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Staged Participation:
Student Nurses’ and Clinical Facilitators’ Perceptions
of the Clinical Learning Environment in Macau

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PhD
The University of Edinburgh
2015
Declaration

I declare that the thesis has been composed by myself and it reports my own work. This thesis has not been submitted for any other degree or professional qualification.

Wai Sha Poon

Word count: 81510
Acknowledgements

PhD journey is tough and demanding, yet full of joy and new discoveries. I am fortunate that a number of people have been by my side and contribute to the successful completion of the thesis.

First and foremost, I offer my sincere gratitude to my wonderful supervisors, Prof Graeme Smith who loved using analogies to help me stay positive, and Dr Charles Anderson who used all his kind words to boost my confidence. Their inspiration, advice, support, patience and encouragement had offered huge assistance to my PhD journey.

I would like to thank Kiang Wu Nursing College of Macau and Kiang Wu Hospital for their enormous support during the data collection process. Heartfelt thanks to all students, clinical instructors, lecturers and mentors who participated in this study for their trust and generosity to share their learning and working experiences. Without their contribution, this thesis would not have been possible.

Thank you all my dear friends in Hong Kong, Edinburgh and Macau, especially Sze, Clara, Jo, Ann and Carla. I am so lucky to have you all to brighten and power my life. I would also like to express my appreciation to Ka-Shing for the inspirational discussions on various topics and being honest to criticize my thoughts. They meant a lot to me and helped me go through the hardest time in the study process.

This thesis is dedicated to my parents Che Cheong Poon and Wai Ling Chin, and my lovely sister Teresa. I am indebted to them for their unconditional love and support throughout the PhD journey.
Abstract

With the movement of nurse education into the higher education sector, the role of student nurses has moved from that of apprentices to learners with full student status on placement. Although supernumerary status is key to current nursing training, not much attention has been paid to its influence on student participation in the community of practice of the workplace. This thesis has set out to address this research gap. A qualitative dominant mixed methods study closely examined student participation on placement by comparing and contrasting students’, mentors’ and clinical instructors’ clinical learning and mentoring experiences and their perceptions of supernumerary status was carried out.

Data were collected in a nursing college in Macau. In the qualitative part, a sample of seven third year and six fourth year student nurses were recruited to participate in a focus group interview corresponding to their year of study. In addition, five mentors and five clinical instructors were interviewed individually. Views from participants were compared and contrasted. For the quantitative part, all second to fourth year students were invited to respond to a questionnaire after placement. One hundred and fifty-one questionnaires were returned. Descriptive and inferential statistics were used to analyse the quantitative data.

This study revealed that there is a lack of clarity about supernumerary status among student nurses. However, students’, mentors’, clinical instructors’ and nurses’ perceptions of clinical learning and supernumerary status exert an impact on student participation on placement. Although students were temporary peripheral participants of the workplace, they had to be engaged in the clinical environment and authentic practice in order to create connections with the workplace and develop nurse identities. It was found that students who were facilitated by mentors, who were drawn from ward staff, had more opportunities to participate in qualified nurses’ work and work with the nursing team on placement than those supported by university-based clinical facilitators.
This study adds to the existing body of knowledge by elucidating the impact of the social context on student learning and identity formation on placement. It highlights the significance of student participation in the clinical learning process and its impact on student development. In order to address the unique features of student learning in the nursing context, the idea of ‘staged participation’ is proposed to refine the concept of ‘legitimate peripheral participation’. This enhances the applicability of the theory of communities of practice in clinical education.
Lay summary

This study set out to examine students’ and clinical facilitators’ clinical learning and mentoring experience from a social learning perspective. A qualitative dominant mixed methods study was conducted. Data were collected from focus groups, interviews and self-reported questionnaires with students, clinical instructors and mentors of a nursing college in Macau. Views from participants were compared and contrasted. Student participation on placement was found to be influenced by students’, mentors’, clinical instructors’ and nurses’ perceptions of clinical learning and supernumerary status. When students were facilitated by mentors, students had more opportunities to participate in qualified nurses’ work and work with the nursing team. Regardless of the type of clinical facilitators students are working with on placement, students have to be engaged in practice in order to connect with the workplace and develop nurse identities. This study brings out the significant impact of the social context on student learning in the clinical environment.
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Chapter one – Introduction and background of the study

1.1 Introduction

‘Placement is a complex social and cognitive experience’ (Cope et al., 2000, pp850). It is where theoretical knowledge meet practice. The purpose of clinical learning is to provide opportunities for students to experience authentic practice (Levett-Jones et al., 2007). Students are expected to develop proficiency in performing clinical skills, establish effective communication skills within the healthcare team and with patients, and construct their professional identity (American Association of Colleges of Nursing, 2008). Students have to apply classroom knowledge into real situations (Cope et al., 2000, Grealish and Trevitt, 2005). Like other work-based learning, the challenge for clinical learning is the involvement of stakeholders who give different priorities to learning in the workplace (Tynjälä, 2008). Regarding nurse education, nursing institutions aim to provide educational experiences for students, while the primary goal of the service sector is to provide quality care to patients (Grealish and Trevitt, 2005, Doel and Shardlow, 2009). It seems that the clinical environment may not be an ideal place for learning (Grealish and Trevitt, 2005).

‘Learning to care in real-life settings lies at the heart of patient-centred education and learning to be a nurse’ (Royal College of Nursing, 2012, pp36). Although it is clear that learning in the clinical environment is full of challenges, clinical learning undoubtedly provides valuable learning experiences for student nurses, which cannot be replaced by lab practice on manikins and simulations. Having an effective clinical learning experience helps prepare student nurses for their future professional role and contributes to the formation of professional identity (Peters et al., 2013, Walker et al., 2014). Since nurse education has moved into the higher education sector, the implementation of supernumerary status has raised concern about the decrease in students’ involvement in practice and the detachment of students from the social context (Hyde and Brady, 2002, Van, 2012). At the same time, research on supernumerary students’ participation and clinical learning experience on placement from a social learning perspective is lacking. In this thesis, I used the theory of the
communities of practice (Wenger, 1998) as a framework to examine students’ and clinical facilitators’ clinical learning experiences, and aimed to contribute to the development of clinical education by: highlighting the importance of engaging student nurses in authentic practice and bringing attention to the impact of the social context of the clinical learning environment on student development.

Among studies in clinical education, various terms are used to designate different types of clinical facilitators in the workplace. For the purpose of clarity in this thesis, I will use ‘clinical instructor’ to refer to clinical facilitators who are affiliated to the academic sector, and ‘mentor’ to refer to clinical facilitators who are employees of the service sector. When I need to address both ‘clinical instructors’ and ‘mentors’, I will use the term ‘clinical facilitators’ to avoid confusion.

1.2 Background of the study

My motivation to investigate students’ clinical learning experience and clinical facilitators’ mentoring experience was based on my own clinical learning experience, my working experience in hospitals, and my personal reflection on my colleagues’ discussion on the preparedness of newly graduated nurses nowadays. When I was an undergraduate student, like many others, I perceived clinical placement as the most exciting component of the nurse education programme. Before each placement, students had to revise all the theories, nursing procedures and medications commonly used in the placement ward. Apart from doing revision, in order to complete our professional look, students had to prepare a stethoscope, a pair of scissors and artery forceps, a roll of ‘Micropore’, a notepad, a small ruler and most importantly, a pair of red and black ball pens which were tied together by a rubber band. Nobody told us why pens had to be tied together, but we saw ward nurses doing it and thought that there must be some good reasons for it. We mimicked nurses’ practices because we wanted to act like a qualified nurse.

Over the period of my undergraduate study, like students, clinical instructors and mentors were all supernumerary on placement. About two thirds of my placements
were facilitated by clinical instructors, while the others were facilitated by mentors who were ward nurses of the practice area. Although both clinical instructors and mentors were experienced, students always gave preference to mentors. We envied our classmates whose placements were facilitated by mentors, because we believed mentors could teach us more. Regarding the learning process, clinical instructors or mentors would hold two cubicles (around twelve patients) for the whole group of students to work on a shift. Students were responsible for all kinds of nursing care in the cubicles. From routines, treatments, admitting and discharging patients, documentations, to doctors’ rounds, unless there were emergencies or we had something important to report, ward nurses would not involve themselves in our caring processes. Similarly, students were not expected to be involved in any nursing activities outside the designated cubicles, unless there were special cases which were highly educational, or students took the initiative to help out with ward routines after finishing own responsibilities. I was always curious about what would it be like if I worked with the nursing team instead of staying with my groupmates and clinical instructors or mentors all the time. Finally, I got the answer in the final year of my undergraduate study.

In order to deal with the problem of manpower shortage, the Hospital Authority of Hong Kong offered part-time working opportunities for final year undergraduate student nurses. Students were paid to work in wards over weekends and holidays. I was allocated to an acute paediatric medical unit. It was the first time I had worked with the nursing team on my own. Unlike going on placements, I felt that I was connected with the workplace though I was not a qualified nurse yet. I was involved in formal and informal ward activities. Senior nurses were keen to share their experiences and practice knowledge which aided me in making clinical judgements. Although learning was never a priority, it took place implicitly. I wished that I could have had opportunities to work along with nurses earlier in my clinical learning trajectory. After graduation, I was employed by the acute paediatric medical unit as a registered nurse.
During the time I worked as a registered nurse, I heard a lot of criticisms on the level of preparedness of newly graduated nurses. Senior nurses complained that the quality of new nurses was getting worse year by year, and they tended to put the blame on the higher education sector. Although I agreed with the fact that the preparedness and readiness of new nurses did not meet the expectation of front line nurses, I was uncertain about what might be responsible for the drop in quality. This inspired my interest in looking into student learning on placement in my master’s degree. I explored the use of simulation in nurse education, problem-based learning, the theory-practice gap, and student learning approaches, but it seemed to me that using cognitive means to improve students’ learning outcomes were not sufficient to improve students’ readiness to practice on placement or upon graduation. Influenced by the social learning perspective proposed by Wenger (1998), I decided to adopt a social learning approach to examine student participation on placement in my doctoral study. I see people involved in the clinical learning process as a unit instead of separate entities as they shape each other’s experience in the clinical learning environment. Therefore, in this study, both students’ and clinical facilitators’ experiences were taken into account.

In consideration of my interest in understanding student nurses’ clinical learning experience and clinical facilitators’ mentoring experience in Asian countries, the potential of my study to contribute to the development of clinical education in Asia and internationally, and the limitation of time to complete a PhD study, Macau was chosen as my location of study.

1.3 Nurse education in Macau

Macau is a small city located in the southern part of China, with a population of 624,000 people (Government of Macao Special Administrative Region Statistics and Census Service, 2014). There are 3 hospitals in Macau, one public and two private, providing 1,366 beds and having 1,854 nurses in total (Government of Macao Special Administrative Region Statistics and Census Service, 2013). Although Macau is small, it is the only Asian city that places all pre-service nurse education at undergraduate level (Lam, 2006).
Hospital-based nursing training was developed by a charity in Macau in 1923. Due to the increasing demand for quality nursing care in the late 1990s, nursing education was moved from hospital-based training to the higher education sector. Currently, there are two institutions providing four-year nursing education programs (Lam, 2006). Luo and Chan (2013) compared the curriculum design of the two undergraduate nursing courses in Macau. Results showed that despite the two courses being different in terms of the categorization of learning modules and the total number of teaching hours, both institutions used a block system for theoretical and clinical teaching, had a mix of clinical instructors and mentors facilitating placements, and included in-hospital, out-patient and community services in clinical placements.

In 2007, the Kiang Wu Nursing College of Macau published a ten year plan for nursing manpower in Macau (Kiang Wu Nursing College of Macau, 2007b). The report highlighted the problem of manpower shortage and the need to develop a regulatory body to monitor licensing, training, and the code of practice, and to increase nurses’ contribution to policy making. In 2013, the Council for Medical Affairs was developed. The council is an advisory body to the Health Bureau of Macau. It comprises seven working groups which draw on different healthcare disciplines, including nursing. The major roles of the council are to collect viewpoints and suggestions from healthcare professionals and citizens during the making of health policy, and to give advice on and review the development of codes of conduct, practice and ethics, continuing education, and the development of healthcare professions in Macau. It aims to enhance the development of the healthcare sector and gain consensus on new health policies. One of its recent activities is developing a registration system for different healthcare disciplines, including nursing. Meanwhile, the registration system is still undergoing public consultation (Government Information Bureau Macau, 2013a, Government Information Bureau Macau, 2013b, Macau Daily News, 2014).

1.4 Characteristics of the study setting

To explore the clinical learning experience of students and mentors in Macau, undoubtedly it would have been desirable to collect data from both institutions.
However, the majority of the clinical placements of these two institutions take place in their own teaching hospital, one in the public hospital while the other is one of the private hospitals. As the structure and the clinical environment are hugely different between the two, in order to keep a clear focus, only one of the institutions was involved in this study. The institution selected has the longest history of nursing education provision in Macau. It was established in the 1920s’ as a nursing and midwifery school. It became a nursing college in 1999, and started providing degree level courses from 2002. In addition, supernumerary status was introduced to the clinical education curriculum from 1999. Students’ role on placement was then shifted from full manpower to a subordinate role, and then progressively to supernumerary status (Kiang Wu Nursing College of Macau, 2007c).

1.4.1 The characteristics of the clinical education curriculum

Clinical preparation for students was divided into two main components, laboratory sessions and clinical placements. In this study, the focus was on clinical placements. According to the clinical curriculum of the nursing college, the number of clinical learning hours increased gradually across the years of study (first year: 80 hours; second year: 320 hours; third year: 480 hours; fourth year: 960 hours). The learning objectives for placement vary year by year. The objective for first year students is to practise basic nursing care and health assessment. Second year students have to master clinical skills and develop critical thinking. Third year students should be able to implement and evaluate their nursing care plan, and fourth year students need to demonstrate their ability to care for patients in a holistic approach.

Macau is a small city and only has three hospitals providing less than a thousand and four hundred beds (Government of Macao Special Administrative Region Statistics and Census Service, 2013). Thus, there are insufficient wards to fulfil the placement needs of nursing students. Therefore, placement opportunities need to be sought outside Macau. Students in this institution have placements in Macau and its surrounding areas such as mainland China and Hong Kong. The duration of placement varies with placement area and year of study, ranging from one day to five weeks. The majority of the placements in the second and third year last for two weeks, while fourth
year student mostly have five-week placements throughout the year. In addition, students will rotate among wards to increase their exposure to different specialties and clinical environments. In terms of the number of students per placement group, first, second and third year students have placements in a group of five to six. In contrast, fourth year students go on placement individually in most of the wards, though sometimes there are exceptions.

