think um if I didn't have the chance to engage in your simulation research, and experience that with other students, I would not know the nurses are there to help us. Even from the first day it was not too difficult to ask nurses anything. [This] one thing I was surprised (pause) I am very surprised for me. (Hyo, C2I)

A strategy employed by one Case Study Two participant was to focus on people who appeared to respond well to questions. During the clinical placement, Jae-Sun recalled the topic of conversation of Simulation Three that focussed on obtaining a blood pressure. The

[13] C2 (Case Study Two) I (Interview)

designed contention of this conversation was that the best-practice approach advocated by university teaching is not widely adopted in the workplace. Jae-Sun explained: "That could be one of the topics I could use for communication. I just deliberately asked them [nurses] the same questions" (Jae-Sun, C2I). Clearly participating in Simulation Three provided Jae-Sun with a simple strategy to initiate mutual engagement as "that was the beginning of our communication, so we (pause) I progress further (Jae-Sun, P2I). According to Jae-Sun, the immersive simulation program "was helpful for making me confident about asking some questions or suggesting my idea" about approaching members of an Australian CoNP with the intent of participation. Examples of strategies Jae-Sun's found helpful in affording access to more full participation included asking "Can I help with doing some vital signs or can I help you with BGL [blood glucose monitoring]?" Jae-Sun's example reflects that of Case Study One participant Cheng (Section 7.3.2) where an understanding of the rhythms of the enterprise of nursing practice, in the case of Jae-Sun, helping out others, represented a form of alignment and increased the likelihood of more full participation.

Clearly these examples suggest that according to the Case Study Two participants, the immersive simulation program facilitated a sense of legitimacy to ask questions of old-timers as an important source of learning. Of interest is the ways that despite feeling a greater sense of legitimacy, both ICALD nursing students expressed concern that "still I felt I asked too much of the nurses" (Hyo, C2I).

A capability and legitimacy to ask questions did not however necessarily translate to accessing learning opportunities. Both Hyo and Jae-Sun encountered boundaries in terms of generational encounters where there was a perception that "Older nurses don't want to teach" (Hyo, C2I). Such experiences translated for Jae-Sun as a need to "identify who likes questions and focused on that people" (Jae-Sun, C2I).

In Section 8.1.3 I described Case Study Two participants' expectation of an orientation in the form of a demonstration from the old-timer (Hyo, C2S1D; Jae-Sun, C2S1D), or through

an invitation to ask questions (Cai, C2S1D; Hyo, C2S1D). Hyo described his initial experience when commencing the clinical placement as one of being left on the periphery. Hyo explained:

> I just follow the buddy nurse because I thought at the time I had to do that. They [the nurse] didn't ask what they expect of us. They didn't tell us anything about what we are doing and they didn't direct anything. (Hyo, C2I)

This example clearly demonstrates the invitational nature of workplaces and how ICALD nursing students' expectations of an orientation can be unrealised. For Hyo, being told "you need to be more proactive" (Hyo, C2I) by his clinical facilitator mid-way through his clinical placement, provided the legitimacy he required. It is interesting to note Hyo's acknowledgement during the post-clinical interview that "I knew that [he needed to be more proactive]" (Hyo, C2I). This statement suggests the depth and persevering nature of culturally defined values, beliefs and norms of cultural heritage that can influence ICALD nursing students' agency as learners.

Wenger (1998a) subtly, but importantly defines ability as capability and legitimacy. An example of Jae-Sun illustrated this important distinction when attempting to make sufficient use of the repertoire of practice to engage in it. Jae-Sun described a situation during the clinical placement where "the staff were very busy and the [patient] situation was quite severe" (Jae-Sun, C2I). Arriving early for his shift, Jae-Sun described this learning opportunity as "my reward for being early" (Jae-Sun, C2I). As Jae-Sun explained:

> ...one of the staff was uncomfortable with me. She asked 'Jae-Sun, could you please help in the kitchen?' I tried to say something like 'Oh, can I stay here?' I looked at her eyes and I found her eyes quite (pause) meaning something. She really wanted me to go out from that room. So I went to the kitchen. (Jae-Sun, C2I)

Clearly this example illustrates the way in which learning in the workplace is secondary to patient care. The significance from this extract is that despite a desire for even legitimate

peripheral participation was unfulfilled, the post-clinical interview provided Jae-Sun with a valuable opportunity to reflect on and explore this situation with myself, the researcher. By using frames of engagement and imagination, the interview provided an opportunity for Jae-Sun and myself to explore the possible concerns and priorities from the perspectives of others; namely the nurses who were focussed on the patient. Through this process of mutual negotiation, Jae-Sun was able reconcile his feelings of exclusion.

It is significant to note the ways in which the immersive simulation program was reported by two of the Case Study Two participants' as contributing to their identities as nursing students. According to Jae-Sun, "My role was to do everything which is related to nursing as a student" (Jae-Sun, C2I). Such an understanding was echoed by Hyo as he explained:

> From the [immersive simulation] experiences, I learnt we don't have to do all things in hospital because we are student nurses not registered nurses. It was helpful for me to learn [this] before the clinical placement [that] our role is smaller than a registered nurse. There is a boundary. After the simulation we had talking about the simulation [debriefing] and we are getting to know about the boundary and our role. (Hyo, C2I)

The findings reflected in Theme Three, support those in Case Study One where it is suggested that learning can be both participatory and non-participatory in immersive simulation and the clinical placement, and that this can be understood through the lens of two of Wenger's (1998a) modes of belonging; engagement and imagination. Learning (as in Case Study One), was facilitated by the Case Study Two participants' capability to engage in a process of negotiating social relationships in order to access learning opportunities. Thus, it has been argued that without an experience of mutual engagement, ICALD nursing students' awareness of the need for and thus development of capability to actively negotiate identities of participation as a student, then meaningful learning will be significantly be impeded.

Further, in this theme I have highlighted the significance of mutual engagement as a gateway to participation in the joint enterprise and shared repertoire of practice.

Importantly, in this theme I have provided Case Study Two participants' accounts of the ways in which immersive simulation purposefully designed to develop the capability of ICALD nursing students to participate with members of an Australian CoNP. However, two important issues have been raised. Firstly, in Theme Three I have highlighted that the enterprise of a CoNP is patient care. What appears to be important is that ICALD nursing students need to understand the rhythms of nursing practice and to develop strategies that may enable their negotiation to access learning opportunities within these rhythms. This has not been the focus of this research study and as such requires further exploration. Secondly, in Theme Three I have illustrated the ways in which power can impede even legitimate peripheral participation. As argued in Case Study One and reflected in Case Study Two, issues of power cannot be ignored. Yet it is worth noting that power, in the form of affording or impeding legitimacy, is in the domain of a CoP. To design immersive simulations that challenge legitimacy, unless the specific intent is to explore such issues in terms of conflict resolution or resilience, is not likely to yield meaningful learning for students as there is little they can do. What I have shown in Theme Three, however, is the value of debriefing during the clinical placement to explore such issues. More specifically, this theme has supported the proposition made in Case Study One (Section 7.3.2) that Wenger's (1998a) two modes of belonging, engagement and imagination, as representing reflective practice, provide suitable lenses through which to explore issues of participation, non-participation and even marginality. Whilst such an approach cannot assure access to learning opportunities in the workplace, debriefing that explores perceptions and experiences based upon engagement and imagination may enable ICALD nursing students to make meaning of challenging situations by exploring the possible concerns and priorities from the perspective of another.

8.4 Summary

In Chapter Eight I have revealed the ways in which participation in the immersive simulation program provided the Case Study Two participants with an opportunity to experience and explore issues of culture, competence and social relations as they relate to everyday nursing practice. As suggested previously in Case Study One, the value of such experiences appears to be related to the role of mutual engagement, not only as a process of negotiating access to practice, but as the resultant process of negotiating identities as legitimate peripheral participants. Again, it is important to emphasise that although the technical aspects of nursing practice were a designed feature of each immersive simulation, it was the tacit elements of practice in terms of perceived social relations with old-timers, mutual recognition and feelings of having legitimacy to participate that presented the greatest challenge and in-turn provided the most meaningful learning.

There was a difference between the Case Study One and Case Study Two participants in the ways in which the immersive simulation program was reported as contributing to two of the Case Study Two participants' identities of participation during the clinical placement. According to these students, the immersive simulation program provided a sense of legitimacy and empowerment in the form of permission to ask questions of members of an Australian CoNP without first waiting for permission. Furthermore, the immersive simulation program was reported as contributing to these ICALD nursing students discovering "the boundary and our role" (Hyo, C2I) as they developed identities of participation as nursing students during the first clinical placement.