1.4.2 Different types of clinical facilitators

Clinical instructors are employees of the nursing college. They can be part-time clinical instructors, lecturers or assistant professors, and are responsible for theoretical teaching, laboratory sessions and clinical teaching. Clinical instructors only facilitate first, second and third year placements which take place in Macau. Like students, they are supernumerary on placements. Since clinical instructors have to bear the workload of both clinical and non-clinical teaching, the institution only requires them to spend half of each day with students on placement, but some of the clinical instructors choose to stay with students for the entire day.

Mentors are employees of the hospital and are nurses in the placement areas. They mainly facilitate fourth year student placements. In most cases, mentors have to share a patient load while mentoring. In some wards, if it is not busy, mentors are not required to share the workload, so that they can focus on facilitating student learning. However, this does not always happen. There are two appointed mentors in each ward. They share the responsibility for mentoring. If both mentors are on leave when students are on placement, the nursing officer will appoint other staff nurses to supervise the students. There are also occasions when a student and a mentor do not work on the same shift. They may only meet during the overlapping hours of the two shifts.

1.5 Structure of thesis

Following the illustration of my reflection on my learning and working experience, my motivation for carrying out this study and a general discussion of the study setting,
in chapter two, I provide a critical appraisal of the body of literature on clinical education, supernumerary status, mentorship, the framework of communities of practice and professional identity. Knowledge gaps are identified and the rationale for carrying out this study is discussed.

Chapter three illustrates the research approach and the research methods employed to address the identified gaps in knowledge. It starts by presenting the research aim and the research questions, and setting out how this qualitative dominant mixed methods study was based on the theoretical perspective of pragmatism. A discussion of the relative contributions of the qualitative and quantitative strands of the research design is then provided. The quantitative strand comprised a survey of student nurses, and the qualitative strand comprised focus group interviews with student nurses and semi-structured interviews with clinical facilitators. A detailed account is then given of: the ethical considerations that featured in the study; sampling decisions and the nature of the sample; the data collection strategies; and the processes of analysis. Descriptive and inferential statistics and thematic analysis were used to analyse the quantitative and qualitative data respectively. Actions taken to ensure the rigour of the study, and to maintain a reflexive approach are addressed at the end of the chapter.

Chapter four summaries the findings of the quantitative strand of the study and serves as a background for the qualitative findings in the discussion chapter. The quantitative findings illuminate the differences in clinical learning experience between second/third and fourth year students. The results of the Clinical Learning Environment Inventory demonstrates that students would like to experience a better clinical learning environment on placements. The findings also indicate that many student participants lack a clear understanding of supernumerary status.

Chapter five combines the findings of focus groups and semi-structured interviews by comparing and contrasting students’ clinical learning experiences and clinical facilitators’ mentoring experiences. In this chapter, I use the three dimensions of the communities of practice, i.e. mutual engagement, joint enterprise and shared repertoire, as a framework to shape the presentation of the findings. By combining these concepts
with the five main themes identified: ‘loving to be involved’, ‘working with different people’, the degree of legitimate participation on placement’, ‘supernumerary status’ and ‘the formation of identity’, the findings reveal the importance of student participation in the clinical learning process and its impact on students’ development and the formation of identity.

Chapter six integrates the study findings with the existing body of literature and the theory of the communities of practice. The discussion centres on student participation on placement and focuses on four key areas: supernumerary status as a reification; different types of participation on placement; the relationship between participation and identity formation; and an overview of the communities of practice of the Macau clinical environment. The concept of ‘Staged participation’ is introduced to refine the conceptualization of legitimate peripheral participation. Conclusions, limitations of the study, and recommendations for further research are discussed. Contributions to knowledge and study implications for clinical education are also presented in this chapter.
2 Chapter Two – Literature review

2.1 Introduction

2.1.1 Focus of the review

Clinical learning is one of the most important components in nurse education. Students are introduced to the authentic clinical environment and are expected to apply knowledge into practice. They have opportunities to interact with qualified nurses and provide direct care to patients. However, from my personal experience of being a student nurse under supernumerary status, my working experience with students in wards and my observations on how my colleagues interact with students, engagement in practice seems to be a big challenge for students. This literature review provides a critical appraisal of the body of literature surrounding student nurses’ and clinical facilitators’ clinical learning and mentoring experiences in both the western and the Asian context. In addition, the theory of the communities of practice and its related studies in the nursing field are identified in order to provide a framework to address the issue from a social learning perspective.

From the last chapter, it is known that nurse education in Macau has been hugely influenced by the western nurse education systems and their development. This literature review presents a critical analysis of existing literature on the issues surrounding student learning in the clinical environment. Clinical learning involves learning from experts in an authentic working environment, working from basic to complex tasks, socializing into the environment, norms and practice of the workplace, and the acquisition of the professional nurses’ role (Cope et al., 2000). Therefore, it is important for students to join the community of practice of the workplace and be accepted by the members of the community whilst on placement (Cope et al., 2000, Ranse and Grealish, 2007). The purpose of the analysis in this review is to highlight the relationship between participation, supernumerary status and the clinical learning environment. In order to address the connections between these three areas, this chapter is divided into five main sections: clinical education, supernumerary status,
mentorship, communities of practice and professional identity. The knowledge gaps identified will be outlined at the end of the chapter.

The review of literature starts with a brief overview of the development of clinical education in nursing, the characteristics of the clinical learning environment and the emphasis on ‘doing’ in the clinical learning process. After that, a critical review on supernumerary status follows. It elucidates the benefits and challenges brought by the implementation of supernumerary status from students’ and clinical facilitators’ perspectives. The review then addresses the importance of effective mentorship on placement and illustrates the constraints faced by different types of clinical facilitators in the mentoring process. After reviewing the special features of clinical learning in nursing, an analysis of the key elements of the theory of communities of practice will be presented. This section is subdivided into two parts; the first part will illustrate the major components of the theory, along with relevant studies in the nursing context, and the second part will focus on participation in the community of practice and the utilization of the concept of legitimate peripheral participation in clinical education. The final section looks at the formation of identity in the clinical learning process.

2.1.2 Literature search methods

The main sources of the publications included in this literature review were identified through electronic databases such as CINAHL, MEDLINE, Science Direct and Google Scholar. The literature search was focused on four major aspects: student participation on placement, supernumerary status, communities of practice and legitimate peripheral participation in the nursing context, and identity formation. In addition to research articles, reports were obtained from governments’, nursing councils’, professional organizations’ and nursing schools’ websites. Both English and Chinese publications are included. The majority of the publications identified were from 2000 to the present. A small number of materials published in the 70s, 80s and 90s, and more from the 90s, were also included. These publications were either used to provide theoretical perspectives to the study, or to demonstrate the historical development of nursing education systems and the introduction of supernumerary status in clinical learning.
Since there is only a limited number of published materials available regarding clinical education in Macau and its surrounding Asian countries, the majority of the information presented in this literature review is from the UK, Australia and North America.

2.2 Clinical education

Clinical learning is crucial to nurse education (Benner et al., 2010, Condon and Sharts-Hopko, 2010). Compared with practising on mannequins in skill laboratories, learning on placement enables students to experience the complexity of clinical situations (Benner et al., 2010). Through learning and practising in the clinical environment, students understand the responsibilities of qualified nurses and the seriousness of nursing practice (Benner et al., 2010). In addition, in the clinical learning process, students can acquire practice knowledge, skills, nursing values and attitudes which belong to the profession (Sayer, 2014).

The number of clinical learning hours required before registration varies quite a lot among different countries, ranging from an average of 758 hours in the US (Li and Kenward, 2006), a minimum of 800 hours in Australia (Health Workforce Australia, 2013), a minimum of 1400 hours in Hong Kong (The Nursing Council of Hong Kong, 2009), 1840 hours in Macau (Kiang Wu Nursing College of Macau, 2007a), and a minimum of 2300 hours in the UK (Nursing and Midwifery Council, 2010). In spite of the difference in clinical learning hours, clinical learning in the nursing context around the world shares some common characteristics. Most student nurses have full student status on placement, and they face similar challenges in the clinical learning environment.

2.2.1 From apprenticeship to full student status

Apprenticeship is a learning process in which ‘active novices advance their skills and understand through participation with more skilled partners in culturally organized activities’ (Rogoff, 1990, pp39). Through guided participation, novices engage with
their skilled partners in social interactions and joint participation. Apart from developing skills through observation and hands-on practice, skilled partners share the culture and values of the workplace with the novice (Rogoff, 1990, Rogoff, 2008).

Student nurses in apprenticeship training were part of the workforce of the workplace (Hyde and Brady, 2002). Students were expected to be ready to undertake clinical responsibilities (Spouse, 1998a). They were responsible for the mundane routines, and had to finish their work before getting any learning opportunities (Lee and French, 1997). Lee and French (1997) criticized the traditional apprenticeship system on its ability to provide educational experience for student nurses since it only aimed to develop some of the professional skills and ignored the intellectual development of students. Under this training system, students were not able to develop critical thinking skills and the skills required to provide systematic care for patients. They argued that moving nurse education into the higher education sector could not deal with the problems students faced in the apprenticeship system unless the criticisms they made were properly addressed. In addition to the challenge of altering the approach of student learning on placement, Bradshaw (2001) noted that since apprenticeship training for nurses had lasted over a century, the public image of nurses was still tightly tied with the vocational aspect of nursing. It seems that although student nurses are no longer apprentices in the workplace, they can hardly detach completely from the influence generated by the traditional apprenticeship style of learning.

Systematic nursing education commenced in 1860 with the opening of the Nightingale Training School for Nurses at St Thomas’ Hospital London. At that time, students were the employees of the hospital and they were part of the workforce in wards (Royal College of Nursing, 2012). While UK nurses were still training under the apprenticeship system, nurse education in the US was gradually moved to the higher education sector. Roughly after World War II, student nurses in the US were granted full student status on placement and the majority of the clinical learning was facilitated by instructors who were affiliated to an academic institution (Berry, 2011, University of Pennsylvania School of Nursing, 2015). The idea of giving student nurses a full student status on placement was proposed in the UK in the Wood Report published in
1947 (Ormerod and Murphy, 1994). However, this idea was not welcomed within the profession. The concept of supernumerary status was put forward again in 1985 in the Judge Report and was adopted as one of the key changes in clinical education in the nurse education reform in 1986, which is known as Project 2000 (Royal College of Nursing, 2012).

In reviewing nurse education systems in Southeast Asia (Hong Kong, Japan, Macau, Mainland China, Singapore and Taiwan), it was found that the development of nurse education has been hugely influenced by the western nurse education systems and their development. Nursing education was introduced to different countries in Southeast Asia between the 1800s and 1900s by missionaries or doctors trained in either the US or the UK, and all of the nursing schools developed in this early period followed the Nightingale system of training which originated in the UK (Lee, 1985, Hisama, 1996, Chan and Wong, 1999, Lam, 2006, Department of Health R.O.C. (Taiwan), 2008). With respect to full student status or supernumerary status, it has not been clearly documented in most of the countries that I have reviewed; but for those which have mentioned the implementation of supernumerary status in published materials, such as Hong Kong and Macau, they very much followed the timeframe of Project 2000 (Yung, 1996, Kiang Wu Nursing College of Macau, 2007c). An analysis of literature on supernumerary status will be provided in detail in a subsequent section.

2.2.2 The clinical learning environment

The clinical learning environment is defined as all the things surrounding students in placement areas. It includes physical settings, ward staff, clinical facilitators and patients (Papp et al., 2003). Learning in the clinical environment gives students a taste of the reality of nursing. Students are allowed to interact with, and apply their knowledge and skills, on patients, and experience nurses’ roles and responsibilities (Chan, 2002b, Egan and Jaye, 2009, Hartigan-Rogers et al., 2007, Idczak, 2007, Ranse and Grealish, 2007). The clinical learning environment also helps students understand how knowledge is utilized in the clinical setting (Ranse and Grealish, 2007). However, placements are not carried out in an environment which is designed for educational
purposes. The prime focus of hospitals is to deliver safe and quality health care to the public, while teaching and learning are only viewed as ‘secondary activities’ in the workplace (Henderson and Eaton, 2013).

From students’ perspectives, an ideal clinical learning environment should be able to provide well organized (Ip and Chan, 2005, Benner et al., 2010, Henderson and Eaton, 2013) and diversified learning opportunities to fulfil learning needs (Papp et al., 2003, Chuan and Barnett, 2012). Students should be supported and involved in practice (Edmond, 2001, Chan, 2002a, Chan and Ip, 2007, Hartigan-Rogers et al., 2007). Being in a good working atmosphere where ward staff work cooperatively with each other (Papp et al., 2003, O’Driscoll et al., 2010), having supportive clinical facilitators and welcoming ward staff (Papp et al., 2003) are vital to student learning on placement. Although it is evidenced that the clinical learning environment provides rich learning and practising opportunities, it is unpredictable and not totally in clinical facilitators’ control (Papp et al., 2003, Tiwari et al., 2005, Egan and Jaye, 2009). The unpredictability within the clinical environment is found to be a source of stress for students and clinical facilitators (Shahsavari et al., 2013).

In terms of quantitative studies, the Clinical learning Environment Inventory (CLEI) and the Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) scale have been used internationally to examine students’ perceptions of the clinical learning environment, but in the Asian context, the CLEI is the only scale being used. Among the studies utilizing the CLEI, significant differences have been shown between actual and preferred clinical learning environments in both Asian (Ip and Chan, 2005) and western countries (Chan, 2001, Chan, 2002a, Midgley, 2006, Brown et al., 2010). It seems that student nurses in general would prefer to have a better clinical learning environment than they have actually experienced (Ip and Chan, 2005). For the studies utilizing the CLES+T, the subscale ‘supervisory relationship’ has been identified as the strongest factor influencing students’ perception of the clinical learning environment (Warne et al., 2010, Bergjan and Hertel, 2013).
Having noted students’ preferences concerning the ideal clinical environment and acknowledging that there is a discrepancy between students’ perception of the actual and the preferred clinical learning environment, I am now going to give a detailed account of students’ clinical learning experience, including students’ perceptions of clinical learning, student-nurse interaction on placement, and how the social environment influences student learning on placement. As mentoring has a substantial influence on student learning in the clinical learning process, it will be addressed separately in another section.

2.2.3 Students’ perceptions of clinical learning

Students find clinical learning both exciting and worrying. On placement, students want to fit into the nursing team, be accepted, be able to apply knowledge in practice, make contributions, learn new things, gain confidence, work with supportive mentors and ward staff, be viewed as a team member and be recognized and valued (Webb et al., 2009, Ralph et al., 2009). They are happy to have learning and practice opportunities, but at the same time, they feel uncertain about their ability and about the clinical environment (Yang, 2013). The inconsistency of practice being taught at school and utilized in the clinical settings is reported as a hindrance for students to implement what they have learnt at school. In addition, since clinical learning takes place in a less controlled environment (Papp et al., 2003), students find it more challenging to perform clinical skills on patients than in the clinical skills laboratory (Houghton et al., 2013). Cope et al (2000) found that students feel vulnerable on placement as they have to face different kinds of uncertainties and need to build new relationships in the workplace. Students realize that they are learning in a working environment. They are conscious of their limitations and understand the demands of the clinical environment. Because of this awareness, students are pleased to have nurses who are willing to spend time on student learning, provide learning and practice opportunities, and include students in the nursing team (Levett-Jones et al., 2009).