As has been highlighted throughout this thesis, facilitating pre-registration nursing students' construction of identities as legitimate peripheral participants situated within a CoNP is not generally the focus of healthcare simulation. Furthermore, such learning is not elicited through other learning and teaching methods such as lectures, tutorials or even skills

laboratory classes. It is at this point in the thesis that the significant need for such an approach can be fully appreciated.

The next chapter brings this thesis to a close. Refinement of the eight design elements as a preliminary design framework for immersive simulation, based upon the recommendations made throughout Case Study One and Case Study Two is presented. This process of refinement has led to the conceptualisation of, the *Situated Learning Design Framework for Simulation*.

Chapter Nine: Design Framework and Conclusion

This chapter is comprised of four sections. In the first section I offer five propositions regarding the ways in which immersive simulations designed according to Communities of Practice contributed to ICALD nursing students' *identities as learners* within an Australian CoNP. In the second section, I present *The Situated Learning Design Framework for Simulation* as an outcome of this research study. This framework is based upon the preliminary design framework developed in Chapter Six, and is an outcome of the process of refinement illustrated in Chapter Seven and Eight. In the third section, I clarify the limitations of the research. Finally, in the fourth section, recommendations for future research are identified.

9.1 Propositions

CoP provided a theoretical perspective and language through which to explore the social and cultural bases of challenges reported by the research participants as ICALD nursing students participating with members of an Australian CoNP. Wenger's (1998a) conceptualisation of CoP provided the framework to *design for* learning. This design took the form of immersive simulation as a strategy to develop the capability of ICALD nursing students to participate with members of an Australian CoNP. In Chapter Seven and Chapter Eight I highlighted the ways in which difference in cultural values, beliefs and norms contributed to a mismatch in perceptions of social relations between ICALD nursing students and members of an Australian CoNP. In these chapters I also demonstrated that the negotiation of such differences during the simulation scenarios as well as the post-simulation debrief provided significant, meaningful learning opportunities for both the Case Study One and the Case Study Two participants. Active participation with members of an Australian CoNP and the subsequent process of negotiation that ensued were not only mirrored in the

processes of learning in the workplace according to CoP, but instances of this process of negotiation were reported by Case Study One participants Cheng, Jiao and Kwan (Section 7.3.1; Section 7.3.2) and Case Study Two participants Hyo and Jae-Sun (Section 8.3.2). They indicated that this process provided an *experience* that contributed to their understanding of their roles as students, as well as strategies to initiate mutual engagement with members of an Australian CoNP.

In response to the focus of this research, which was to explore the ways in which immersive simulation informed by CoP can develop the capability of ICALD nursing students to participate within an Australian CoNP, five propositions regarding the construction of ICALD nursing students' *identities as learners* within an Australian CoNP are offered.

1. Significant meaningful learning occurs from exploring participation and non-participation through simulations that replicate everyday nursing practice. In this research I have demonstrated that immersive simulations that replicate everyday nursing practice provide significant, personally meaningful learning opportunities for ICALD nursing students. Wenger's (1998a) notions of participation and non-participation provide an appropriate lens through which to explore ICALD nursing students' experiences and perspectives of interactions with members of an Australian CoNP when exposed to simulations of everyday nursing practice. Exploring issues pertaining to participation and non-participation during the post-simulation debrief facilitates ICALD nursing students' understanding of the ways in which participation and non-participation can contribute to the construction of a particular identity as a student nurse, as well as identification with an Australian CoNP.

2. Competence from a Communities of Practice perspective facilitates understanding of learning as an ongoing process of becoming. In this research I have highlighted the ways in which immersive simulation informed by CoP can assist ICALD nursing students' to overcome their uncertainty and fear of having nothing to contribute (Section 7.2.2). This includes their fear of revealing their limited clinical competence to members of an Australian CoNP (Section 8.2.2). This happens when ICALD nursing students are afforded emotionally safe opportunities to participate in nursing practice. The sociocultural perspective of CoP enables the exploration of ICALD nursing students' concerns of competence in terms of a trajectory. From this perspective, *experiencing* the essential nature of social relationships, based on mutuality, demonstrating accountability to the enterprise, and attempting to use the repertoire of nursing practice takes primacy over preconceived expectations of needing to demonstrate competence in terms of codified knowledge and skill.

3. Mutual engagement *affords access* to the joint enterprise and shared repertoire. Learning, according to CoP, is represented as three interrelated processes: evolving forms of mutual engagement; newcomers understanding and tuning their enterprise; and newcomers developing their repertoire of styles and discourses (Wenger, 1998a). Whilst acknowledging these processes cannot be separated, the findings of this research have illustrated the essential role mutual engagement plays in affording ICALD nursing students access to the joint enterprise and shared repertoire of practice. In Case Study One and Case Study Two I demonstrated across each of the three simulations, that in the absence of mutual engagement, students' participation in the enterprise and use of the repertoire was characterised either by following directions provided by the old-timer, or an uncertainty of how to approach a situation. In contrast, Cheng's approach to initiating mutual engagement in Simulation Three (Case

Study One, Section 7.3.1), not only facilitated access to the repertoire of practice being discussed between members of an Australian CoNP, but provided Case Study One participant Kwan with a strategy that he believed he could use during the clinical placement. Further, Case Study Two participant Jae-Sun found the topic of obtaining blood pressure discussed between old-timers during Simulation Three (Section 8.3.2) provided a simple strategy to initiate mutual engagement during the clinical placement. These three instances provided examples of effective ways for ICALD nursing students to access the repertoire, the stories and language, of Australian nursing practice.

4. Negotiation of multimembership *must* explore cultural difference in relation to participation. In This research I emphasised the ways in which differences in culture, whether it be university, workplace, or cultural heritage, contribute to a mismatch in pedagogical expectations experienced by ICALD nursing students when participating with members of an Australian CoNP. Wenger (1998a) posited that the most significant challenge faced by newcomers moving from one CoP to another, is the ability to reconcile competing demands, and conflicting values, beliefs and assumptions (p. 160). Yet Wenger (1998a) did not provide insight as to how newcomers can be empowered to engage in the work of reconciliation within a nexus of multimembership. This is of particular importance when considering that for ICALD nursing students, backgrounding membership to their cultural heritage in order to fit in to an Australian CoNP, presents fundamental challenges to their cultural identity. Exploring the process of reconciliation of membership to multiple communities in a way that is cognisant of culture, and the various values, beliefs and assumptions that characterise the cultures of the communities to which we belong or aspire to belong, represents a holistic approach to negotiating multimembership. In

this research I have demonstrated how immersive simulation can reveal the complexity of multimembership. I have uncovered the challenges to ICALD nursing students' identity as they attempt to reconcile competing demands, and conflicting values, beliefs and assumptions as well as how such challenges can be negotiated and better understood by both ICALD nursing students and facilitators of simulation during the post-simulation debrief.

5. Simulation represents a boundary object, which facilitates connections between communities of practice. In Section 4.3.2 I indicated that there are multiple theoretical perspectives from which healthcare simulation can be interpreted as contributing to learning. In this research I have demonstrated the value of employing one theoretical perspective to understand the ways in which immersive simulation can facilitate learning and more importantly, identity construction. Employing the single theoretical perspective of CoP not only provided a lens through which to explore the research problem, it provided the framework to design a space for learning as a strategy. By adopting this theoretical perspective I sought to enable ICALD nursing students to develop identities as legitimate student nurses when participating within an Australian CoNP. Furthermore, the language of CoP was used to provide clarity in terms of how nursing simulation as a designed space for learning can align with perspectives of learning in the workplace. Wenger (1998a) posited that connections between communities can be made by brokers; old-timers who can introduce elements of one practice to another. Connections can also be made through boundary objects; the "artifacts, documents, terms, concepts, and other forms of reification around which CoP can organise their interconnectedness" (Wenger, 1998a, p. 105). From this perspective, an immersive experience of simulated nursing practice that brings together newcomers, reified artifacts of practice, and brokers in terms of members of

an Australian CoNP and myself as the simulation facilitator, represents a boundary object, comprising a nexus of perspectives that require coordination in order to facilitate connections between CoP.

9.2 Implications: The Situated Learning Design Framework for Simulation

The following implications for immersive simulation design have been drawn from chapters six, seven and eight, and from the propositions cited above. These implications reflect how findings from this research may contribute to immersive simulation design and they are presented as *The Situated Learning Design Framework for Simulation*. The framework, illustrated in Figure 8, consists of two dimensions as a design framework for situated learning simulation. Each dimension encompasses design elements and design characteristics to enable the operationalisation of the framework. These are described in the following sections.

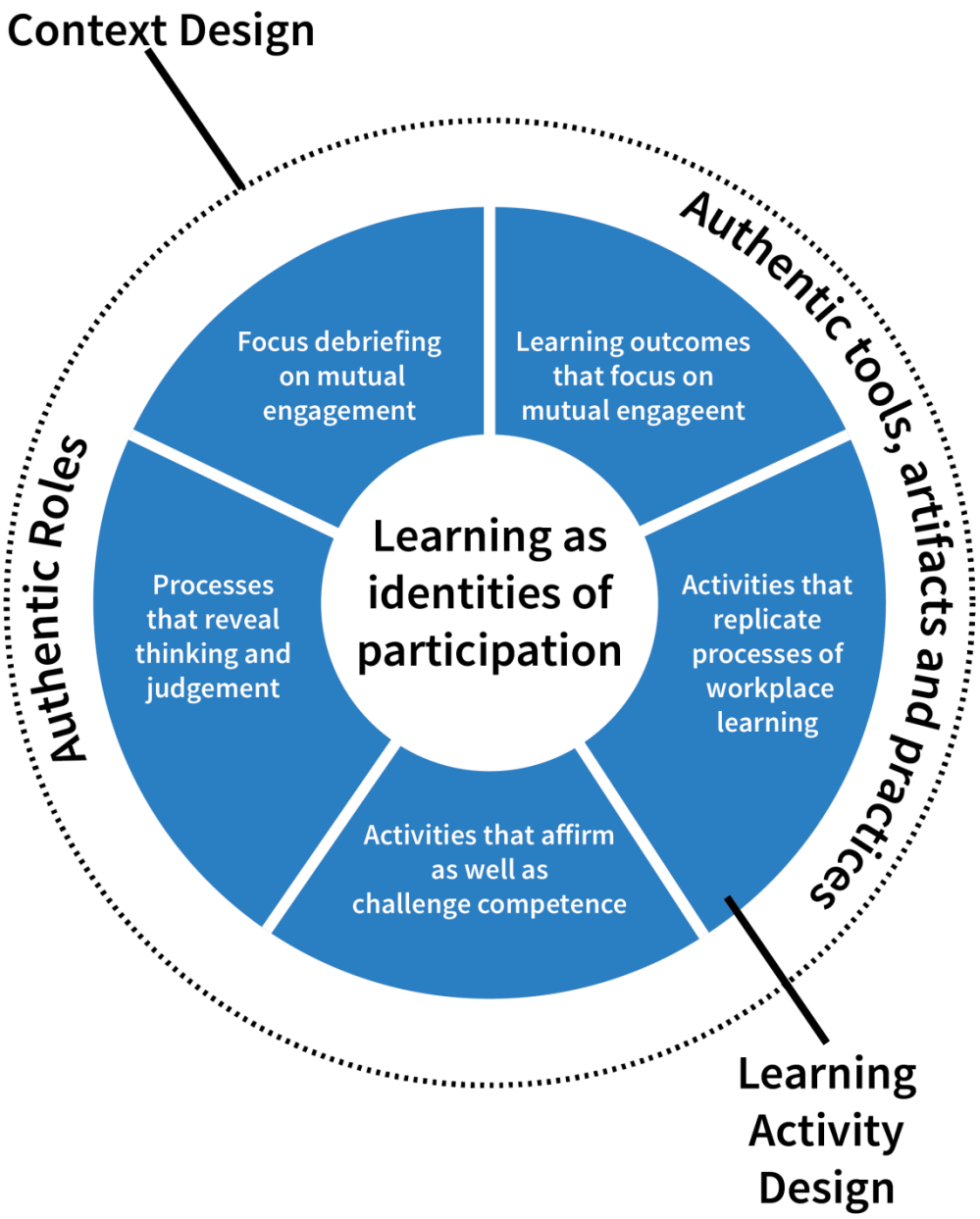

Figure 8. The Situated Learning Design Framework for Simulation.

The Situated Learning Design Framework for Simulation comprises two dimensions: the Context Design; and the Learning Activity Design. The Context Design relates to replicating the physical and social environment of the situation being simulated. As illustrated in Figure 8, the Context Design envelopes the designed learning activity. The Learning Activity Design comprises five design elements. These five design elements provide the requirements for the design of learning experiences according to situated learning simulation. This framework reflects the assertion made in Chapter Four that whilst an

authentic context is one requirement for simulation learning environments, it is the designed learning activity that represents the process of learning. Designing for situated learning simulation focuses on processes of learning through interactions and social relationships between nursing students and members of a CoNP, enabling the development of students' identities of participation represented as the core of this framework.

Hence, The Situated Learning Design Framework for Simulation represents a holistic approach to simulation design where learning activities, designed to facilitate and explore social relationships as a means to gaining access to learning opportunities in practice, is situated within a sufficiently realistic physical and social environment.

9.2.1 Context Design.

The Context Design requires the consideration of two design elements to replicate the physical and social context for learning; the representation of authentic roles of participants being portrayed in the simulation activity, and authentic tools, artifacts and practices that relate to the situation being simulated. In this research I have illustrated the ways in which authentic tools and artifacts of nursing practice provide focal points around which negotiation of meaning may occur. Authentic tools and artifacts reflect the multidimensional concept of fidelity described in Section 4.3.1. However, in this research I have also clearly shown the need for ICALD nursing students to engage with members of a CoNP in everyday practices of nursing, to initiate the negotiation of social relations that contribute to meaningful learning and identities of participation. The consideration of designed activities that facilitate mutual engagement between nursing students and members of a CoNP distinguish the Context Design from existing definitions of fidelity. In Table 27 I present the two design elements that comprise the Context Design, and the respective design element characteristics.

Table 27

Context Design

Design element	Descriptor	Design characteristics
Authentic roles	Simulations bring together students and members of a CoNP in their authentic roles.	Design CoNP member roles such as: -clinical facilitator -buddy nurse -enrolled nurse. Incorporate CoNP members of different ages and different cultures. Clearly state the roles of student and CoNP member in the simulation briefing.
Authentic tools, artifacts and practices	Simulation activities: -include the tools and artifacts required in an actual situation -comprise everyday nursing practices that students can participate during the clinical placement.	Design the simulation space to resemble the context being replicated. Limit artifacts of practice to those essential to the simulation activity. Provide sources of information as would be encountered in practice such as people, reference books, databases and medical records. Use language, terminology and pace of speech as would be encountered in practice. Align simulated nursing practices with nursing students' trajectory within the curriculum. Select nursing practices that require interaction between nursing student and CoNP member.

9.2.1.1 Authentic roles.

In this research I have clearly shown that a significant challenge for ICALD nursing students participating with members of an Australian CoNP is the negotiation of social relationships which are characterised by perceptions of power, hierarchy and authority. In Section 7.1 and Section 8.1.2 I demonstrated the ways in which authentic roles of the student nurse and member of a CoNP exposed the perceptions of power that existed within these relationships. These perceptions were then explored and negotiated during the simulation debrief. Thus, authentic roles are required to bring these perceptions of power to the fore in order to explore and negotiate these in terms of identities of participation. In this way, authentic roles may contribute to a kind of *sociocultural fidelity*. Immersive simulation can provide a way to the explore these different social relationships between the nursing student

and members of a CoNP. This is done by involving different members of a CoNP; for example a clinical facilitator, a buddy nurse or even an enrolled nurse, depending on the learning outcome that is desired. A further variation of a CoNP as highlighted in Section 7.3.2, can include members of different ages and cultural heritage. What is highlighted in this research is that a clear explanation of each person's roles is required in the simulation briefing to ensure role clarity.

9.2.1.2 Authentic tools, artifacts and practices.

I have clearly shown the ways in which the inclusion of authentic tools and artifacts of nursing practice in the design of immersive simulation contributed to participant's suspension of disbelief; a perception of being immersed in a realistic situation. Authentic tools and artifacts provide the focus around which ICALD nursing students and members of a CoNP can negotiate meaning. However, replication of the ways in which artifacts such as language, documentation, repositories of information and equipment are used in practice also contribute to the development of ICALD nursing students identities of participation. For this reason, designed simulation activities need to reflect practices which nursing students would be able to legitimately participate in during the clinical placement. Ideally these would be practices that require interaction between the ICALD nursing student and a member of a CoNP. Examples of everyday nursing practices as medication administration, telephone communication, patient assessment (when under pressure), and joining in conversations with members of a CoNP should be included in these simulations.

9.2.2 Learning Activity Design.

Whilst the Context Design represents the physical and social context of a learning environment for situated learning simulation, it is the ways in which simulation activities are designed to replicate the process of learning through participation that defines the Learning Activity Design. In the Learning Activity Design, emphasises is placed on the processes of

negotiating social relationships in order for nursing students to *gain access* to learning opportunities within nursing practice. There is a focus on developing the capability in ICALD nursing students to enable them to negotiate and gain access to practice.

The Learning Activity Design is comprised of five design elements, that together represent a design for learning experiences that simulate the processes of workplace learning:

- Learning outcomes that focus on mutual engagement.
- Activities that replicate processes of workplace learning.
- Activities that affirm as well as challenge competence.
- Processes that reveal thinking and judgement.
- Focus debriefing on mutual engagement.