Students have reported that they have different learning experiences in different practice settings. It was found that students having placements in medical-surgical
units have more opportunities to practise clinical skills than in the specialties. Students are more likely to take the observer role because of the advanced skills and knowledge required in the specialties. However, having placements in different clinical settings were not seen as a major problem for clinical learning from students’ perspective. Students perceived that if they were well supported to perform clinical activities and not restricted to be an observer in the workplace, valuable learning is possible regardless of the nature of the clinical unit. In addition, some students found that staffing in specialties is not as tight as other units and nurses working in specialties are well trained. These characteristics generate a supportive environment for clinical learning which is valued by students (Hartigan-Rogers et al., 2007).

Having a good relationship with clinical facilitators and ward nurses was found to be beneficial to student learning in the clinical environment (Atack et al., 2000, Gillespie, 2005, Stockhausen, 2005, Ranse and Grealish, 2007, Shen and Spouse, 2007, Levett-Jones et al., 2009, Houghton et al., 2013). Students viewed nurses as gatekeepers on placement. Nurses controlled students’ access to clinical activities. By monitoring and supervising students, safe practice was ensured throughout the clinical learning process (Brammer, 2008). Students valued ward nurses’ practice experiences and thought that nurses could help them understand ward practices and provide an insight to the reality of patient management (Stockhausen, 2005). It was found that a good student-nurse relationship is formed when nurses are willing to share their practical knowledge and experience with students (Atack et al., 2000, Stockhausen, 2005), respect and value the students’ role (Levett-Jones et al., 2009), are empathetic toward students and remember the feeling of being a student (Atack et al., 2000). Courtney-Pratt et al (2012) added that in a positive student-nurse relationship, students feel that they are part of the nursing team. Students are confident to seek advice from nurses and ask nurses for help. All these factors help students maximize learning opportunities, establish a sense of belonging, and let students get the most from their clinical learning experience (Stockhausen, 2005, Levett-Jones et al., 2009).

However, an effective student-nurse relationship seems to be difficult to establish. Short placements, limited interaction with nurses, nurses’ perceptions of student
nurses and a busy ward environment impede the formation of a student nurse relationship. Because of short placements and frequent rotations, students constantly have to fit into a new environment and do not have sufficient time to build a trusting relationship with ward nurses (Chow and Suen, 2001, Chuan and Barnett, 2012). Students can hardly develop a sense of belonging to the workplace and seldom have meaningful interactions with ward staff (Berry, 2011). In Brammer’s (2006) phenomenographic study, thirty Australian registered nurses were interviewed to examine nurses’ understanding of their role in the clinical learning process. Results show that in some clinical facilitation models, students only have opportunities to work with qualified nurses when clinical facilitators are busy working with other students or busy finishing their own work, as is the case with junior students of the Macau nursing college. Brammer (2006) described this kind of temporary student facilitation as the informal role of qualified nurses, and because of its informality and the demand of patient load, nurses prioritise meeting service needs rather than on fulfilling students’ learning needs (Chow and Suen, 2001, Chuan and Barnett, 2012).

Not all nurses find it comfortable to work with student nurses. Some nurses prefer to work by themselves and students find this limits their learning opportunities (Shen and Spouse, 2007). Students also notice that some nurses think supervision is time consuming and is a burden to their daily work (Brammer, 2008). In busy situations, ward nurses can hardly supervise, teach or explain anything to students (Courtney-Pratt et al., 2012, Houghton et al., 2013). They prefer do the work by themselves or take over the work which has been delegated to students (Chuan and Barnett, 2012). Similarly, students hesitate to approach nurses if they know nurses are busy (Atack et al., 2000). Although all the above findings are from students’ perspectives, they are consistent with Brammer’s (2006) findings which reported nurses’ experiences of working with students on placement. Also, it has to be noted that although research findings are mostly negative regarding the influence of busy and short-staffed environments on clinical learning, some students found that they are more likely to be delegated a greater amount of responsibilities in busy situations. Students felt that they are more likely to be trusted and valued as their contribution to the ward is appreciated in a busy environment (Papp et al., 2003, Levett-Jones et al., 2009).
As clinical learning model in Macau, North American student nurses are facilitated by faculty members and mentors in the early and later stages of clinical education respectively. Students learn in groups when they are facilitated by faculty members and have very limited interactions with ward staff. Although communication is known to be crucial to the development of a student-nurse relationship (Atack et al., 2000, Ranse and Grealish, 2007), in that situation, communication between students and nurses is always limited and mostly related to patient care (Berry, 2011). Houghton et al. (2013, pp1967) added that when students are learning in groups, they may rely overly on the “safety net of peer support” and be reluctant to establish a relationship with ward nurses. As a result, this prevents students from seeking help from nurses and experiencing the real nursing practice (Roberts, 2009).

Some students view themselves as outsiders in the workplace. Since they do not know the hidden practices, they feel that they are being excluded (Newton et al., 2015), ignored (Suresh et al., 2013) and unable to communicate effectively in the community (Ousey and Johnson, 2007). Also, it has been found that some nurses see students as guests and do not always address them by names (Chow and Suen, 2001). These perceptions and actions magnify students’ feeling of being an outsider and consequently create a ‘them and us’ situation (Ousey and Johnson, 2007) which further separates students and nurses. Furthermore, the perceived power difference between students and nurses is another hindrance to the establishment of a student-nurse relationship (Lee and French, 1997, Ousey and Johnson, 2007). Ousey and Johnson (2007) argued that students’ social status in the workplace is difficult to define. This is because students come to the clinical environment to learn and only stay for a short period of time. Students are seen as visitors and they are neither categorized as qualified nor unqualified staff in the workplace. Therefore, students only have very limited power in the clinical environment.

Clinical learning is important to students’ personal and professional development. It allows students to develop competence and learn how to be a qualified nurse. In the learning process, students want to be involved in practice, as well as being socially engaged in the nursing team. However, due to the heavy workload of nurses, busy
ward environment, short placement duration and the perception of the student as an outsider, it seems that clinical learning is far from the ideal expected by students.

2.2.4 The emphasis on ‘doing’ in the clinical learning process

The preceding discussion of the clinical learning environment and students’ perceptions of clinical learning has presented the differences between the ideal and actual clinical learning experience. Although the situation is quite disappointing, clinical learning is still perceived as the most important component of nurse education. Theoretical knowledge can be transmitted to students at school, but implicit rules of practice are yet to be learnt in the authentic environment. Without practical knowledge, students will not be able to work and communicate effectively in the clinical environment (Webb et al., 2009).

Spouse (1998b) and Cope et al. (2000) have employed Vygotsky’s (1978) concept of the ‘Zone of Proximal Development’ to give an account on the process of student learning on placement. Spouse (1998b) suggested that clinical facilitators have to identify the space between students’ capability and their potential for development, so that they can provide an appropriate level of guidance and meaningful practice opportunities for students. By this means, knowledge can be developed safely and efficiently on placement. In addition, students can make sense of the relevance of formal knowledge to practice through working with experienced nurses. Similarly, Cope et al. (2000) described clinical learning as a three-step process. Students have to start working on the tasks that they can manage. After that, students can move on to develop new skills with the help and support provided by clinical facilitators. Lastly, students can work independently in the workplace. These studies demonstrated that participation in the social environment is extremely important in the clinical learning process. The outcome of clinical learning depends on the availability of meaningful learning opportunities, supportive clinical facilitators and a facilitative social environment. Restricting student involvement in the workplace will cause disempowerment and hinder the quality of clinical learning (Bradbury-Jones et al., 2007).
It has been long recognised that clinical skills acquisition builds the foundation of nurses’ professional practice (Secrest et al., 2003). Historically, the ability to perform clinical skills proficiently and confidently is highly valued in nursing (Fealy and McNamara, 2007, Carlson et al., 2010). Newly-graduated nurses are expected to be equipped with sufficient clinical skills and ready to practise once they are registered (Liou et al., 2013). Because of this expectation, students tend to place the development of clinical skills and meeting assessment criteria as their top priority on placement (Tiwari et al., 2005, Hartigan-Rogers et al., 2007, Gidman et al., 2011). Moreover, as stated by Cope et al. (2000), being knowledgeable about theoretical content does not imply competence or expertise in practice. Not all aspects of nursing are visible and can be taught (Stockhausen, 2005). The essence of nursing knowledge, which is also known as practical wisdom, is embedded in clinical practice (Macleod, 1996, Benner, 2001, Carlson et al., 2010, Myrick et al., 2010). Learning can take place implicitly in the working environment, and sometimes it is so subtle that people are unaware of it happening during work (Macleod, 1996, Tynjälä, 2008).

Literature has showed that students value ‘doing’ as much as nurse educators, clinical facilitators and nurses, and most of the positive clinical learning experiences are linked to demonstrating competence and hands-on opportunities (Löfmark and Wikblad, 2001). By ‘Doing’, students learn in action (Stockhausen, 2005). Students are motivated to learn and devote themselves to nursing through performing hands-on practice and accumulating care experiences (Brammer, 2008, Yang et al., 2013). Students enjoy being busy on placement because it means they have more learning opportunities and, more importantly, it makes them feel that they are involved in practice (Shen and Spouse, 2007). Although students are afraid of making mistakes on patients (Benner et al., 2010), they believe that practice makes perfect. In contrast, when students find that they are uncertain about what they should do in the workplace, they see themselves as an obstacle in the clinical environment (Yang, 2013). Apart from acquiring practical knowledge, ‘doing’ lets students gain confidence, obtain a sense of accomplishment and receive confirmation and recognition because they are able to contribute and perform their best in front of clinical facilitators, nurses and

Although ‘doing’ is viewed as an inevitable part of clinical learning by both students and service providers, disappointment concerning newly-graduated nurses’ competence has been reported everywhere (Ousey, 2000, Clark and Holmes, 2007, Hartigan-Rogers et al., 2007, Liou et al., 2013). Likewise, students are not satisfied with their clinical preparation before registration. A large national survey on nursing graduates’ perception of the adequacy of their educational preparation before registration in the United States showed that over one third of the registered nurses thought that they were not adequately prepared to work effectively upon graduation (Li and Kenward, 2006).

Grealish and Trevitt (2005), Egan and Jaye (2009), Levett-Jones and Lathlean (2009) and Houghton et al. (2013) argued that ‘doing’ may not yield positive learning outcomes, particularly when learning situations are not in educators’ control. Because of the variation between the theoretical ideal and actual practice, what students have learnt in the clinical environment may not match with educators’ expectations (Egan and Jaye, 2009). Grealish and Trevitt’s (2005) comparative study (n=6) and Houghton et al.’s (2013) case study (n=43) explored students’ clinical learning experiences and found that when students encounter dissonance between the practices being taught in school and utilized in the workplace, students tend to adopt the workplace practice in the first place, rather than to perform what they have been taught in the classroom. This corresponds with the findings of Levett-Jones and Lathlean’s (2009) cross national case study (n=18) on student nurses’ experiences of belongingness on placements found that some students are willing to comply with inappropriate practice even if they do not feel comfortable doing so. This is because students think they are outsiders in the workplace and do not want to ruin their relationship with nurses.

In addition, the move from apprenticeship training to full student status on placement has reduced the amount of hands-on practice for students as they are no longer part of the workforce (O’Callaghan and Slevin, 2003). In order to compensate for the loss in
the workforce due to the removal of student apprentices in the clinical setting, nursing auxiliaries were hired to cover the work of student nurses in the apprenticeship training system (Ormerod and Murphy, 1994). This move has also altered students’ definition of nurses’ work and influenced how students perceive what they are supposed to do on placement. O’Driscoll et al. (2010) found that since healthcare assistants had taken up most of the bedside care while nurses spent most of their time on doing qualified nurses’ work, there is an increasing trend that students acquire bedside care from healthcare assistants and are supervised by them. Students felt that that they were at the lowest position of the hierarchy when ward assistants delegated tasks for them and they had to keep working on mundane routines. In such a situation, students did not see themselves being accepted as members of the nursing team (Chuan and Barnett, 2012).

The separation of bedside care and qualified nurses’ work makes students belittle bedside care and overlook the learning opportunities in it (Hickey, 2010, O’Driscoll et al., 2010). Students prefer what they perceive as ‘real’ nursing tasks (Hickey, 2010) and think that they do not have enough practice on technical skills (Carlson et al., 2010). Some students have reflected that they are seen as an extra pair of hands of the workplace instead of a learner (Shen and Spouse, 2007, Dadgaran et al., 2013, Suresh et al., 2013). Students think that they are exploited and are being removed from learning situations (Bradbury-Jones et al., 2007). Although McGowan (2006) supported the finding that students’ learning may be hindered if too much emphasis is put on performing basic nursing routines, good nurses are perceived to be able to pay attention to, and willing to do, every aspect of patient care, including those performed by auxiliary staff (Carlson et al., 2010). Allan and Smith (2009) also recognized the value of doing basic nursing tasks on placement and argued that doing bedside work helps students fit into the nursing team, as they are less likely to be stereotyped as lacking practice experience. However, they also warned that students may feel stigmatized, marginalized, devalued, and unprepared for qualified nurses’ work if they were requested to perform bedside care continuously (Allan and Smith, 2009). This magnifies students’ feelings of being an outsider to the nursing team (Allan and Smith, 2009, Roberts, 2009).
2.2.5 Summary

Learning in the authentic clinical environment is crucial for student nurses to develop competence which is valued by the profession. Although students are no longer apprentices in the workplace, the traditional concept of learning by doing remains in the clinical learning process. However, the move from the apprenticeship training to full student status on placement seems to have altered students’ and ward nurses’ relationships in the workplace, students’ perceptions of the nature of ‘doing’ in the clinical learning process, and ward nurses allowing student involvement in practice. These factors seem to have a major influence on students’ interaction with the social environment and their participation on placement. The next section details the impact of the implementation of supernumerary status on student learning on placement and further illustrates its influence on student participation in the workplace.