Conceptually, these five design elements are considered in sequence. In Table 28 I present the five design elements that comprise the Learning Activity Design, and the respective design element characteristics.

Table 28

Learning Activity Design

Design element	Descriptor	Design characteristics
Learning outcomes that focus on mutual engagement	Situated learning simulation focuses on developing strategies for nursing students to initiate and maintain mutual engagement with members of a CoNP rather that technical or procedural skill.	Design learning outcomes that aim to enhance competence with initiating, negotiating and maintaining social relations. Provide flexibility when designing learning outcomes to enable a range of participant perspectives to be explored during the debrief. Align brief, *scenario design* and debrief with learning outcomes.
Activities that replicate processes of workplace learning	Designed activities facilitate interactions between student nurse and members of CoNP as anticipated during the clinical placement.	Design simulation activities to include work related and personal conversations: -between students and clinical supervisors, buddy nurses and managers -with clients. Responses by members of a CoNP need to be authentic. Provide opportunities to explore different perspectives through negotiation of differences. Provide opportunities for mutual engagement in formal spaces such as: -patient bedside -medication rooms -community healthcare settings. Provide opportunities for mutual engagement in hybrid spaces such as: -meal rooms -meeting rooms. Provide opportunities to communicate via different media such as: -face to face -telephone. Allow time in the simulation plan for students to clarify and revisit issues with members of a CoNP.
Activities that affirm as well as challenge competence	Designed activities present *just enough* challenge, requiring students to: initiate mutual engagement; demonstrate accountability to learning and to nursing practice; and use the language and artifacts of practice.	Design simulation activities: -in which students can participate -that involve constraints such as time -that provides a withdrawal of support by members of a CoNP according to the capability of the student. Include challenges that reflect realistic workplace expectations of nursing students. Provide opportunities to explore and negotiate: -student perspectives -possible strategies to reconcile differing priorities and perspectives between students and workplace environments -competence as a continual process of becoming.

Design Element	Descriptor	Design Characteristic
Processes that reveal thinking and judgement	Facilitate learning through collaboration and decision making by revealing thought processes of students.	Design simulation activities that: -require nursing students to ask questions and seek clarification from members of a CoNP -are represented in formal curriculum prior to simulation experience (thus are somewhat familiar to students) -accommodate a range of student responses from full participation to non-participation. Incorporate *Thinking Aloud* as a strategy to reveal thought processes and judgement to facilitate negotiation and learning. Provide sufficient time for students to explore different ways to participate.
Focus debriefing on mutual engagement	Debrief explores participation in terms of mutual engagement through the negotiation of cultural and pedagogical difference.	Engage students in active negotiation of identities of participation by facilitating dialogue about: -students' interactions, actions and CoNP member reactions to students during the simulation -perceptions of identities as students within a CoNP -issues that impact on mutual engagement including: social and cultural beliefs, values, norms; and perceptions of power, hierarchy, authority. Engage in dialogue about: -issues pertaining to consolidating individual skills, social and technical, as a coherent practice -past, present and future selves as a learning trajectory -competence as a continual process of developing an identity as a legitimate participant. Questions for exploration and negotiation of identities of participation may include: -What were you wanting to achieve? -What did you anticipate this situation would be like? -How did you respond? Why do you believe you responded that way? -In what ways did what you anticipate compare to what occurred? -How did you feel in the situation? -How do you think others felt in the situation? -What different ways could have been used to approach the situation? -What would be an acceptable way to respond in (insert country)? As a student? As a professional?

9.2.2.1 Learning outcomes that focus on mutual engagement.

It is clear that social relationships between student nurses and members of a CoNP that comprise mutual engagement facilitate access to practice and as such, help to contribute to the construction of students' identities of participation. The Case Study One and the Case Study Two participants reported that the negotiation of social relationships and the initiation of mutual engagement with members of an Australian CoNP was a significant challenge. Part of

this negotiation involves negotiating participation but also non-participation. Participants in both Case Study One and Case Study Two reported different challenges to initiating mutual engagement, reflected in part by participants' different perspectives and life experiences. This justifies the need to design learning outcomes that are not prescriptive; rather ones that provide sufficient flexibility to accommodate a range of participant responses so that these can be explored in the post-simulation debrief.

Therefore, using this framework allows for the implementation of learning outcomes that focus on enhancing capability of ICALD nursing students to initiate, negotiate and maintain mutual engagement.

9.2.2.2 Activities that replicate processes of workplace learning.

Participants in both case studies described significant differences to the processes of learning and what was learned between the immersive simulation program and classroom-based learning. Common to these participants was learning how to appropriately initiate and respond to interactions with members of an Australian CoNP, in different physical and social contexts. Therefore, it is essential that simulation activities replicate different workplace spaces, such as, a patient bedside when administering medication, or a hospital cafeteria during a meal break. It is also important that different forms of social relationships, requiring different approaches to mutual engagement are offered in simulation activities, as this may result in different kinds of learning.

Activities that replicate the processes of workplace learning involve activities that require collaboration between student nurse and members of a CoNP. The participants engaged in peer to peer interaction which is a valuable learning process and should not be discounted. However, such interaction does not take into account issues of power and authority which have been shown to represent significant concern for ICALD nursing students.

Designed simulation activities that replicate processes of workplace learning include providing students with opportunities to communicate with nurse managers, doctors as well as patients in a variety of contexts, since, the participants voiced some difficulty negotiating these interactions. These issues were related to respect for hierarchical structures as well as concern about not being able to understand what was being communicated (for example, language difficulties). This was illustrated when some participants the realised the need to communicate with the patient when they discovered that the manikin could talk. Significantly, all research participants described feelings of uncertainty, discomfort and at times unmet expectations when interacting with members of a CoNP during the coffee break which formed Simulation Three. Each of these examples represent sources of personal, meaningful learning that resulted from participating in activities that imitated the processes of workplace learning.

However, it is essential that sufficient time (within a reasonable timeframe) must be allowed when designing situated learning simulation to allow students to clarify and revisit issues with members of a CoNP.

9.2.2.3 Activities that affirm as well as challenge competence.

It is essential to provide ICALD nursing students with experiences of everyday, simulated nursing practice that requires the bringing together of individual skills into a coherent practice, that provides *just enough* challenge to facilitate meaningful learning. Meaningful learning involves discovering boundaries to competence, negotiating strategies to reconcile such boundaries, and trying things out. However, an issue arising from this research study, is that mutual engagement presents a source of risk. Participants demonstrated that revealing and negotiating boundaries to competence through mutual engagement may impede participation. Thus, the implication that this has for designing situated learning simulation, is the need to scaffold challenge to competence, as well as to withdraw the level of support

provided by members of a CoNP within each simulation activity and across simulation programs.

I have clearly shown the need for ICALD nursing students to feel a sense of legitimacy in order for mutual engagement to occur. A view supported by Wenger's (1998a) lens of competence where learning represents an evolving identity characterised by *evolving forms of mutual engagement, understanding and tuning their enterprise*, and *developing repertoire, styles and discourses.*

9.2.2.4 Processes that reveal thinking and judgement.

One way immersive simulation can contribute to learning and identity is through facilitating collaboration through problem solving. Some ICALD nursing students felt that initiating mutual engagement was impeded by a fear of being perceived rude or disrespectful. Further, when confronted with challenging situations, participants in both case studies preferred to say nothing and do nothing for fear of revealing limitations about their knowledge or skill performance to members of a CoNP. However, during the post-simulation debriefing, these ICALD nursing students revealed that they wished to engage and more importantly, that they had something to contribute. They also indicated that they had some understanding of the situations that they were confronting. The implication is that when designing situated learning simulation, students must be encouraged to verbalise their thinking and judgement. One way to do this is to encourage students to initiate questions and seek clarification from members of a CoNP as they participate in the simulated practice. A second way to reveal processes of thinking and judgement is to include the strategy verbalising thoughts known as *thinking aloud.*

Thinking aloud may provide ICALD nursing students with a strategy for: gaining access to nursing practice; facilitate mutual engagement by conveying to members of a CoNP their perceptions, interpretations and potential responses to a situation; and at the same time, this may help in the development of higher order problem framing and clinical reasoning

skills (Banning, 2008; Heine, 2010; Vygotsky & Luria, 1994). Such processes straddle the boundaries of learning paradigms, making cognitive processes explicit by encouraging *reflection in action* (Schön, 1983) through social and cultural processes of negotiation. A further and significant benefit of these strategies is to provide ICALD nursing students with a purposeful reason for engaging with, practising and refining the repertoire of nursing language (Heine, 2010).