2.3 Supernumerary status

Supernumerary status is defined as the ‘student will not, as part of their programme of preparation, be contracted by any person or body to provide nursing care’ (Nursing and Midwifery Council, 2010, p65). The Royal College of Nursing (2006) further explained that although students are present as learners on placement, they have to participate actively in ward activities in order to become familiar with patient care. The introduction of supernumerary status aimed to transform the students’ role in the workplace from worker to learner (Ormerod and Murphy, 1994, McGowan and McCormack, 2003, McGowan, 2006). Its intention was to provide educational experiences for students and put learning needs before service needs on placement (O’Connor, 2007, Allan et al., 2011). During my literature search, the term ‘supernumerary status’ has only been identified in published materials in the UK and other countries which adopted the UK nurse education system. Although the term ‘supernumerary status’ is not used in countries such as US and Canada, phrases like ‘learning became primary’ (Peterson and Schaffer, 2001) and ‘non-apprenticeship style’ (Rich and Nugent, 2010) are used to indicate the adoption of full student status on placement. In South East Asia, the concept of supernumerary status was adopted in
some countries in the late 1990’s (Chan and Wong, 1999, Liu et al., 2010). However, research on the influence of supernumerary status on student participation on placement has not been identified. In addition, the majority of the identified literature on supernumerary status was published around the late 1990s to mid-2000s when Project 2000 was about to be implemented in the UK’s nurse education system. After that period of time, the concern over supernumerary status has reduced though it is still perceived to be problematic.

The understanding and interpretation of supernumerary status is found to be an area of concern. Although there is a clear definition of what it is about, when it comes to the practice environment, different interpretations have emerged (O’Callaghan and Slevin, 2003). A student’s role as a learner is not clear to ward nurses (Shen and Spouse, 2007). Supernumerary status is often interpreted as students not being counted into the workforce of the practice area (McGowan and McCormack, 2003, McGowan, 2006). It seems that this common interpretation is not able to reflect the full meaning of supernumerary status. Also, it is worth noting that students are viewed as extra people to provide help in the ward though they are not part of the workforce (O’Callaghan and Slevin, 2003).

The implementation of supernumerary status was found to enhance learning when positive learning experiences were created (O’Callaghan and Slevin, 2003). Ward staff have to be enthusiastic about facilitating clinical learning, and be supportive and friendly to students (McGowan, 2006). Under supernumerary status, students are expected to be self-directed learners, able to identify learning opportunities, and participate actively in order to fulfil their learning needs (Castledine, 2001, Elcock et al., 2007). Supernumerary status is found to be beneficial to both student learning and staff development. Being supernumerary on placement increases students’ learning opportunities and makes learning flexible as the emphasis of placements is put on learning. Students can be withdrawn from work at any time and participate in learning activities (Ormerod and Murphy, 1994, Joyce, 1999, O’Callaghan and Slevin, 2003, McGowan, 2006). From clinical facilitators’ perspectives, facilitating supernumerary students promotes self-reflection, helps realize the need to update knowledge and
enhances professional development (Wilson-Barnett et al., 1995). However, in other studies, research findings on the perceptions of supernumerary status have been largely negative. It was found that the concept is not well-accepted and valued by ward nurses and students (Hyde and Brady, 2002, Clark and Holmes, 2007, Allan et al., 2011).

2.3.1 Clinical learning experience under supernumerary status

Being supernumerary, students are learners instead of workers. The change in students’ role in the workplace has altered students’ relationships with ward staff and patients. Although ward nurses who were trained under the apprenticeship model are expected to adapt to these changes, many of them still stick with the memory of their own clinical learning experience (Spouse, 1998a, White, 2010). As a result, conflicting expectations of students’ roles on placement are created. Some ward nurses commented that supernumerary students were lazy (Joyce, 1999) and unable to meet the standard (Castledine, 2001, Hyde and Brady, 2002, Clark and Holmes, 2007).

O’Driscoll et al. (2010) revealed that ward staff and students are still not sure about the expectation of the degree of student involvement in practice whilst on placement. If students do not negotiate learning opportunities, their supernumerary status may become a barrier to participation and learning in the workplace. Because of this, some students chose not to negotiate their supernumerary status on placement in order to expand practice opportunities (Joyce, 1999), while some students think that they have freedom to do anything they want on placement. Although some students have reported positive learning experiences regarding supernumerary learning on placement, other students feel that they are not always involved in practice. Also, it is agreed by students and clinical facilitators that fulfilling the ward’s expectations of students helps students establish a better relationship with nurses, promotes acceptance, and therefore brings more learning opportunities for students (Wilson-Barnett et al., 1995, Bradbury-Jones et al., 2011).

Hyde and Brady’s (2002) qualitative study examined the perceptions of staff nurses (n=16), who were trained under the apprenticeship system, of their working experience
with students under a supernumerary status and the traditional apprenticeship training programme. ‘Learning by doing’, ‘clinical responsibilities’ and ‘being part of the team’ were the major differences identified between these two types of students by the staff nurses. Staff nurses showed preferences for students under the apprenticeship system because they valued students’ contribution to the ward and thought students were more motivated. Staff nurses thought that supernumerary students were not as capable as expected and needed more practical experiences. They did not value students’ learner roles and did not understand that students were there to observe. As a result, nurses sometimes hesitated to delegate work to supernumerary students, partly because they were not sure what students could do, and partly because staff nurses were too busy and stressed to supervise. In addition, staff nurses believed that the implementation of supernumerary status interfered with the social structure of the clinical environment, such as the long established pattern of nurses’ work. Hyde and Brady (2002) stated that these negative perceptions and misunderstandings towards supernumerary status probably might keep students away from some learning opportunities.

Supernumerary status is not always reinforced in clinical settings (McGowan and McCormack, 2003, Allan et al., 2011). Ward managers have the authority to ‘honour or dishonour’ supernumerary status since they are in charge of the manpower arrangement of the workplace (Andrews et al., 2006). McGowan (2006) concurred that students are used as an extra pairs of hands in a short-staffed environment. Students are either left to observe or allocated to work with auxiliary tasks as if they were still working under the apprenticeship model. Students are sometimes used to cover holidays and sick leave. In an article discussing the challenges of nursing education in China, the authors stated that students are possibly used as manpower to provide service to the workplace whilst on placement, rather than learning and practising under clinical facilitators’ supervision (Eddins et al., 2011). A more recent ethnographic study on supernumerary status conducted by Allan, Smith and O’Driscoll (2011) found that academics and nurses and mentors hold different values towards supernumerary learning in the workplace. Nurses did not agree that being supernumerary on placement is an effective way to learn. They prefer students to work in the nursing team instead of emphasizing their supernumerary status.
2.3.2 Critiques of supernumerary status

Supernumerary status has been implemented in clinical learning for more than two decades. As shown in the preceding section, its implementation is continually criticized by ward staff, nurse educators and students (Joyce, 1999, Hyde and Brady, 2002, O’Callaghan and Slevin, 2003, Elcock et al., 2007). Joyce (1999) noticed that supernumerary students are not always included in practice since they are no longer part of the workforce. Elcock et al. (2007) pointed out that the interpretation of supernumerary status tends to focus on what students are not supposed to be, rather than what students are expected to be on placement. This makes participation and learning difficult to achieve simultaneously on placement. The above criticisms are supported by McGowan’s (2006) findings that students are not prepared well to understand supernumerary status. Some students perceived that they are observers on placement. They felt frustrated when asked to work on something that was not perceived as a student’s responsibility. Apart from students, ward nurses also showed their lack of clarity concerning supernumerary status. They were inadequately prepared and not sure what to expect of students (Joyce, 1999). Ward nurses believed that supernumerary status removed students from the tradition of learning from doing, and cast doubt on students’ readiness to work as a competent nurse upon graduation (Allan et al., 2011).

Viewing supernumerary status from a social perspective, White (2010) highlighted a potential problem in that the implementation of supernumerary status might not be as favourable to student learning in the clinical environment as has been expected. It is because supernumerary status probably distances students from other members in the community of practice of the workplace unless effective sponsorship from clinical facilitators is provided. Otherwise, students might not be accepted as members of the community. Students might find it difficult to contribute and feel alienated in the workplace. This argument has also been mentioned by Cope et al. (2000), but the authors noted that even being recognized as a member of the workforce of the ward does not guarantee membership in the community of practice. It depends on the nature of student participation in the workplace.
It is also reported in the literature that supernumerary status forms a barrier to effective learning on placement (Allan and Smith, 2009) and creates trouble for learning particularly when the ward is busy (Allan et al., 2011). Students missed practice opportunities because there was nobody available to provide supervision. As a result, learning and practice opportunities become further limited in a busy ward environment (Allan et al., 2011). It seems that in order to learn effectively on placement, supernumerary students have to open themselves to all kinds of clinical activities available in the practice area. However, as suggested by Allan and Smith (2009), if students fail to negotiate their supernumerary status on placement, they will find learning difficult to achieve in practice. Based on the original idea of supernumerary status, the negotiation of supernumerary status and practice opportunities are not incompatible ideas, but according to the above analysis of the clinical learning process and supernumerary status, it is apparently unrealistic for students to negotiate practice opportunities and supernumerary status concurrently on their own. External support is definitely required.

2.3.3 Summary

Supernumerary status creates challenges for student in the clinical learning process. It directly affects student participation and their engagement with the social environment. Being supernumerary on placement has been linked with ineffective clinical learning, limited involvement in ward practice and not being a member of the nursing team. Although students are encouraged to negotiate their supernumerary status on placement, they are usually in a passive position in the workplace. Students are influenced by the power of ward managers, and by nurses’ and clinical facilitators’ perceptions of effective clinical learning on placement. The variation between the original intention of the supernumerary status and its interpretation in the workplace has generated misconceptions towards student participation on placement. Students are put into an ambiguous position in the clinical environment where on the one hand they are encouraged to negotiate practice opportunities and engage in the nursing team, but on the other hand the practice area has some uncertainties concerning the activities that students can be involved in on placement. In order to optimize the effectiveness
of clinical learning, it seems to be important to make the idea of supernumerary status clear, provide a well-planned and structured concept of student participation on placement, and make sure students are effectively facilitated in the learning process.

2.4 Mentorship

The quality of mentorship affects the development of nursing students and hence the quality of future nurses (Liu et al., 2010, Andrews and Ford, 2013). Tynjala (2008) stated that workplace learning is not just about putting students into the working environment, it is vital to provide coaching and guidance while students are participating in workplace activities in order to achieve optimal learning outcomes. Clinical facilitators have an important role in the clinical learning process. Their clinical learning and working experiences are the best resources to promote student learning in the workplace (O’Callaghan and Slevin, 2003). Clinical facilitators function as a sponsor, motivator, supporter, moderator and catalyst in the learning process. They play an active role in planning and providing meaningful learning experiences and promoting enthusiasm for learning in the workplace. They identify students’ potential, provide appropriate guidance and feedback, reinforce good practices and encourage reflection (Spouse, 1998a, Spouse, 1998b, Joyce, 1999, Kelly, 2007, Levett-Jones et al., 2007, Henderson and Eaton, 2013).

Students valued highly clinical facilitators who demonstrate good communication skills with students, ward staff and patients (Pearcey and Elliott, 2004, Kelly, 2007). Clinical facilitators provide an access for students to enter the community of practice of the workplace as legitimate participants and let students be acknowledged by the members of the community. Having clinical facilitators as mediators helped reduce students’ feeling of being different and separated from existing members of the community (Spouse, 1998a, Henderson and Eaton, 2013).
2.4.1 Different types of clinical facilitators

In reviewing the literature, it was found that student learning on placement is not only influenced by the quality of clinical facilitators; the type of clinical facilitators and their corresponding roles in the workplace also have an effect on the student learning experience on placement.

Basically, there are three types of clinical facilitators identified from the literature, and they can be differentiated by the nature of their appointment. The first type of clinical facilitator is employed by academic institutions. These clinical facilitators are usually referred to as clinical instructors (Chow and Suen, 2001, Tiwari et al., 2005, Shahsavari et al., 2013), clinical teachers (Hsu, 2006, Shen and Spouse, 2007, Hendricks et al., 2013), clinical facilitators (Courtney-Pratt et al., 2012, Andrews and Ford, 2013) and clinical teaching assistant (Omer et al., 2013). They are supernumerary to the workplace while mentoring students on placement. In some cases, these clinical facilitators are also responsible for classroom, laboratory and clinical teaching (Tiwari et al., 2005, Hsu, 2006, Omer et al., 2013). Students are usually facilitated in groups when going on placement with this type of clinical facilitator (Hickey, 2010). The second type of clinical facilitator is the employee of the hospital. They are usually referred to as mentors or preceptors. They have to take up their normal responsibilities and workload in the ward while mentoring students (Chow and Suen, 2001, Myrick et al., 2010, Liu et al., 2010, O’Driscoll et al., 2010, Hendricks et al., 2013). The third type of clinical facilitator is employed by joint appointment of the academic and service sector (Hendricks et al., 2013). This type of clinical facilitator is less common than the other two. It is worth noting that students on placement can be either facilitated by a single type or a mix of any of the above three types of clinical facilitators, depending on the arrangement of their respective nursing institutions.

From students’ perspectives, they prefer to have ward nurses as clinical facilitators rather than university staff. Clinical teachers are found to be task-oriented and focus a lot on theoretical knowledge and task completion (Hsu, 2006). Students believe that they are able to receive more attention and have a broader range of learning
opportunities when they are paired up with ward nurses (Hartigan-Rogers et al., 2007, Hickey, 2010). Nurses also agree that students learning in group may reduce learning opportunities on placement (Houghton et al., 2013). Also, Hendricks et al. (2013) argued that when students are facilitated by clinical teachers, since students have to follow clinical teachers’ arrangements, students do not practise as ward nurses normally do. Although students are situated in the clinical environment, they are not involved in real practice. Conversely, when they have ward nurses as the facilitators, students are given opportunities to work closely with nurses, participate in real situations and learn how to be a nurse. Ward nurses as mentors help students socialize into the ward culture and the nursing profession (Myrick et al., 2010).

Contrasting results have been found in two Australian studies comparing students’ learning in a group with a clinical instructor and having a preceptor assigned to them individually on placement. Findings showed that students preferred learning in a group with a clinical facilitator because the learning process was less affected by the frequent rotation of mentors (Walker et al., 2013), staffing problems and the busy ward environment (Croxon and Maginnis, 2009, Walker et al., 2013). Also, students were more likely to receive peer support when learning in small groups (Croxon and Maginnis, 2009). It appears that different types of clinical facilitators have their own strengths in facilitating student learning in the clinical environment. Students are more ready to engage in ward practices with mentors, while learning is more likely to be protected when students are working with clinical instructors.

2.4.2 Mentoring experiences

Clinical facilitators can play the roles of an educator, coach, evaluator and role model. They have to be patient and empathetic, clear about students’ roles on placement, provide constructive feedback, and be accountable for students’ care of patients (Atack et al., 2000). They have to treat students as learners on placement, introduce them into the clinical environment and see them as members of the nursing team (Myall et al., 2008). When talking about the mentoring experience, most of the clinical facilitators describe it as a source of contentment and stress.
Clinical facilitators view the mentoring experience as highly beneficial to their personal and professional development, and see mentoring as learning opportunities (O’Callaghan and Slevin, 2003, Myall et al., 2008). Clinical facilitators’ professional knowledge and skills are enhanced by continuous reflection, sharing of knowledge and updating their knowledge with new information in the mentoring process (O’Callaghan and Slevin, 2003, Myall et al., 2008, Courtney-Pratt et al., 2012, Newton et al., 2015). Mentoring is thought to be rewarding and to give clinical facilitators a sense of job satisfaction (Myall et al., 2008).