9.2.2.5 Focus debriefing on mutual engagement.

I have clearly shown that social relationships between ICALD nursing students and members of a CoNP that comprise mutual engagement contribute to the formation of students identities of participation. Whilst incorporating processes that reveal thinking and judgement can facilitate negotiation and contribute to learning *during* the simulation (reflection *in* action), negotiation of identities of participation is also possible during the post-simulation debrief; contributing to learning through reflection *on* action (Schön, 1983).

Best practice guidelines for nursing simulation recommend focusing the post-simulation debrief on learning outcomes (Arthur et al., 2013; Decker et al., 2013; Jeffries & Rogers, 2007). Accordingly, debriefing for situated learning simulation needs to reflect learning outcomes of situated learning simulation, and focus on issues of enhancing nursing student's capability to initiate, negotiate and maintain mutual engagement.

It is important to clarify that focusing debriefing on mutual engagement does not aim to diminish the role of joint enterprise and shared repertoire in learning and identity within a CoNP. As posited in Section 9.1, mutual engagement affords access to joint enterprise and shared repertoire. As such, an emphasis on developing ICALD nursing students' capability to initiate and manage social relations built on mutual engagement represents a priority, particularly for these students in their early years of nursing studies in Australia.

Through a lens of CoP, exploring issues pertaining to mutual engagement through debriefing provides an opportunity to facilitate educational imagination, enabling ICALD

nursing students to explore: their identities as learners within an Australian CoNP; new trajectories as learners; and new possibilities and ways of belonging to a CoNP, not as full members, but as temporary residents (Boud, 2010). Furthermore, focusing debriefing on mutual engagement facilitates educational alignment: and allows for the exploration of issues involved in negotiating participation within boundaries; making personal meaning of experiences of multimembership; and engaging in the styles and discourses of nursing practice in a non-threatening environment. In this way, the simulation debrief provides a facility educational engagement, imagination and alignment to facilitate workplace learning. Furthermore, focusing debriefing on mutual engagement provides a forum for ICALD nursing students to explore: pedagogical difference in terms of university and workplace learning; differences in values, beliefs and interpretations of behaviours; and possibilities in the form of imagined trajectories through the negotiation of their own experiences as well as the experiences of others.

In this section I have presented *The Situated Learning Design Framework for Simulation* developed, based on the findings from this research study. The Situated Learning Design Framework for Simulation represents a significant contribution to nursing simulation, since this framework can be used to prepare ICALD nursing students for their first clinical placement in Australia.

In the section below I provide the limitations of the research that emerged through the research process. I also discuss why certain approaches and perspectives have been pursued whilst other have been left for future inquiry.

9.3 Limitations of the Research

Wenger's (1998a) Communities of Practice provided the theoretical basis for this research study. In Chapter Three I acknowledged that whilst there are numerous ways to understand learning as a process, the choice to focus on one perspective of learning was three-fold. Firstly, focussing on a single learning theory enabled an in-depth understanding, and thus, detailed engagement with CoP across each stage of this research. Secondly, the sociocultural perspective, language and framework of Wenger's (1998a) conceptualisation of CoP provided a way to understand the process of learning that closely represented how learning occurs during the clinical placement. Thirdly, focusing on CoP provided a single analytical framework in which to explore the ways in which learning theory can assist in understanding the process of learning through immersive simulation. This approach represented a response to calls by Kaakinen and Arwood (2009) and Rourke et al. (2010) identified in Section 4.5.1 for clarity when engaging with learning theory in the design and evaluation of learning from nursing simulation. Furthermore, it is important to note that a comprehensive search of the literature suggests the approach to healthcare simulation represented in this research has not been undertaken previously.

The qualitative case study approach to this research enabled the exploration of ill-defined and complex social phenomena of participation, learning and identity as experienced by the research participants. However, a small sample size of 12 participants from the same Australian school of nursing whilst in keeping with qualitative case study approaches to inquiry, could raise questions of trustworthiness. In Chapter Five I carefully described the research processes undertaken to strengthen trustworthiness by detailing the strategies employed to enhance credibility, transferability, dependability and confirmability of the findings of this research. To enhance the trustworthiness of the research findings, a variety of strategies were employed including multiple data collection tools, data collection methods,

and triangulation across multiple data sources and cases. Nevertheless, the research findings should be considered as heavily contextualised when considering their transferability.

The focus of this research was on ICALD nursing students. It is important to acknowledge that Phase Two Case Study One was comprised of two overseas qualified nurses (OQNs) and two ICALD nursing students. Despite this, similar challenges were reported and identified between both OQNs and ICALD nursing students within Case Study One and between Case Study One and Case Study Two participants in relation to the initiation and management of social relationships built upon mutual engagement. This suggests The Situated Learning Design Framework for Simulation provides relevant learning experiences for OQNs as well as ICALD nursing students.

What was not explored in this research was the role of the broker. As discussed in Chapter Three, most clinical placements in Australia comprise of an experienced registered nurse employed by the university or healthcare agency to fulfil the role of the broker. However, it must be acknowledged that for nursing students, the most important social relationship is that between student and ward nurse with whom students are buddied (Newton et al., 2009; Solomon et al., 2006; Zilembo & Monterosso, 2008a). It was for this reason that the focus this research was on developing the capability of ICALD nursing students to participate with members of an Australian CoNP.

9.4 Recommendations for Future Research

It is clear that the above propositions and implications for simulation design need to be further researched due to the identified limitations of this research.

First, further research is required with the aim of exploring the proposition that developing ICALD nursing students' capability to initiate and maintain mutual engagement enhances access to learning opportunities during the clinical placement. Whilst the findings from this research (Section 7.3.2; Section 8.3.2) suggest that enhancing capability to initiate

mutual engagement may provide ICALD nursing students with strategies for accessing nursing practice, in gaining a greater understanding of the enterprise, and in refining their use of the repertoire of nursing practice in a simulation learning environment, further research is required to explore this proposition in the practice setting.

Second, the literature reviewed for this research study revealed a need for programs that help to develop ICALD nursing students' identities of participation. However, a similar need may exist for domestic students. Hence, further research is required to explore the suitability of The Situated Learning Design Framework for Simulation to design simulation experiences for domestic pre-registration nursing students. An additional area for further research may be the application of the framework for simulation design in the area of newly graduated nurses as they make the transition to registered nurse in their first year of practice.

Third, in this research study I have used Wenger's (1998a) two modes of belonging – engagement and imagination – as an analytic frame for post-simulation debriefing. Whilst such an approach was attempted as a part of this research, this was not the focus of this inquiry. Thus, further exploration is required of the ways in which engagement and imagination may form a validated debriefing framework and, as such, contribute to developing nursing students' reflective practice. In addition, in Section 7.3.2 I suggested that in addition to providing an analytic frame for simulation debriefing, Wenger's (1998a) three modes of belonging (as components of a learning architecture), engagement, imagination *and alignment*, may support learning and identity development, by providing a valuable framework for debriefing during clinical placement. Wenger's (1998a) components of his learning architecture (presented in Section 3.4.5) defined alignment as one's ability – capability and legitimacy – to generate and coordinate sufficient social energy to reconcile the challenges one experiences and as such, determine the social effectiveness of one's actions. The exploration of such ability was not possible during the immersive simulation program, due to the short duration of the program. However, such exploration may be possible when

debriefing occurs during the clinical placement where students are in close proximity to nursing practice. This presents a significant avenue for future research.

Finally, this research has illustrated the ways in which ICALD nursing students notice the difference between approaches to learning at university and those in the workplace. In this research, I have demonstrated one way in which a perspective of situated learning enabled an immersive simulation program situated in a university to replicate the processes of learning in the workplace. Further research would be valuable into the design of university-based learning experiences that engage theories of workplace learning in order to better enable pre-registration students, particularly for vocational programs such as nursing, so as to enable them to negotiate, understand and participate in the processes of learning in work.

In this thesis I have pursued issues of significant pedagogical concern and addressed gaps in the current research literature. I have provided five propositions and seven implications for immersive simulation design in the form of The Situated Learning Design Framework for Simulation. While these are presented as concrete ways to address the issue of sociocultural adjustment through negotiation of pedagogical perspectives of academic and workplace learning in Australia, they also flag areas and assumptions that warrant further research. On this basis, this research study represents a step forward in understanding healthcare simulation design and, importantly, how immersive simulation can develop ICALD nursing students' identities of participation within an Australian CoNP. It does this by proposing a more holistic application of Wenger's (1998a) framework of CoP to nursing simulation.

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Appendix A: Focus Group Interview Guide Phase One

Date: _____ Name: _____

Time: _____ Location: _____

Participants:

Notes:

- Set-up chairs in a circle.
- Table in the centre.
- Jug of water, glasses and sweets.
- Set up one or two voice recorders.
- Explanatory statements.
- Consent forms.
- State the name of the participants, the date and time.