On the negative side, facilitating clinical learning creates extra workload for clinical facilitators who are employees of the workplace (i.e. mentors). Mentors love to work with students who are well prepared to take responsibilities in the workplace, are able to work independently and do not need close supervision because students can share the workload (Atack et al., 2000, O’Driscoll et al., 2010). In contrast, in a short-staffed and busy working environment, mentoring is viewed as time consuming and increases the workload for mentors. When mentors find that students are not enthusiastic to learn, mentoring is thought to be wasting time (O’Callaghan and Slevin, 2003). In addition, because of the busy working environment, mentors can find it challenging to spend time on supervising and supporting students on placement (Atack et al., 2000, McGowan, 2006). Mentors reflected that working with students would lower their efficiency to carry out clinical tasks, since they need to spend time explaining the procedures and rationales to students. Particularly in a busy environment, mentors found it difficult to work with students and thought that it would impact negatively on students’ learning experiences (O’Callaghan and Slevin, 2003, Myall et al., 2008). Also, due to inadequate training and difficulties in identifying and dealing with students’ problems, mentors find assessing students stressful (Andrews and Ford, 2013).

Mentors need continuous support and feedback from academic institutions in order to improve knowledge and skills and gain confidence in mentoring (Myall et al., 2008, Andrews and Ford, 2013). However, O’Callaghan and Slevin (2003) and Peters et al. (2013) reported that practice nurses had very limited communication with tertiary
institutions. Support from institutions was not always provided. Some mentors reflected that academic institutions were not always accessible for immediate consultation. Regarding the support provided by hospitals, Henderson and Eaton (2013) suggested that management personnel of wards have to prepare nurses for their mentoring role, allocate workload effectively, and create a friendly environment showing that learning and teaching are appreciated in the workplace.

In the Macau clinical context, a phenomenological study (n=20) investigating mentoring experience in Macau showed that mentors found their experience both fulfilling and challenging. Mentors noticed that they gained respect, satisfaction and personal development in the mentoring process. They believed that they had to be approachable to students and be the students’ role model. However, they were constrained by heavy workloads and unclear guidance from the academic institutions. Mentors also felt stressed when handling difficult students (Liu et al., 2010). These findings are consistent with the western literature reviewed in earlier paragraphs.

2.4.3 The influence of clinical facilitators on the clinical learning process

Clinical facilitators are the most influential people for students in the clinical learning process (Levett-Jones et al., 2007). In reviewing the literature on students’ learning experience with clinical facilitators, it appears that clinical facilitators’ relationship with the workplace, the time they spend with students on placement, their relationships with students, their mentoring behaviour, and the way they help students to connect theory and practice exert the greatest impact on student learning on placement.

Students prefer to have clinical facilitators who have recently worked in the ward (Gillespie, 2002). Recent experiences, confidence in practice and updated practical knowledge enhance clinical facilitators’ ability to introduce students into the clinical environment (Gillespie, 2002). They are in the best position to connect students with patients (Omer et al., 2013) and the nursing team (Myall et al., 2008). Chow and Suen (2001) obtained similar results when they examined Hong Kong student nurses’ perceptions of clinical facilitators’ roles and responsibilities. Their findings suggested
that mentors are believed to be better equipped to perform the mentoring role than clinical instructors because mentors are more familiar with the environment and ward practices, and these advantages enhance their ability to open learning and practice opportunities for students. However, mentors also have their own limitations in clinical facilitation. Mentors do not understand students’ background as clinical instructors do, and sometimes they fail to arrange practice opportunities appropriate to the students’ levels (Chow and Suen, 2001). In chapter five, we will explore the influence of different types of clinical facilitators on student learning in the context of the Macau clinical learning environment.

It has been documented extensively in the literature that students want clinical facilitators to spend time with them in the clinical learning process (Lloyd Jones et al., 2001, Levett-Jones et al., 2009, Gidman et al., 2011, Huybrecht et al., 2011). Students love working with clinical facilitators who are knowledgeable, enthusiastic to work with students, able to realize students’ learning needs, negotiate learning opportunities, and provide guidance, support and feedback throughout the clinical learning process (Gillespie, 2002, Hsu, 2006, Kelly, 2007, Shen and Spouse, 2007, Myall et al., 2008, Gidman et al., 2011, Omer et al., 2013). Students can learn through practice and develop the competence expected of qualified nurses (Ousey, 2009). However, Lloyd Jones et al. (2001), Levett-Jones et al. (2007) and Myall et al. (2008) found that students did not always work with their named mentors on placement. Although other qualified nurses are usually arranged to take over the supervisory role when mentors are absent, students are found to spend significantly less time on educational-related activities and have less opportunities to work in partnership with nurses to provide care to patients. Students are potentially marginalized and learning is likely to be impeded.

Students do not like having multiple clinical facilitators on placement (McGowan, 2006). Having a consistent clinical facilitator enables the establishment of rapport between students and nurses (Myall et al., 2008, Houghton et al., 2013, Newton et al., 2015). It facilitates the formation of a sense of belonging, forms a better connection between students and the clinical environment and helps students fit into the nursing team. Also, students tend to learn more proactively when working consistently with
their mentor (Levett-Jones et al., 2007). In contrast to the above supporters of having consistent clinical facilitators on placement, Grealish and Ranse (2009) argued that students should be given opportunities to work with different qualified nurses in the workplace, because while working with nurses, students could identify the nurses’ qualities that they would or would not like to adopt.

Clinical facilitators affect students’ self-perception of being an insider of the workplace (Rush et al., 2009). Mentors help students fit in by creating a welcoming environment and let students feel they are a team member and valued in the workplace (Ousey, 2009). Involving students in both the formal and informal activities of the workplace helps to establish a positive relationship between students and clinical facilitators (Chow and Suen, 2001). A positive student-mentor relationship makes students feel comfortable and accepted. It enhances students’ confidence to participate, to ask questions and to verbalize worries. Students who are fully supported are more willing to interact with ward staff and more likely to work effectively in the clinical environment (Spouse, 2001b). The formation of mutual understanding, trust and respect between students and teachers helps students gain an awareness of their potential and capacity in the workplace, and facilitates identity formation in the clinical learning process (Gillespie, 2005). Lin et al. (2013) added that clinical facilitators’ support is particularly important for junior students, as they need extra help to socialize into the workplace, and identify learning opportunities and their own limitations.

On the contrary, experience of alienation prevents students from engaging in the workplace and decreases learning motivation (Levett-Jones et al., 2007). Without adequate support, students find themselves repeating mundane routines, being restricted to perform tasks which they are capable of and missing out on opportunities to learn and participate in complex qualified nurses’ activities (Spouse, 2001b). It is also important to note that the formation of student-mentor or student-teacher relationships is different between cultural contexts. Nahas and Yam (2001) argued in their Hong Kong study that because of the formality of the student-teacher relationship in the educational environment, students are less likely to consider the need to establish a close relationship with clinical teachers as compared with student nurses in other
countries. Similar findings are also found in the current study as will be illustrated in chapter five.

Walker et al. (2013) found that clinical facilitators’ mentoring behaviour will also influence student learning attitudes. If clinical facilitators distance themselves from students, are too aggressive, or supervise students like ‘mothering’, students will become less positive in the learning process. Working with nurses who are not enthusiastic about clinical facilitation makes students feel like a burden in the clinical area (Walker et al., 2014). Students believe that mentors help them to get through difficulties in clinical learning. Without a mentor, students feel that they are left alone in the workplace (Morrell and Ridgway, 2014).

With respect to the problem of connecting theory and practice, Spouse (1998b) suggested that this phenomenon might not be caused by the incompatibility of formal and practical knowledge, but be due to students’ inability to acknowledge the relevance between the two. Therefore, students need clinical facilitators’ support to create connections and avoid them perceiving formal and practical knowledge as parallel entities. Students need clinical facilitators’ theoretical and practical support to reflect effectively upon clinical learning experiences in order to achieve optimal learning outcomes. Otherwise, students may just be able to rely on their personal reflections and make inappropriate assumptions on clinical practices which affect the quality of knowledge acquisition on placement (Field, 2004).

2.4.4 Summary

It appears that clinical facilitators do not only transmit skills and knowledge to students in the clinical learning process, but also have the power to grant legitimacy for students to participate in clinical activities. Students’ learning on placement is influenced by the type of clinical facilitators they are working with, clinical facilitators’ relationships with the workplace, students’ relationships with clinical facilitators, and the establishment of connections between a student and the social environment, and between theory and practice. Inadequate support from clinical facilitators would make
student participation in the workplace difficult, and consequently hinder student
gagement with the social environment.

2.5 The communities of practice

Learning in the social environment does not only depend on personal qualities and the
motivation to learn, but also on the influence of the social cultural environment on
individuals (Tynjälä, 2008). Student nurses learn best if they are engaged in practice
(Newton et al., 2015). “Becoming a nurse is about joining the community of practice
represented by qualified nurses as much as it is about learning the technicalities of
nursing” (Cope et al., 2000, pp854). However, students are not going to be a member
of the community automatically once they start clinical placement. Some students
reflected that they were isolated and were not being accepted into the community
throughout the clinical learning process. Not being included in the community not only
affects students’ social well-being in the workplace, but also the effectiveness of
clinical learning (Cope et al., 2000).

Egan and Jaye (2009) have pointed out three social characteristics of the clinical
learning environment for healthcare professionals. The first characteristic is the
variation in the primary goal of academic institutions and the service sector. Although
there are some shared values, academic intuitions aim to provide education, while the
service sector focuses on providing care and services to patients. It seems that students
have to learn in two distinct social settings and concerns have arisen concerning how
the service sector can fulfil both service needs and students’ learning needs. The
second characteristic is the limited power of teaching staff in the service setting.
Despite teaching staff having control over student learning in the clinical learning
environment, activities available for students in the clinical settings are largely
determined by the opportunities given by clinical staff and patients’ agreement. The
third characteristic is the variation in the learning approach and content between
academic and service settings. Learning at school tends to be more individualized and
theoretically based. In contrast, learning in the service setting involves many more
social components. Students do not learn by themselves in the service setting. They
have to work with clinical staff at different hierarchical levels. Also, the focus of learning has been put on the acquisition of practical knowledge in the clinical learning environment. In accordance with the above findings, the term ‘hidden curriculum’ has been identified in nursing literature to describe the characteristics of student learning experience in the clinical environment. This description indicates the distinctive features of the practice setting, and confirms its difference from academic institutions (Field, 2004, Allan et al., 2011).

In addition, Contu and Willmott (2003) argued that being a competent member of a community of practice is not totally depend on the skills and knowledge that a person is equipped with. Rather, members’ competence is indicated by their understanding of the social context and their ability to make sense of the shared values of the community of practice. It seems that joining the community of practice of qualified nurses on placement is important to students’ learning and it facilitates the development of competencies in the workplace. However, it is seldom taken into consideration in the planning of the clinical education curriculum (White, 2010).

In terms of social learning theories, Vygotsky’s (1978) social development theory, Bandura’s (1977) social learning theory, and Wenger’s (1998) theory of the communities of practice have illustrated the power of social influence on learning. Vygotsky (1978) pointed out the importance of identifying the zone of proximal development, which is the distance between individuals’ matured functions and their prospective level of development, in the learning process. Under appropriate guidance and support, individuals are able to reach their fullest potential by trying out new things that they are not skilful enough to perform independently.

Bandura’s (1977) social learning theory addressed three important concepts of learning: perceived self-efficacy, observational learning and role modelling. These concepts outlined the interrelationship between cognitive development, social influence and human behaviour, and have been widely adopted in research on clinical education. Perceived self-efficacy is defined as ‘beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments’
Self-efficacy beliefs are constructed from individuals’ participatory experiences, observational experiences, comparisons with role models, encouragement and reinforcement received in the learning process, and individuals’ emotional judgement on their capability to complete a task. Among the above determinants, participatory experiences exert the strongest influence on efficacy beliefs. Active participation provides evidence of one’s capability and alters perceived self-efficacy by assessing and evaluating cognitive, physical, emotional, and environmental factors which affect performances (Bandura, 1977, Bandura, 1999).

In Bandura’s (1977) scheme, performing observation is only a starting point of the learning process. In order to achieve the optimal outcome of observation learning, learners have to determine and select what to observe. Followed by repeated observations, learners need to integrate and construct visual and verbal information into concepts, and then reproduce the acquired skills and compare their performances with those of role models. Observational learning fails if observation is perceived as irrelevant to learners’ needs, verbal instruction is inadequate, learners fail to reconstruct observation experiences into knowledge and skills, and reinforcement is insufficient (Bandura, 1977). Bandura (1977) also suggested observational learning is particularly essential in a learning environment where mistakes would cost tremendous loss.

Role modelling allows learners to develop competence which is required to function effectively in work situations (Bandura, 1977). From Bandura’s perspective, role models have to provide adequate instructions, practice opportunities and constructive feedback to learners. Successful role modelling should be able to help learners to acquire skills and coping strategies, recognize the generalizability of abstract rules and skills which are flexible and can be modified in order to suit different situations, understand the environment and expectations on them, and boost learners’ self-efficacy.

In the following subsections, I will focus on the key ideas of the social cultural learning theory of communities of practice and the concept of legitimate peripheral
participation. Nursing literature associated with these concepts will also be presented in order to show its relevance to the clinical learning context.

2.5.1 Wenger’s theory of communities of practice

The notion of communities of practice was raised by Lave and Wenger (1991). The authors suggested that “a community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice” (Lave and Wenger, 1991, pp98). Wenger (1998) has further postulated that a community is formed by a sense of coherence among its members based on mutual engagement, joint enterprise and a shared repertoire. In order to construct membership in a community, people have to actively engage in practice and demonstrate the competence valued in that community. Through establishing relationships, taking up responsibilities, making contributions and negotiating new meanings, people construct and refine their identities in a continual process. The primary focus of the theory is on learning and on the formation of identity through social participation. Communities of practice provide a context for learning, as well as knowledge creation. “Learning is a process of becoming” (Wenger, 1998, pp215). It transforms individuals’ practice and identity while they acquire skills and knowledge through engagement in practice. There is no absolute end point of learning in a community of practice. New insights are continuously negotiated and the shared repertoire is open to revision in the light of new knowledge and practice (Wenger, 1998).