Briefing statement:

Thank you for coming along to this focus group today. I realise that you are doing this in your own time and am very appreciative of your support. Before we begin our discussion, it will be helpful for us to get acquainted with each other. You will see that each of us has a name badge to assist with the discussion. Let's start by introducing ourselves and state what was the most enjoyable thing to have happened to you since the end of classes last semester. X would you like to introduce yourself?

Today's discussion is no doubt going to raise some very interesting issues and to allow everyone to feel safe and free to speak up today, there will be some guidelines that we all need to be aware of.

I would like to reassure you that confidentiality is assured. I need you to know that I will be recording this interview. I will then transcribe the recording into text. Once transcribed, the recordings will be destroyed. Your names will not be present on any documentation related to this project. However, due to the small group size, I cannot guarantee anonymity.

I must reinforce that your participation in this study will in no way influence your studies at the University and that you are free to withdraw at any time. Are you happy to continue?

Our discussion today will take around 60-90 minutes depending on how much or little you have to say! If, at any time, you feel that you need to take a break please let me know.

I will be recording this interview and may from time to time check the recorders. I will also be making notes and using a checklist of items that I want to cover. At these times please continue with what you are saying.

I may interrupt to further clarify points or to keep us focused. Sometimes I will use very general questions, please answer as best you can.

It may be easiest if you wish to say something, to try and speak one at a time. This may be easiest achieved by indicating you wish to say something by raising your hand.

Focus	Questions	Probes / prompts
Demographic data	What is your country of origin? Please indicate your age range. Do you have a nursing qualification? How long have you been nursing?	20-24 / 25-29 / 30-34 / 35-39 / 40-44
	What has been your nursing experience in your home country?	Type of area / facility: Specialisation:
Difference	1. What differences in roles did you notice between nursing in Australia and your home country?	Differences in the work nurses do. Differences between how nurses and healthcare team work together.
Challenges	2. You have all recently completed your clinical placement. Tell me about the most challenging part of this clinical placement.	What made it difficult for you? What may have contributed to these difficulties? What differences did you notice between being a nursing student in Australia to being a nursing student in your home country?
Practice	3. Nursing practice is made up of many practices that are difficult to identify and are often not taught at university. What were some examples of everyday practices that you were not aware of when commencing the clinical placement that would have assisted you fitting in?	Tell me an occasion when you felt the workplace did things a certain way and made it difficult or impossible for you to do the right thing? How did this situation end up?
	4. Tell me about an occasion during your clinical placement when you remembered a skill or a particular class from uni that assisted you to work with the other health care professionals.	What was it that helped in this situation?

Focus	Questions	Probes / prompts
Preparation for placement	5. What knowledge or skills did you find you needed when working with nurses that would have been good to know prior to your clinical placement?	Which of these do you think is most important? Please explain why you feel this way.
	6. What skills, knowledge or experience from your clinical placement do you think future international students really should know before starting their first clinical placement in an Australian hospital?	Which of these do you think is most important? Please explain why you feel this way.
	7. This project aims to provide experiences for overseas qualified nurses such as yourselves, using simulations as preparation for clinical placement. What skills and knowledge do you think could be practiced and discussed on campus as preparation for placement?	

Appendix B: Focus Group Interview Guide Phase Two

Simulation brief and debrief

Date: _____ Name: _____

Time: _____ Location: _____

Participants:

Notes for pre-simulation brief:

- Provide briefing statement.
- Seek volunteers to participate first if the simulation is to be run twice.
- Orientate participants to the simulation environment (Simulation One).
- State learning outcomes.
- Introduce participants to the nurse and provide handover.

Briefing statement:

Thank you for participating in this simulation today. I realise that you are doing this in your own time and am very appreciative of your support. Before we begin, there are some things I would like to reinforce.

Today's simulation takes two parts. The simulation that should last approximately 20 minutes. The debrief after the simulation should last between 60-90 minutes. Although you might be a little anxious about today, I want to reinforce that your participation in this study will in no way influence your studies at the University and that you are free to withdraw at any time.

I would like you to know that the simulation will be recorded via video and the debrief will be recorded via a voice recorder. I will transcribe these recordings into written text. Both the recordings and the text will be stored in a password protected computer file. Your names will not be present on any documentation related to this project. However, due to the small group size, I cannot guarantee anonymity. Are you happy for us to continue?

As I will be recording the debrief, I may from time to time check the recorders. I will also be making notes and using a checklist of items that I want to cover. At these times please continue with what you are saying.

I may interrupt to further clarify points or to keep us focused. Sometimes I will use very general questions, please answer as best you can.

Notes for debrief:

- Set-up chairs in a circle.
- Set up two voice recorders.
- State the names of the participants, the date and time.

Focus	Questions	Probes / prompts
Demographic data (Simulation One only)	What is your country of origin? Please indicate your age range. Do you have a nursing qualification? How long have you been nursing?	20-24 / 25-29 / 30-34 / 35-39 / 40-44
	What has been your nursing experience in your home country?	Type of area / facility.. Specialisation.
What happened (reflection on action)	1. Tell me about what happened in the simulation.	In what ways do you feel you were or were not a participant? Please explain why you feel this way.
	2. What did you feel your role was during the simulation?	What did you feel you were there to do in that situation? Did you feel like you knew what was happening?
What students wanted to happen (reflection in action)	3. What did you want to happen during the simulation?	How did what you wanted to happen compare to what actually happened? How did this make you feel? Tell me about what made you most uncomfortable during that situation?
	4. What motivated you to participate? 5. What prevented you from participating?	Where do you think these motivators came from?
Future strategies	6. Who did you feel more likely to seek support from; other students or the RN you were working with?	Please explain why you felt this way.
	7. What do you believe may have helped you to feel more comfortable to participate in that situation?	What might you do differently in a similar situation?

Appendix C: Individual Interview Guide Phase Two

Post-clinical placement

Date: _____ Name: _____

Time: _____ Location: _____

Participant:

Notes:
- Private office / meeting room.
- Glass of water.
- Set up one or two voice recorders.
- State the name of the participant, the date and time.

Briefing statement:
Thank you for agreeing to be interviewed today. I would like to reinforce that what we discuss today remains confidential and will not be reported to the University or the clinical facility. I need you to know that I will be recording this interview. I will then transcribe the recording into text. Neither your name or the name of the clinical facility will be identified on any documentation related to this research.
I must reinforce that your participation in this study will in no way influence your studies at the University and that you are free to withdraw at any time. Are you happy to continue?

Our interview today will take around 60-90 minutes depending on how much or little you have to say! If, at any time, you feel that you need to take a break please let me know.

I will be recording this interview and may from time to time check the recorders. I will also be making notes and using a checklist of items that I want to cover. At these times please continue with what you are saying.

I may interrupt to further clarify points or to keep us focused. Sometimes I will use very general questions, please answer as best you can.

Focus	Questions	Probes / prompts
Identity and Participation	1. What was your role during the clinical placement?	How did this role compare with what you had expected prior to the clinical placement?
	2. Tell me about how you participated in nursing practice during the clinical placement.	What helped participation? What prevented participation? What may have contributed to this?
	3. In what ways do you feel like you helped nurses during the clinical placement?	
Engagement and Imagination	4. Tell me about an occasion during your clinical placement when you remembered something from the simulation program that assisted you to participate during the clinical placement.	How did you feel when you tried something out for the first time? Were you satisfied with how you handled this situation? What might you do differently in a similar situation?
Challenges to Mutual Engagement	5. What did you find as the greatest challenge during the clinical placement?	Possible influences of: • Culture • Conflicting values, beliefs, assumptions, expectations • Language and communication • Student status • Not knowing / limited experience
Identity of Participation	6. What did you learn most from the clinical placement?	Who helped most with learning this? • clinical facilitator • buddy nurse • other people.

Appendix D: Sample Contact Summary

Contact type: Case 1 Simulation One Variant

Site: Simulation Suite

Contact date: 11/04/2011 1345hrs

Date of report: 11/04/2011

Written by: Steve Guinea

File / Source Name: simulation one_group oneV_110411_video

1. What were the main observations and issues from this contact?

- The difference between a supportive and unsupportive old-timer behaviour is subtle.
- ICALD nursing students experienced difficulty negotiating power relations.
- Role of unhelpful nurse appeared to limit learning by impeding participation for first-year students.