2.5.1.1 Community, coherence: The three dimensions of practice

According to Wenger (1998), practice is a kind of connection. It provides opportunities for people to work together and negotiate new meanings within and across communities of practice. The concept of community of practice reflects the complexity of the working environment. Members of a community may react to certain things in a similar manner, but it does not suggest homogeneity among members or guarantee everything is in harmony. Disagreement and conflicts are commonly found. Mutual
engagement, joint enterprise and shared repertoire are the sources of coherence of a community. These concepts explain how people construct their membership in a community by establishing relationships, taking up responsibilities, making contributions and negotiating new meanings through participation.

Mutual engagement helps develop interrelationships between members of the community of practice. Newcomers have to be included in practice so that they can obtain their membership through engaging in practice. This creates a sense of belonging to the community. The concept of mutual engagement emphasizes the complementarity and mutual accountability of members in the community. In the engagement process, the uniqueness of individuals is valued. Its focus is on maintaining diversity rather than achieving homogeneity among members in the community of practice. Members have their distinctive role in the community. They are connected through formal and informal communication, working, resolving problems and creating new ideas together, rather than simply establishing similarities. They exchange opinions, integrate knowledge, contribute to and support each other. They act as both contributors and receivers of the community. However, it should be noted that the above relationships take time to develop, as trust needs time to establish (Wenger, 1998). In the Macau clinical learning environment, short placements, inadequate communication and the expectation for student to align with ward practice are just some of the negative factors influencing the establishment of mutual engagement between students and the nursing team on placement. Findings and discussion on these factors will be provided in chapter five and six.

Mutual engagement forms the foundation of the development of joint enterprise and a shared repertoire. A joint enterprise results from continuous negotiation of practice and is defined by the members of the community. In a joint enterprise, members live with differences while being accountable to each other. Members have a good understanding of the enterprise and contribute to the community with respect to their strengths and the division of labour.
The shared repertoire is ‘a resource for the negotiation of meaning’ (Wenger, 1998, pp84). It is produced by and shared among participants engaging in the enterprise. It can be routines, ways to react to certain situations and the adoption or production of concepts. The repertoire is open to different interpretations, negotiation and revision, and thus makes the creation of new meanings possible. Members of a community should have full access to the repertoire developed and be able to demonstrate their competence to manipulate it (Wenger, 2000).

2.5.1.2 Communities of practice in the nursing perspective

The communities of practice framework has not been widely adopted in nursing research in general, and in particular it has not featured much in preceding research on clinical learning. Studies identified are quite limited and mainly concentrate on three aspects: the first one is to use the framework of the communities of practice in general to make sense of how learning occurs and how knowledge is generated on placements. The second one is students’ experience of being a member in the community of practice of the workplace, and the third one is focused more specifically on the concept of legitimate peripheral participation. I will examine the studies on the first two aspects first and then consider those involving the concept of legitimate peripheral participation in detail in the next subsection.

Ranse and Grealish (2007) carried out a qualitative study to explore students’ learning experience in a Dedicated Education Unit, a ward specifically developed for clinical learning under the collaboration of the higher education and the service sector, in Australia. The study revealed that acceptance, the development of competence, responsibility and accountability are the important elements that make learning happen in the workplace. The researchers confirmed that these elements support Wenger’s (1998) assumptions of learners as social beings, knowledge as a matter of the competence valued in an enterprise, and knowing as a matter of active participation. Engaging in clinical activities, being accountable and demonstrating competence helped students establish a trusting relationship with nurses and gain recognition in the workplace. These findings demonstrated that students had to participate in practice in
order to generate meaningful learning experiences in the clinical learning process, and suggested the value of applying the framework of communities of practice in the planning of the clinical learning curriculum in the future.

In order to let students engage in the community and make sure effective participation is occurring on placement, clinical facilitators’ input is also important (Smedley et al., 2010, Sayer, 2014). To make students’ desire to become a member of the community a possibility, clinical facilitators have to function as brokers to ease students’ entry into clinical practice. They have to open up learning opportunities for students and help students to establish relationships with nurses. Through interacting with nurses, students are able to learn from their clinical experiences including how to react appropriately to different situations in the community of practice (Smedley et al., 2010). Berry (2011) further suggested that, to achieve the best result from learning in a community of practice, the partnership between nurse educators and ward nurses is of paramount importance. They have to work together to explore learning possibilities in the workplace, so that students are able to gain meaningful learning experience from clinical participation on placement.

In addition to the significance of active participation and effective mentorship and partnership on placement, it is evidenced that viewing students as a member of the community of practice of the workplace motivates students to learn. In Denmark, Thrysoe et al. (2010) used a phenomenological approach to examine student nurses’ (n=9) participation on placements in the community of practice of the workplace. It was found that being noticed is crucial to the process of becoming a member of the community. Not only do ward nurses have to let students know that they are being noticed and included in practice, students also have to demonstrate their keenness to enter the social world and allow themselves to be noticed by others. Students reported the feeling of frustration and a loss of enthusiasm for participation when they were ignored by ward staff. In contrast, when students’ contributions to the workplace were being acknowledged and they were engaged in both formal and informal activities of the community, their sense of belonging was strengthened and they were motivated to learn and participate to a greater extent.
2.5.2 Participation

From the perspective of the communities of practice, the prerequisite of any educational design is the provision of opportunities for learners to engage in authentic practice (Wenger, 1998). Learning occurs when individuals interact with experienced working partners and engage progressively in practice (Fuller and Unwin, 2003). Participation facilitates the construction of identities and the establishment of membership in a community. It is a complex process which goes beyond the level of the individual. It involves feelings, thoughts and interpersonal relationships. Participation facilitates the development of mutual recognition among participants in the community. Mutual recognition does not imply equal status among participants, but it indicates the interdependence of participants and lets participants define themselves in the community of practice. Apart from forming positive relationships, participation can also bring negative experiences such as conflicts (Wenger, 1998). Chapter five of this thesis details how participation in the clinical environment of Macau is complicated by students’ supernumerary status; and the variations in practice and values that students acquired at school and the workplace created challenges for engagement and the achievement of mutual recognition in the clinical learning process.

The best place for learning which is associated with skill development is the authentic practice environment, where students are allowed to participate legitimately in practice and make sense of real life situations (White, 2010). Students have to let mentors understand their learning needs in order to negotiate learning opportunities which allow them to apply their knowledge and skills at appropriate levels (Bradbury-Jones et al., 2007). Grealish and Ranse (2009) suggested that to optimize student learning on placement, students should be allowed to work along with qualified nurses, express their thoughts on possible nursing care to be provided for patients and be responsible to manage the care of a small number of patients under supervision.

The findings of the literature on clinical learning experience, that have been reviewed earlier, indicate that students’ involvement on placement does not appear to meet the assumption of participation suggested by Wenger (1998), which emphasizes active
involvement in practice. This is because when students are working with clinical facilitators who are affiliated to academic institutions, students may participate in clinical activities without interacting with ward nurses. In addition to the “them and us” phenomenon mentioned in the section on students’ perceptions of clinical learning, the differences between the primary goal, learning approach and content point up the existence of boundaries between educational and practice settings. Clinical facilitators have to act as a broker to help students cross the boundaries and introduce them to the practice of the workplace. Brokers have to be able to explore new opportunities for newcomers, form connections between different kinds of knowledge in use, and help establish relationships with members of the community (Wenger, 2000). By achieving the above, students will be able to start participating in the community with fewer barriers which hinder the exploration of learning and practice opportunities in the clinical learning process.

2.5.2.1 Participation and reification

Wenger (1998) suggested that participation and reification are interconnecting concepts. Reification is a projection of meaning. It helps visualize abstract ideas and shapes experiences in concrete ways. Wenger adopted a positive sense towards reification and believed that the flexibility of reification promotes negotiation of meaning, and potentially enriches an object’s or a concept’s original meaning in the reifying process. However, reification can possibly be misleading as it may not be able to reflect the full meaning of the original context. Reification and participation shape each other, and different combinations will generate different meanings in practice. However, over reliance on either side would be problematic. If the component of participation is stronger than reification, a diversity of assumptions about practice will result and lead to problems in coordination. In contrast, if reification is more dominant, it will reduce the room for interactions, reflections and the negotiation of meanings among participants. Because of the complementarity of the concepts, reification cannot achieve its meaning without participation. Wenger further advised that the imbalance of participation and reification cannot be corrected by reinforcing the
weaker component alone. It is important to analyse the situation as a whole and consider the duality of the two components in order to address the problem.

2.5.2.2 Legitimate peripheral participation

Broadly speaking, the training of healthcare professionals can be seen as a trajectory that moves students towards full participation in their corresponding discipline (Egan and Jaye, 2009). Students are motivated to learn as they foresee their future role as a full participant of the workplace. They have a strong desire to develop the competence that is valued in the community (White, 2010). Nevertheless, because of the short duration of clinical learning, students are in fact participating in peripheral trajectories which hardly lead to full participation in the clinical setting (Egan and Jaye, 2009). Cope et al. (2000) also pointed out that in short placements, students could hardly engage actively in practice and probably remain observers. This is believed to be detrimental to students’ social and intellectual development and to prevent them from learning effectively on placement. Although students are equipped with knowledge and basic clinical skills, they have neither performed those skills on patients nor experienced the actual clinical situation. Students need clinical facilitators to provide guidance and opportunities to participate in legitimate peripheral activities in order to transform knowledge to practice and therefore achieve their potential. Also, by interacting with qualified staff students learn how to use formal knowledge in the practical area (Spouse, 1998b).

The concept of legitimate peripheral participation was proposed by Lave and Wenger (1991). The concept of legitimate peripheral participation was used to describe a dynamic learning process where learners learn through engagement in practice in the social environment. The authors stated that peripherality can be empowering or disempowering in learning situations. In order to achieve positive learning outcomes, open access to the shared information and resources among members of a community, as well as participation opportunities have to be provided for learners, so that they can move gradually towards full participation. Legitimate peripheral participation represents an initial membership of a community of practice. A prolonged period of
legitimate peripheral participation enables learners to immerse into the practice culture and understand the essentials, requirements and meanings of being a full participant in a particular community of practice.

Wenger (1998) further clarified the meaning of peripherality in the process of legitimate peripheral participation and reinforced the importance of granting enough legitimacy for newcomers to participate in the community. The central idea of peripheral participation is to let newcomers be exposed to the authentic practice environment and open up pathways for newcomers to move toward full participation. Apart from participating in activities which are less risky and less intense, doing observation can be one of the options, but it should only serve as an introductory phase to active engagement in practice. Otherwise, newcomers would be marginalized and not be able to move closer to full participation in the learning process. In the same vein, newcomers need to have enough legitimacy to engage in practice so that they can learn through participation and become members of the community of practice (Wenger, 1998).

In the nursing context, legitimate peripheral participation involves working with qualified nurses in authentic practice under guidance and in a progressive manner. Students are expected to engage in the same activities as qualified nurses and participate in a series of planned activities according to their ability, such as letting students handle certain components of a nursing procedures at the beginning and allowing them do the entire procedure when they are equipped with the necessary knowledge and skills. Students are not left behind to observe or work on repetitive menial tasks. Through legitimate peripheral participation, students become members of the community and are allowed to contribute to the community on placement (Spouse, 1998a, 2001a). It has been identified from the literature that some of the common practices in clinical facilitation share a common feature with the concept of legitimate peripheral participation, for instance, the idea of progressive learning from basic to advanced nursing procedures, the transition in the mentoring approach from close supervision to performing independent care and students’ desire to be accepted as part of the nursing team whilst on placement (Cope et al., 2000, Stockhausen, 2005,
Ousey, 2009, Webb et al., 2009, Allan et al., 2011). However, legitimate peripheral participation is found to be tricky to adopt in nurse education. It has been perceived as unsuitable for clinical learning and been critiqued by some nurse educators. This issue will be further addressed in the current study.

2.5.2.3 Studies associated with the use of legitimate peripheral participation in nurse education

The concept of legitimate peripheral participation has not received much attention in nurse education research. The majority of the studies identified are from the UK and there are a few from the US. These studies do not directly explore the use of legitimate peripheral participation in nurse education. Rather, the authors either use the concept of legitimate peripheral participation as a framework to look at student learning experiences and the importance of having an effective clinical facilitator in the clinical learning process, or discuss the suitability and applicability of legitimate peripheral participation in clinical education.

Spouse (1998b) is one of the earlier researchers adopting a sociocultural perspective in clinical nurse education. She discussed students’ clinical learning processes and the significance of effective mentorship in student learning by employing Vygotsky’s (1978) zone of proximal development and Lave and Wenger’s (1991) legitimate peripheral participation. She suggested that students need a mentor who is able to provide guidance and support in relation to students’ abilities, acknowledge students’ potential, work with students, encourage students to participate in clinical activities which are manageable but go beyond their self-perceived ability, and help students to connect their knowledge with the practices and culture of the workplace.

In another article, Spouse (1998a) reported a qualitative longitudinal study exploring seven UK student nurses’ clinical learning experiences throughout their years of study. It was found that it is essential for students to have a close relationship with their mentor. Working together with a mentor allows students to attain progressively the qualities of qualified nurses. It helps students engage in clinical activities, establish
relationships with other ward staff, develop commitments to the workplace and the nursing profession, and become a member of the community of the workplace. Based on these findings, Spouse suggested that the concept of legitimate peripheral participation is highly relevant to the learning process of student nurses on placement.

The adoption of the concept of legitimate peripheral participation has been challenged by some nurse educators. Benner et al. (2010) argued that student nurses should not be restricted to participate in peripheral activities on placement though they are not capable of participating fully as a qualified nurse. The authors stated that simply observing or shadowing is not enough to provide opportunities for students to integrate knowledge in practice, and acquire the nursing essentials such as effective and ethical practice which contribute to students’ personal and professional development. Therefore, clinical facilitators should engage students fully in practice as soon as possible, so that students are prepared to deliver effective and knowledge-based nursing care to patients. Also, Allan and Smith (2009) claimed that the concept of legitimate peripheral participation seems not to be valued by mentors because students are allowed to take an observer role in the clinical learning process. The findings from their later study indicated that mentors cast doubt on the students’ observer role on placement and their readiness to work competently in the workplace upon graduation (Allan et al., 2011).

Similar to Wenger’s communities of practice, Vygotsky’s social development theory and Bandura’s social learning theory also highlight the importance of active participation and work under guidance with experienced and skilled members of the community in the learning process. However, Vygotsky and Bandura place their focus on learners’ cognitive development through social interactions which centred on learners and their facilitators; while Wenger extends the degree of interpersonal interactions in the learning process from an individual to a social level. From Wenger’s perspective, learners not only have to engage in separate tasks to develop competencies, but also engage in the working environment to acquire practices, values and norms, in order to become a fuller member of the community of practice of the workplace. In addition, learners are not merely receivers in the learning process. They engage in
practice, contribute to the workplace, and negotiate new meanings with members of the community.