2. What were the initial impressions from these observations?

Time	Observation	Impression of the situation	Possible Theme
0:00:10	The difference between a supportive and unsupportive old-timer behaviour is subtle.	Perceptions of unsupportive: RN1 states "I am going to leave it (medication administration) for you guys to do, and I'll just be watching".	Invitations and affordances
0:01:00	ICALD nursing students experienced difficulty negotiating power relations.	Kwan does not contest being pressured from RN1 when stating "We have got to get moving. We don't have much time this morning".	Power and authority
0:01:45	The difference between a supportive and unsupportive old-timer behaviour is subtle.	An absence of wait-time. A sense of pressure was created by RN1 by asking questions in relatively rapid succession. The students do not appear to have time to respond in full. It is unclear whether the students understood the questions.	Power and authority Legitimacy

Time	Observation	Impression of the situation	Possible Theme
0:04:15-0:07:30	Role of unhelpful nurse appeared to limit learning by impeding participation for first-year students.	Observing the simulation, there was a feeling of powerlessness. Few questions were asked by Kwan or Jiao. The only words spoken by the students were single-word responses when questioned by RN1. At times the mood felt almost volatile. At one point I thought Kwan was going to walk out of the simulation. The trigger for this was RN1's rapid-fire of questioning and pressuring the students to 'get moving' rather than providing sufficient time to respond.	Power and authority Legitimacy
0:05:30	The difference between a supportive and unsupportive old-timer behaviour is subtle.	RN1 is providing guidance to students but it is more directive than discussion. The students appeared receptive to the guidance provided by RN1 however there is no exploration of potential learning opportunities between RN1 and students.	Invitations and affordances
0:08:30	Role of unhelpful nurse appeared to limit learning by impeding participation for first-year students.	Students *do* complete medication administration however with errors. The students appear unsettled. The debrief reveals the students' perceptions of this interaction.	Legitimacy

3. Summary of the information that was obtained (or not obtained) from each of the debriefing questions:

Question	Information
1. Tell me about what happened in the simulation.	• There was a perceived problem between old-timer and newcomer. • Student reported they knew what to do but being pressured impeded participation.
2. What did you feel your role was during the simulation?	• Role as a student.
3. What did you want to happen during the simulation?	• Wanted to be shown each step like the first simulation.
4. What motivated you to participate?	• A need to respect authority. • Doing as what the nurse told him to do due to hierarchy.
5. What prevented you from participating?	• Delay in responding - wait time. • A fear of being perceived by the nurse as confrontational.
6. Who did you feel more likely to seek support from; other students or the RN you were working with?	• Disempowerment. • Disinclined to seek support from the nurse. • Question required re-wording for single participant.
7. What do you believe may have helped you to feel more comfortable to participate in that situation?	• A supportive nurse.

4. What new (or remaining) target questions do I have when considering the next contact?

- What are some alternative ways to manage that situation?
- How could you ask questions of the nurse that would help you to interact with the nurse that may not be perceived as confrontational?

Appendix E: Human Research Ethics certificate of approval – Monash University

MONASH University

Standing Committee on Ethics in Research Involving Humans (SCERH)
Research Office

Human Ethics Certificate of Approval

Date:	**12 May 2009**	
Project Number:	**CF09/0447 - 2009000145**	
Project Title:	**In what way can high-fidelity simulation as an authentic learning activity facilitate nursing students' learning within the professional community of practice**	
Chief Investigator:	**Dr Michael Henderson**	
Approved:	**From: 12 May 2009**	**To: 12 May 2014**

Terms of approval

1. The Chief investigator is responsible for ensuring that permission letters are obtained, if relevant, and a copy forwarded to SCERH before any data collection can occur at the specified organisation. **Failure to provide permission letters to SCERH before data collection commences is in breach of the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research.**
2. Approval is only valid whilst you hold a position at Monash University.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project (including changes in personnel):** Requires the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any further correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

[redacted]

Professor Ben Canny
Chair, SCERH

cc: Dr Bernard Holkner; Mr Stephen Guinea

Postal – Monash University, Vic 3800, Australia
Building 3E, Room 111, Clayton Campus, Wellington Road, Clayton
Telephone [redacted] Facsimile +61 3 9905 1420
Email [redacted] www.monash.edu/research/ethics/human/index/html
ABN 12 377 614 012 CRICOS Provider #00008C

Human Research Ethics amended ethics approval – Monash University

from MRO Human Ethics Team (Adm) [redacted]
to "Michael Henderson (Education)" [redacted]
cc Stephen Guinea [redacted]
date 13 April 2011 15:44
subject Re: Request for Amendment to Ethics - CF09/0447-2009000145
mailed-by monash.edu

PLEASE NOTE: To ensure speedy turnaround time, this correspondence is now being sent by email only. MUHREC will endeavour to copy all investigators on correspondence relating to this project, but it is the responsibility of the first-named investigator to ensure that their co-investigators are aware of the content of the correspondence.

Dear Researchers

Thank you for submitting a Request for Amendment to the above named project.

This is to advise that the following amendments have been approved and the project can proceed according to your approval given on 12 May 2009.

1 Amendment to section 2.6 c - Removal of the student researcher as presenting the 10 minute information session. The 10 minute session will be conducted by a colleague of the student researcher (not a teacher of the potential participants.).

2 Amendments to section 2.8 - Removal of the statements -

"...I do not teach or assess any of these students prior to or within the semester in which the research will be conducted." and "...that their participation will not be reported to the lecturer in charge of the subject..."

Thank you for keeping the Committee informed.

Professor Ben Canny
Chair, MUHREC

Human Ethics - Monash Research Office
Building 3E, Room 111
Monash University, Clayton 3800
Phone: 9905 5490

Appendix F: Human Research Ethics certificate of approval – Australian Catholic University

Australian Catholic University
Brisbane Sydney Canberra Ballarat Melbourne

ACU National

Associate Professor Janis (John) Ozolins

School of Philosophy

Australian Catholic University Limited
ABN 15 050 192 660
Melbourne Campus (St Patrick's)
115 Victoria Parade Fitzroy VIC 3065
Locked Bag 4115 Fitzroy MDC VIC 3065
[redacted]

Wednesday, 8 July 2009

Dear Mr Guinea,

Re: Approval Number HREC **CF09/0447 - 2009000145**

I have perused the application, noted that it has ethics approval from Monash University and give permission for you to approach the National School of Nursing and Midwifery for your research project for the Master of Education (Research) program in which you are enrolled.

With every best wish for success with your project,

Yours sincerely,

[redacted]

Jānis Ozolins,

Chair, Human Research Ethics Committee

CRICOS registered provider:
00004G, 00112C, 00873F, 00885B

Appendix G: Recruitment flyers

Recruitment flyer Phase One

Are you an Overseas Qualified Nurse from China or India
studying the Bachelor of Nursing at
ACU National St Patrick's Campus?

Will you be commencing your first clinical placement
in Australia this semester?

Would you be willing to talk about your experiences of being
an international student on clinical placement in Australia?

I am a registered nurse and lecturer within ACU National School of Nursing and Midwifery St Patrick's Campus. As a part of my Master of Education studies at Monash University, I am conducting a research project investigating the experiences of Overseas Qualified Nurses on their first clinical placement in Australia.

Why have you been selected?
Your experiences as students are unique and extremely valuable. The discussion of your thoughts and experiences from clinical placement may lead to improved preparation of future international nursing student's for clinical placement in Australia.

What is involved?
This project involves a one-hour small group discussion about your experiences from your first clinical placement.

Where and where will this project take place?
The small group discussions will be held on-campus soon after your first clinical placement.

Please note:

- You will not be identified in any way throughout this project.
- You are not required by the university to participate in this project.
- Participation or non-participation in this project will not in any way affect your grades.

Would you like to know more?
If you are interested and would like some further information, please contact Stephen Guinea at [redacted] for an information letter.

Recruitment flyer Phase Two

Are you an Overseas Qualified Nurse from China, Korea, Sri Lanka or India studying the Bachelor of Nursing at
ACU National St Patrick's Campus?

Will you be commencing your first clinical placement in Australia this semester?

Would you like to participate in a new approach to preparing you for clinical placement at ACU?

I am a registered nurse and lecturer within ACU National School of Nursing and Midwifery St Patrick's Campus. As a part of my Master of Education studies at Monash University, I am conducting a research project investigating the experiences of overseas qualified nurses on their first clinical placement in Australia.

Why have you been selected?
The first clinical placement is always a stressful experience for nursing students; even more-so for overseas students. This research project aims to investigate the ability of specific education sessions to prepare overseas nursing students for clinical placement in Australia.

What is involved?
This project involves six one-hour practical classes during the semester and a one-hour small group discussion about your experiences from your first clinical placement.

Where and where will this project take place?
The practical classes will be held on-campus during October 2010 in addition to timetabled classes.
The small group discussion will be held on-campus soon after your first clinical placement.

Please note:

- You will not be identified in any way throughout this project.
- You are not required by the university to participate in this project.
- Participation or non-participation in this project will not in any way affect your grades.

Would you like to know more?
If you are interested, please contact Stephen Guinea at
[redacted] *for an information letter.*

Appendix H: Explanatory Statement Phase One

MONASH University

9th September 2009

Title: In what way can high-fidelity simulation as an authentic learning activity facilitate overseas qualified nurses' learning within the professional community of practice?

This information sheet is for you to keep.

My name is Stephen Guinea and I am conducting a research project with Dr Michael Henderson, lecturer and Dr Bernard Holkner, senior lecturer in the Department of Education towards a Master of Education at Monash University. This means that I will be writing a thesis which is the equivalent of a 200 page book.

I am seeking the participation of Overseas Qualified Nurses who are enrolled in a 12 month or 24 month Bachelor of Nursing program who have not yet participated in a clinical placement in Australia.

The aim of this study is to:

1. better understand the experiences of overseas qualified registered nurses when on clinical placement in Australia; and
2. develop more relevant on-campus learning opportunities for overseas qualified nurses prior to commencing clinical placement.

I am conducting this research to find out whether high-fidelity (highly realistic) simulated experiences at university improve overseas qualified nurses' learning when on clinical placement in Australia.
The possible benefits of this research include:

- a greater understanding of the issues facing overseas qualified nurses when on clinical placement in Australia.
- more effective learning for nursing students on-campus as well as on clinical placement.
- improved student confidence both on-campus and within health-care agencies.
- the delivery of more effective nursing care.

The study involves a group interview (small group discussion). The interview will be conducted within ACU National St Patrick's Campus after the completion of your clinical placement and should take approximately 90 minutes. The topics discussed in the interview will be about your experience as a nurse in your home country and your expectations and experiences of learning on campus and on clinical placement.

Inconvenience / discomfort
Some participants may find the process of discussing their experiences in a small group as slightly uncomfortable. If you feel distressed during the focus group, you may stop participating in the focus group. ACU National counselling services are available should you wish to access these.

Payment
No payment will be offered to participants for their involvement in this research.

Can I withdraw from the research?
Being in this study is voluntary and you are under no obligation to consent to participate. You can agree to stop participating and withdraw from this study at any time. All best efforts will be taken to remove any data you had provided up to this time however, due to the collection of group data, this may not be possible. All names and identifying information will be removed from the research findings

Confidentiality
Any information and data collected as a part of this research will be de-identified. Information obtained from the questionnaire will be allocated a code. Your name will be removed. Any data published will be identified by the use of a pseudonym (false name).

Storage of data
Storage of the data collected will adhere to the University regulations and kept on University premises in a locked filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Use of data for other purposes
The information obtained is for use for the purpose of this research only.

Results
If you would like to be informed of the aggregate research finding, please contact Stephen Guinea on 0413 567 044 or e-mail Stephen.Guinea@education.monash.edu.au. The findings are accessible for 6 months after the completion of the focus groups.

If you would like to contact the **researchers** about any aspect of this study, please contact the Chief Investigator:	If you have a **complaint** concerning the manner in which this research **CF09/0447 - 2009000145** is being conducted, please contact:
Michael Henderson Lecturer, Faculty of Education Building 6 Room Monash University Victoria 3800 Australia. [redacted]	Executive Officer Standing Committee on Ethics in Research Involving Humans (SCERH) Building 3e Room 111 Research Office Monash University VIC 3800 [redacted]

Thank you.
Stephen Guinea.

Appendix I: Explanatory Statement Phase Two

MONASH University

21st March 2011

Title: In what way can high-fidelity simulation as an authentic learning activity facilitate overseas qualified nurses' learning within the professional community of practice?

This information sheet is for you to keep.

My name is Stephen Guinea and I am conducting a research project with Dr Michael Henderson, lecturer in the Department of Education towards a Master of Education at Monash University. This means that I will be writing a thesis which is the equivalent of a 200 page book.

I am seeking the participation of overseas qualified nurses who are enrolled in a 12 month or 24 month Bachelor of Nursing program who have not yet participated in a clinical placement in Australia.

The aim of this study is to:

1. better understand the experiences of overseas qualified nurses when on clinical placement in Australia; and
2. develop more relevant on-campus learning opportunities for overseas qualified nurses prior to commencing clinical placement.

I am conducting this research to find out whether high-fidelity (highly realistic) simulated experiences at university improve overseas qualified nurses' learning when on clinical placement in Australia.

The possible benefits of this research include:

- a greater understanding of the issues facing overseas qualified nurses when on clinical placement in Australia.
- more effective learning for nursing students on-campus as well as on clinical placement.
- improved student confidence both on-campus and within health-care agencies.
- the delivery of more effective nursing care.

The study involves three on-campus practical classes and a group interview (small group discussion).

The practical classes are separate to your timetabled classes and will consist of a one-hour class (outside of your timetable classes) during weeks 8, 9 and 10. The practical classes will be problem-solving classes using the learning strategy of simulation. To obtain an accurate record, these classes will be video-recorded. All data obtained through these recordings will be de-identified (names, ages or images removed) when referred to in the research findings.

The group interview will be conducted on-campus at the completion of your clinical placement and should take approximately 60 minutes. The topics discussed in the interview will be about your expectations and experiences of learning on campus and on clinical placement.

Inconvenience / discomfort
Some participants may initially find the simulations used in these practical classes intimidating and sometimes embarrassing. Similarly, some participants may find the process of discussing their experiences in a small group as slightly uncomfortable. If you feel distressed during the practical class or focus group, you may stop participating immediately. ACU counselling services are available should you wish to access these.
Participation in this project is an additional learning activity to your timetabled classes. This project is completely unrelated to the ACU Bachelor of Nursing course and will be conducted outside of timetabled class time. This project is in no way linked to any assessment.

Payment
Participation within this project is completely voluntary. No payment will be offered to participants for their involvement in this research.

Can I withdraw from the research?
Being in this study is voluntary and you are under no obligation to consent to participate. You can agree to stop participating and withdraw from this study at any time. All best efforts will be taken to remove any data you had provided up to this time however, due to the collection of group data, this may not be possible. All names and identifying information will be removed from the research findings.

Confidentiality
Any information and data collected as a part of this research will be de-identified. Information obtained from the questionnaire will be allocated a code. Your name will be removed. Any data published will be identified by the use of a pseudonym (false name).

Storage of data
Storage of the data collected will adhere to the University regulations and kept on University premises in a locked filing cabinet for 5 years. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

Use of data for other purposes
The information obtained for this research is for the purpose of this research only.

Results

If you would like to be informed of the aggregate research finding, please contact Stephen Guinea on [redacted] The findings are accessible for six months after the simulation classes and group interviews.

If you would like to contact the **researchers** about any aspect of this study, please contact the Chief Investigator:	If you have a **complaint** concerning the manner in which this research **CF09/0447 - 2009000145** is being conducted, please contact:
Michael Henderson Lecturer, Faculty of Education Building 6 Room Monash University Victoria 3800 Australia. [redacted]	Executive Officer Monash University Human Research Ethics Committee (MUHREC) Building 3e Room 111 Research Office Monash University VIC 3800 [redacted]

Thank you.
Stephen Guinea.

Appendix J: Consent form Phase One

Title: In what way can high-fidelity simulation as an authentic learning activity facilitate overseas qualified nurses' learning within the professional community of practice?

NOTE: This consent form will remain with the Monash University researcher for their records.

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

I agree to be interviewed by the researcher	☐ Yes	☐ No
I agree to allow the interview to be audio-taped	☐ Yes	☐ No
I agree to make myself available for a further interview if required	☐ Yes	☐ No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. If I do choose to withdraw from this project, I understand that all best efforts will be made to remove data contributed by me.

I understand that in the case of emotional distress, ACU National counselling services are available to me.

I understand that any data that the researcher extracts from interviews that appear in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

I understand that data from the interviews will be kept in secure storage and accessible to the researcher only. I also understand that the data will be destroyed after a 5 year period.

Participant's name

Signature

Date

Appendix K: Consent form Phase Two

Title: In what way can high-fidelity simulation as an authentic learning activity facilitate overseas qualified nurses' learning within the professional community of practice?

NOTE: This consent form will remain with the Monash University researcher for their records.

I agree to take part in the Monash University research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I understand that agreeing to take part means that:

I agree to be interviewed by the researcher	☐ Yes	☐ No
I agree to allow the interview to be audio-taped and video-taped	☐ Yes	☐ No
I agree to allow the practical classes to be video-taped	☐ Yes	☐ No
I agree to make myself available for a further interview if required	☐ Yes	☐ No

I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way. If I do choose to withdraw from this project, I understand that all best efforts will be made to remove data contributed by me.

I understand that in the case of emotional distress, ACU National counselling services are available to me.

I understand that any data that the researcher extracts from the interviews, focus groups, audio-tape or video-tape for use in reports or published findings will not, under any circumstances, contain names or identifying characteristics.

I understand that I will be given a transcript of data concerning me for my approval before it is included in the write up of the research.

I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.

I understand that data from the interviews, focus groups, audio-tape or video-tape will be kept in secure storage and accessible to the researcher only. I also understand that the data will be destroyed after a 5 year period.

Participant's name

Signature

Date