Furthermore, Price and Price (2009) argued that on many occasions, role modelling in placements fails to meet the social learning criteria suggested by Bandura due to lack of planning, and nurses being too busy. Some role models are unable to let students understand the rationale behind their clinical judgements. In considering the characteristics of the clinical learning environment, the sets of actor involved in the clinical learning process, and the constrains and limitations of the workplace as shown in the findings and in the preceding literature; accordingly, Wenger's theory is more applicable to the situation of clinical learning in nursing than the other theories identified.

2.5.3 Summary

The theory of communities of practice, which has been delineated in the preceding pages, offers a framework to understand the clinical learning process from a social perspective. The factors contributing to students’ success in becoming a member of the community of practice are in line with the long-established tradition in nursing education of emphasising doing and participation. The matters of acceptance within a work community and active engagement in practice can be seen to shed light on the impact brought about by the implementation and interpretation of supernumerary status on placement. Also, the role of clinical facilitators in assisting boundary crossing has been highlighted. With respect to the concept of legitimate peripheral participation, although it has been critiqued by some nurse educators, by reaffirming the meaning of peripherality, it can offer a sensible pathway to enhance student participation on placement. Building on this consideration of participation in the workplace, the next section looks at the formation of identity which is generated from different degrees of engagement in the clinical learning process.
2.6 Professional identity

Identity is constructed through individual’s experience of participation, interpretation of reifications, demonstration of competence, and negotiation of new meanings. These experiences connect individuals with the social environment, and develop values and practices that are agreed within the community (Wenger, 1998). Learning to be a competent nurse is the common goal of student nurses on placement (Cope et al., 2000). Students start developing a professional identity once they go on clinical placements (Cook et al., 2003, Webb et al., 2009). Wearing a uniform, being in hospital, being part of a team and gaining clinical experiences enhances students’ sense of being a nursing professional (Secrest et al., 2003, Walker et al., 2014). Professional identity develops continually throughout nurses’ careers, but the most critical time for its formation is in the nurse education process. The acquisition of nursing knowledge and skills begins from the first step of entering the profession. It provides students with the feeling that they are part of the community (Johnson et al., 2012).

The formation of professional identity during nurse education is affected by the socialization process in the workplace, the interaction with clinical facilitators, nurses, other ward staff and patients on practice, and the process of theory-practice integration (Johnson et al., 2012). The feeling of alienation has been reported to be detrimental to the construction of professional identity. It is noteworthy that alienation not only results from learning in an unwelcoming environment, and not being involved, accepted and valued, but is also induced by experiencing disparity between professional ideals and actual practice (Levett-Jones et al., 2007). Therefore, a smooth transition and alignment between the academy and practice allows students to have a realistic and positive projection towards professional nursing (Johnson et al., 2012).

2.6.1 The formation of identity on placement

According to Gallagher (2007), students develop their professional values from three types of theory: private theory, formal theory and practical theory. Private theory comes from students’ perceptions of nursing before receiving nurse education. It can
result from personal experience with nurses or the image presented by the mass media. Formal theory comes from formal nurse education carried out in the classroom. It is where students begin to understand nursing as a profession. Students are exposed to practical theory when they observe nurses’ practice or perform hands-on practice on placement. Practical theory has the power to modify students’ perceptions of formal theory and alter their professional values. Confrontations between students’ preconceptions about the nursing profession and any of the above theories may cause disappointment, and thus influence the quality of clinical learning. The focus of the discussion of this section will be placed on the practical component.

Secrest, Norwood and Keatley (2003) interviewed 69 undergraduate nursing students to explore their experiences of being a professional on placement. It was found that the sense of being a professional was grounded in three factors: belonging, knowing and affirmation. These factors are associated with the interaction between students and the people they encountered in the clinical environment. Gaining a sense of belonging, being able to communicate with patients and families on nursing issues, being appreciated and valued by ward staff and patients make students feel that they are part of the nursing team. Students receive affirmation by demonstrating their sense of belonging and understanding of norms in the workplace and practice. The affirmation received further reinforces students’ sense of belonging and confidence to practise. From this process, students recognize themselves as part of the profession. The importance of receiving affirmation in the clinical learning process is echoed by the findings of Bradbury-Jones et al.’s (2007) study that a simple ‘thank you’ is powerful enough to boost students’ confidence and make them feel empowered. When students notice that they are competent enough to undertake some of the nurses’ work and be able to engage in nurses’ activities, they confirm themselves as a ‘nurse to be’ (Stockhausen, 2005).

Students categorize nurses as good and professional by their caring attributes and technical achievements (Apesoa-Varano, 2007). Being accepted and involved in the nursing team, students are given practice opportunities to refine their clinical skills and gain confidence on practice (Stockhausen, 2005, Walker et al., 2014). In the process
of clinical participation, students become self-aware by undertaking reflection, making comparisons between nurses and themselves, and experiencing conflicts (Stockhausen, 2005, Idczak, 2007). Students have a strong desire to provide professional and compassionate care for patients and want to gain a sense of being a nurse. Although students see nurses and clinical facilitators as role models (Hsu, 2006, Liu et al., 2010, Carlson et al., 2010, Myrick et al., 2010, Omer et al., 2013, Yang, 2013), they are conscious of the negative behaviours of nurses in the workplace. They do not want to be socialized into the negative side of nursing (Idczak, 2007). By working with nurses, students distinguish which type of nurse they want and do not want to be (Yang, 2013).

2.6.2 Socialization in relation to nursing

Communication is perceived as a skill that facilitates the socialization process. A Japanese study, where eight students and two faculty members were interviewed, reported that student nurses regarded their interactions with nurses and patients as the best part of the clinical learning process. Through interacting with nurses, students gain learning opportunities, as well as an insight to the values and beliefs held by nurses in order to function in the profession (Condon and Sharts-Hopko, 2010). The use of occupational language is one of the characteristics of communication in the clinical setting. Occupational language is mostly in form of abbreviations and used across specialties (Carlson et al., 2010). ‘Nurses tend to use a very specific professional language and occupational slang making language a distinct sign of professional belongingness’ (Carlson, 2013, pp460). Although a large part of occupational language is shared among different specialties, different specialties may have some unique occupational language which reflects their expertise and unique culture. For example, the occupational language being used in the emergency department and the intensive care unit. Therefore, variations in occupational language are expected from ward to ward (Carlson et al., 2010). Students acquire occupational language through communication on placement. Being able to use occupational language is a sign of fitting in and it facilitates the process of becoming a member of the community of practice. Clinical facilitators can introduce the use of occupational language to students, so that students can understand and respond accurately to mentors’ or ward nurses’
instructions, and promote effective communication between students and ward staff during the clinical learning process (Carlson et al., 2010, Carlson, 2013).

With respect to clinical learning, socialization is a process whereby students internalize professional norms, values and beliefs of the workplace (Du Toit, 1995, Philpin, 1999). The socialization process starts when nurse education commences (MacIntosh, 2003). By acknowledging professional ideals, students project themselves into their future professional roles and recognize the nurse identities that they have to develop (Du Toit, 1995, MacIntosh, 2003). However, socialization may not yield positive learning outcomes because students are expected to follow the tradition of the workplace in the socialization process and changes are not always permitted to be made (Lee and French, 1997). Mackintosh (2006) carried out a longitudinal qualitative study to explore the effect of socialization on pre-registration nursing students’ experiences of the caring role of nurses in practice. Students were interviewed at the beginning and at the end of the programme. It was found that socialization influences students’ perceptions towards their role as a carer in a negative way. Students were found to demonstrate an increased tolerance of environmental and practical limitations of the practice area, and a diminished perception of the importance of care at the end of the nursing programme. The researcher suggested that these changes may result from socialization. Students need to adapt the nursing role of the workplace and cope with its challenges.

In addition, Apesoa-Varano (2007) has made a criticism of professional socialization in nursing. The author finds the concept of professional socialization contradictory because while nurse educators try to enhance nursing professionalism by socializing students towards the scientific and technical aspect of the profession, the occupational identity that students gain from practice is still central to the caring aspect of nursing. This variation accentuates the problem of the discrepancy between professional ideals and the actual practice of the nursing discipline. From all the above studies, it seems that the identities formed from socialization are very much limited to the adoption of existing identities which are shared and valued in the workplace. However, with respect to the theory of the communities of practice, practice, values and identities evolve with the development of the community. Being a member of the community of
practice does not limit one to the adoption of existing values, but also may involve generating new meanings through mutual engagement, the development of a joint enterprise and the negotiation of a shared repertoire.

2.6.3 Identity formation from Wenger’s perspective

From Wenger’s perspective, the construction of identity is a dynamic process. Apart from integrating past experiences and making projection to the future, identities are shaped when individuals encounter unfamiliarity, acknowledge practice essentials, and negotiate new meanings. It is not unusual to live with multiple memberships as it is common for individuals to participate in different communities of practice simultaneously. In this regard, identities are not formed from a single source. They aggregate and cast an influence on each other. Although memberships can coexist, tensions are expected as each community of practice has its own boundary. Efforts have to be made to maintain one’s identities while crossing boundaries, and at the same time, linkages have to be built to enhance the compatibility between identities and practices formed in different communities of practice, so that meanings generated from various forms of participation can be tied together.

The construction of identity is based on what people think they are and they are not. Building on this notion, Wenger (1998) suggested that participants in a community construct identities through a mixture of participation and non-participation in the workplace. Although non-participation signifies the position of an outsider of a community of practice, it does not imply that individuals in this position are entirely separated from activities taking place inside the community. From Wenger’s perspective, non-participation is a starting point leading to engagement in practice which enables learning. The interaction of participation and different levels of non-participation yield a wide range of experiences. Wenger elaborated these experiences into the concepts of peripherality and marginalization, and illustrated their impact on participants’ identity construction in the community of practice. Peripherality is a condition where non-participation is part of the trajectory leading to full participation, while marginalization is a situation where participants are restricted to non-
participation and prevented from moving toward fuller participation. Participants define themselves according to their experience of different kinds of participation in practice, their relationship with the rest of community and their own expectation of the learning trajectory.

To further explain the relationship between participation, non-participation and identity formation, Wenger brings out the concept of the three modes of belonging, which are engagement, imagination and alignment. Newcomers gain a sense of belonging by working and achieving goals together with the members of the community. However, newcomers may not be authorized to participate in every aspect of practice in the community. In this situation, identities are not only formed from active involvement in the activities that newcomers have already gained access to, but also from newcomers’ imagination of their connection with the remaining parts of the community of practice. Imagination is a mode of belonging that allows newcomers to construct a self-image and the image of their corresponding community. It also connects individuals to the broader social context. However, if imagination deviates too much from actual practice, identity may be detached from the reality. Alignment is a mode of belonging that connects members of a community by coordinating practices, interpretations and views. The nature of alignment varies according to participants’ power in the community. Some people have the power to demand alignment, while others have to align with practice in order to demonstrate their belongingness to the community or the broader social context. Identities formed from alignment may contradict individuals’ own sets of identities and make them feel powerless in the community (Wenger, 1998, Wenger, 2000).

It appears that Wenger’s notion of identity formation fits well with the features of nurse education, where student nurses have to participate in both the higher education and service sector. The different sources of identity formation are relevant to the characteristics of student learning in the clinical environment which have been examined in detail in this literature review. Thus it appears that the theory of the communities of practice can offer valuable insights into student learning in the clinical environment.
2.6.4 Summary

Student nurses have to participate in the clinical environment in order to construct identities that are valued by the nursing profession. In all, identity construction is a continuous process which incorporates past experiences, present participation in the community of practice and the projection of the future. It is the result of the interactions between participation, non-participation, reification, boundary crossing, and the establishment of a sense of belonging. The theory of the communities of practice has offered a multidimensional way to understand the formation of identity, rather than relying on the traditional viewpoint of socialization. It provides an alternate way to look at student nurses’ identity in the clinical learning process. Findings of the current study will be presented in relation to the key elements of the framework of the communities of practice and the influence of supernumerary status on clinical learning. Also, the limitations of the framework of the communities of practice in the field of nursing will be discussed.

2.7 Conclusion

In this literature review, the importance of student participation in the clinical learning environment, the influence of the implementation of supernumerary status, the importance of effective mentorship, and the influence of the social environment on clinical learning and identity formation have been extensively discussed. It is known that student nurses have to engage in practice and work actively on placement in order to acquire practical knowledge and develop competences which prepare them to become a qualified nurse upon graduation. However, following the implementation of supernumerary status, the relationship between students, ward nurses and the clinical environment has been changed. The deviation of the interpretation of supernumerary status from its original intention, and the uncertainties surrounding the level of legitimacy of student participation on placement has accentuated ward nurses’ and students’ discontent concerning supernumerary learning on placement. The framework of the communities of practice has offered an alternate point of view to understand
learning in the workplace and provided insights into the enhancement of clinical learning effectiveness in the nursing context.

Clinical learning has been widely researched in the western context. However, little is known about the social dynamics of the implementation of supernumerary status, particularly on student participation on placement. The review of literature has also indicated a lack of empirical research on the clinical learning process of student nurses from a social learning perspective in the Asian context. In particular, students’ clinical learning experience in the Macau clinical learning environment has not been widely researched. The nature of student participation on placement, students’ and clinical facilitators’ perception of supernumerary status, the influence of having different types of clinical facilitators on clinical learning, and the formation of identity resulting from different levels of participation in the clinical learning process are remain unknown. Identification of these knowledge gaps has led to the development of research aim and questions.
3 Chapter Three – Methodology

3.1 Introduction

This chapter discusses the methodological approach taken to address the research gaps identified in the last chapter. The research aim and research questions are stated. Then I move on consider the theoretical underpinnings of the research design and the rationale of choosing a mixed methods design. After that, my decisions on research methods, sampling, the phases of data collection and the approach to data analysis are presented. Finally, the ways in which I sought to ensure the rigour of the study are examined.

3.1.1 Aim of the study

Based on the knowledge gaps I identified in the literature review, this study set out to examine student participation on placement in the clinical learning environment in Macau. In order to gain a better understanding of students’ learning experiences on placement, clinical facilitators’ perceptions of supernumerary status were also explored. By combining students’ and clinical facilitators’ views, perceptions and experiences of the clinical learning process, a comprehensive picture of student learning in the community of practice of the workplace could be provided.

Two main research questions were formulated. One focused on students’ clinical learning experience, and the other focused on clinical facilitators’ mentoring experience. The research questions came from the review of literature and my personal experience of being a nursing student under supernumerary status, and my experience of being a ward nurse.
3.1.2 Research questions

1) How do students perceive their clinical learning experience?

a. How do students perceive the clinical learning environment?

b. How do students perceive their degree of participation on placement?

c. How does the social environment of the clinical area affect student learning on placement?

d. How do students interact in the social environment on placement?

e. How do students perceive supernumerary status?

2) How do clinical instructors / mentors influence student learning on placement?

a. How do clinical instructors / mentors perceive clinical learning?

b. How do clinical instructors / mentors perceive their role on placement?

c. How do clinical instructors / mentors perceive student participation on placement?

d. How does the social environment affect student learning on placement?

e. How do clinical instructors / mentors perceive supernumerary status?
3.2 Research design

As established in chapter two, clinical learning is a complex issue. Not only are students’ learning experiences related to their attitudes, learning behaviour, motivation and perceptions towards the clinical learning environment, but clinical facilitators are also one of the major contributors to effective learning in the clinical learning environment. Most of the preceding studies on clinical learning have either focused on students’ or clinical facilitators’ views, but have seldom included both. From a social learning perspective, student learning in the workplace is influenced by the social environment and depends on students’ interactions with other participants in the workplace. As clinical facilitators are the people with whom students have most interaction, in order to provide a comprehensive view of the clinical learning process and to consider the interaction between different participants in the workplace and their influences on each other, I decided to explore both students’ and clinical facilitators’ experiences and their perspectives on the clinical learning process.

Data were collected from three groups of participants: student nurses, clinical instructors and mentors. In order to obtain the best available data to address the research questions, different data collection strategies were selected for each group, regarded by the purpose of data collection, sample characteristics and practicality. To generate a rich description of learning and mentoring experiences, qualitative methods seemed to be a good way to collect data from students and clinical facilitators. However, apart from clinical learning experiences, I wished to gain an understanding of the nature of student participation on placement and how students in general understand their supernumerary status, which could not be achieved by qualitative methods. It seemed that study aims would be best achieved by using quantitative methods. As suggested by Erzberger and Kelle (2003), a complementarity model could be used when individual research method was not sufficient to collect adequate information for the exploration of a phenomenon. For all the above reasons, a mixed methods approach which emphasized the complementarity of research findings was chosen.
3.2.1 Research paradigm

The characteristics of intersubjectivity, transferability and the abductive reasoning of pragmatism (Morgan, 2007, pp71) guided the knowledge generation of this study. Intersubjectivity highlights the importance of the establishment of mutual understanding and communication in order to develop shared meanings and reach consensus in the research process. Researchers have to move back and forth between subjectivity and objectivity to create knowledge. The idea of transferability emphasizes the identification of the most appropriate ways to apply the newly created knowledge, instead of focusing on the level of generalizability of a study. Researchers should be able to identify the factors influencing the transferability of a study to different contexts. The term ‘abduction’ used by Morgan (2007) was different from the view of abduction discussed by Reichertz (2004) and Bryant and Charmaz (2007) which linked it with inductive reasoning. In line with Johnson and Onwuegbuzie (2004), Morgan (2007) viewed ‘abduction’ as process to search for meaningful connections between different kinds of knowledge in order to provide the best understanding of the phenomenon being studied.

In contrast to positivism and constructivism, the philosophy of pragmatism does not restrict researchers to choose between quantitative or qualitative methods. Onwuegbuzie and Leech (2005) argued that positivism and constructivism place the focus on the differences, instead of the similarities, between quantitative and qualitative study. ‘Pragmatism offers an epistemological justification and logic for mixing approaches and methods (Johnson et al., 2007, pp125). Pragmatism constructs knowledge by both top-down and bottom up approaches (Johnson and Onwuegbuzie, 2004). It allows researchers to use a mix of approaches to address social phenomena (Johnson and Onwuegbuzie, 2004, Onwuegbuzie and Leech, 2004). Pragmatism offers an ‘outcome-orientated method of inquiry’ (Johnson and Onwuegbuzie, 2004, pp17). It does not aim to verifying theories, but to find out what works best in practice. The conceptualization of knowledge can be achieved from multiple perspectives (Creswell and Clark, 2011). Qualitative and quantitative approaches are not opposing pairs. They contribute complementarily to the study area by making useful connections.
Researchers are allowed to choose and combine different approaches to integrate quantitative and qualitative strands to obtain the ‘best answers’ for their research questions (Johnson and Onwuegbuzie, 2004, Onwuegbuzie and Leech, 2005).

Pragmatism is not without disadvantages. Pragmatism believes that knowledge changes over time, so that new meanings generated can only be viewed as provisional (Johnson and Onwuegbuzie, 2004). The formation of tentative knowledge has been challenged for its limited contribution to the society, as it may only be able to suggest incremental changes. Also, pragmatic researchers need to clearly define the degree of usefulness of the selected research methods regarding the research questions. Otherwise, uncertainties that affect the value of study results will be generated (Johnson and Onwuegbuzie, 2004).

3.2.2 Mixed methods research

Quantitative research is characterized by its objectivity, generalizability, and the use of a deductive approach to verify theories, make predictions and seek confirmation, while qualitative research is characterized by its subjectivity and its use of an inductive approach to generate theories, explore and discover phenomena (Johnson and Onwuegbuzie, 2004, Morgan, 2007). The emergence of mixed methods research is not to replace quantitative or qualitative research, but is a way to bring the strengths of both methods together and to compensate for the weaknesses of each single method by including the use of induction, deduction and abductive reasoning in the research process (Johnson and Onwuegbuzie, 2004). Mixed methods research is characterized by its consideration of ‘multiple viewpoints, perspectives, positions and standpoints’ (Johnson et al., 2007, pp113). Teddie and Tashakkori (2003) suggested that the key advantages of mixed methods research include its ability to answer both confirmatory and exploratory research questions, make strong inferences, and integrate diverse views. In this section, I will explain my choice of mixed methods design for this study, starting with a definition of mixed methods research, followed by an exposition of the reasons, timing, breadth, and the orientation of the mix.
According to Johnson and Onwuegbuzie (2004), there are two types of mixed research designs: mixed-model and mixed-method design. In a mixed-model design, the mix can occur within or across the stages of a study, while in a mixed-method design, quantitative and qualitative strands are separated into phrases in a study. In this thesis, I will focus on the discussion of mixed-method design. In a mixed-method design, researchers can either conduct the quantitative and qualitative phases sequentially or concurrently. Also, researchers can make decision on the weight of the quantitative and qualitative strands. Creswell and Clark (2011) have suggested seven types of mixed methods designs: convergent, explanatory, exploratory, embedded, transformative and multiphase design. However, it is important to note that the design of mixed-method research is flexible. Researchers can create any designs that are able to offer the ‘best answer’ to their research questions. The only rule of mixed-method research is that the study findings have to be integrated at some point in the research process (Johnson and Onwuegbuzie, 2004).

I adopted Johnson, Onwuegbuzie and Turner’s (2007, pp123) definition of mixed methods research in this study. Mixed method research is ‘the type of research in which a researcher, or team of researchers, combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and corroboration’. This definition demonstrated the flexibility of mixed methods research and its ability to include diverse views in a study. By adopting a mixed methods design, I was enabled to use the best available methods to gather views from students and clinical facilitators. I used focus group and survey to collect data from students and semi-structured interviews to collect data from clinical facilitators. By comparing and contrasting findings from different sources and strands, a comprehensive picture of student nurses’ and clinical facilitators’ perceptions of the clinical learning environment in Macau could be achieved.

Mixed methods research allows researchers to employ different approaches to address the research questions. In order to obtain the best available data to answer the research questions, research methods have to be selected carefully, making sure that they are able to provide rich explanations for the research problem (Johnson and Onwuegbuzie,
The quantitative and qualitative strands in this study were carried out both sequentially and concurrently so as to gather the most meaningful data. According to Greene, Caracelli and Graham (1989, pp259), there are five reasons for doing mixed methods research. They are triangulation, complementarity, development, initiation and expansion. Triangulation aims to seek convergence between qualitative and quantitative findings in order to enhance the validity of the result of a study. Complementarity allows researchers to combine the strengths of both qualitative and quantitative strands of a study in order to elaborate on, and enhance the illustration of, the results. Development is the use of the findings of one research method to inform the development of the other method. Initiation seeks discovery of contradictions and results in re-framing of research questions. Expansion enables researchers to expand the breadth of inquiry by using different methods in qualitative and quantitative strands (Greene et al., 1989).

The main purpose of this study is to explore student participation on placement by combining students’ and clinical facilitators’ perceptions and experiences of their clinical learning and teaching experiences. To achieve this, the focus of the integration of qualitative and quantitative findings is to seek complementarity. Quantitative findings were not used to cross-check against qualitative findings; instead, quantitative findings were used to provide supplementary information which is not available in the qualitative data, and form a basis for the presentation of the findings. Although qualitative and quantitative data were compared and contrasted constantly throughout the study process, contradictions that would have provided new perspectives to re-frame the research questions were not discovered. Accordingly, initiation did not pay a significant role in the study. In addition to seeking complementarity, this study also involved the components of development and expansion in a mixed methods study. The focus group findings aided the development of the self-designed questions of the post-placement questionnaire, while the use of both focus groups and individual interviews in the qualitative strand has enriched the breadth and depth of the inquiry.

Data from student nurses were collected from both quantitative and qualitative methods, while only qualitative methods were used to collect data from clinical
facilitators. Both quantitative and qualitative methods had their value in my study; their complementarity was essential to the generation of meaningful study results. Also, I used students’ qualitative findings to inform part of the quantitative strand of the study.

There were two reasons for using both quantitative and qualitative methods to collect data from students in this study. Firstly, I wished to obtain a general understanding of students’ perceptions of the clinical learning environment and the nature of participation on placement in Macau. It was appropriate to use quantitative method since they would allow me to gain a secure sense of a range and distribution of students’ experiences of clinical learning. In the quantitative strand, I used the Clinical Learning Environment Inventory (CLEI) (details of the inventory will be provided in section 3.6.2) to examine students’ perceptions of the psychosocial aspect of the clinical learning environment. In order to address the remaining research questions, it was necessary to construct some self-designed questions in the survey, and these questions could not be formed without a theoretical base. As shown in the literature review, students’ learning experiences in Macau has not been widely researched. Therefore, I had to collect qualitative data from students to inform the construction of the self-designed questions which aimed to reflect the actual situation of student learning and participation in the Macau clinical learning environment. Qualitative methods are the most appropriate way to capture participants’ insights (Onwuegbuzie and Leech, 2005).

This study was divided into three phases:

Phase 1: Focus group (Third and fourth year students)

Phase 2: Survey (Second, third and fourth year students)

Phase 3: Semi-structured interviews (Clinical instructors and mentors)

Phase one focus groups and the phase two survey was carried out sequentially. The data collected from focus groups informed the development of part of the questions in
the survey. Phase three interviews were carried out concurrently with the phrase two survey. The aim of this phase was to elucidate clinical facilitators’ perceptions of clinical learning and their clinical facilitation experiences. The three phrases explored different facets of the clinical learning environment and experiences and hence provided a rich account of clinical learning in the Macau clinical environment.

This is a qualitative-dominant mixed methods research study. As noted by Johnson, Onwuegbuzie and Turner (2007), this subtype of mixed methods research is used when a researcher believes it is valuable to include quantitative input in a qualitative study. Phase one of this study aided the development of phrase two. At the same time, phase one and phase two of the study helped expand the breadth of information gathered in the phase three semi-structured interviews. My decision on the weight of quantitative and qualitative strands changed during the analytic process. Figure 3.1 demonstrates the weight of the quantitative and qualitative strands in the original study design, and Figure 3.2 shows the change in the contribution of quantitative and qualitative strands in the presentation of findings and discussion of this study. This change occurred because the findings of the qualitative strands were found to give the ‘best answer’ the research questions and provided rich data to describe different aspects of student learning experiences on placement and the influence of different communities of practice on student learning and participation in the clinical environment. Although it seemed that using qualitative findings alone was sufficient to present the story, parts of the quantitative findings were kept and formed the background of the thesis. These findings indicated important differences in student learning experiences between years of study, (refer to chapter four for details), which were not able to be shown explicitly in the qualitative data.

According to Creswell (2011), integration of quantitative and qualitative strands can take place at different stages of a research study. They can be mixed at soon as designing the study or during the process of data collection, analysis and interpretation. In this study, quantitative and qualitative strands were analysed separately. Quantitative and qualitative data were brought together at two points of the study. The first point of mixing occurred during data collection when focus group data findings
were used to inform the construction of the self-designed questions of the phase two survey. The second point of mixing occurred when I brought quantitative and qualitative findings together in the interpretive stage, setting quantitative findings as the background and qualitative findings as the foreground of the thesis. I drew conclusions on both data sets and made connections between quantitative and qualitative findings.

Figure 3.1 Study design

Figure 3.2 The weight and contribution of quantitative and qualitative strand in the findings and discussion chapter
3.2.3 Ethical considerations

The ethical considerations of the study are based on the research ethics framework of the College of Humanities and Social Science, University of Edinburgh. Ethical approval was sought from the Ethical Committee of the School of Health in Social Science of the University of Edinburgh (Appendix E.1). Because of the need to interview students and clinical instructors from the nursing college, as well as mentors in the hospital, the research proposal was sent to the research ethics committees of Kiang Wu Nursing College of Macau (Appendix E.2) and Kiang Wu Hospital (Appendix E.3) respectively for approval.

Quantitative and qualitative studies share a common ground of ethical considerations (Parahoo, 2006). In this study, participants were neither put in harm nor benefited from the study directly. The questions asked in questionnaires, focus groups and interviews were focused on participants’ placement experiences. They did not involve any intrusive and sensitive topics. Also, none of the questions would cause embarrassment to the participants. In other words, no participant was put at risk of harm in the research process. However, as noted by Parahoo (2006), participants’ disclosure of their attitudes, beliefs and inner thoughts may trigger emotions and cause distress. Interviewers have to observe participants’ verbal and non-verbal expressions throughout interviews and respond carefully. In the data collection process, none of the participants showed any indications of emotional distress verbally and non-verbally. All the focus groups and interviews were held and ended in a friendly and positive atmosphere. Conversations with participants were always continued after the focus groups and interviews had been completed. I believed that participants and I had established trust in the data collection process and that they were happy to share their life experiences with me. In addition, although participants did not receive any benefit from this study, they understood that their contribution would benefit the development of clinical education in Macau.

Informed consent (Appendix B.1 and B.2) was obtained before taking ahead the questionnaire, focus groups and interviews. Although informed consent is not always
seen as a necessity for self-administered questionnaires as returning of questionnaires could be seen as an indicator of consent (Parahoo, 2006), I opted to include a consent form with both the pre- and post-placement questionnaire. Because I introduced the study in class and distributed the questionnaire to students afterwards, I did not want to give a wrong impression to the students that they must fill out the questionnaire for me. In order to make sure students’ participation was voluntary, I emphasized that they could choose to participate or not. If they agreed to participate, they had to return their questionnaire with a signed consent form. Returned questionnaires without a signed consent form were seen as invalid. Also, students were allowed to return a blank questionnaire if they did not want to participate. The same measures applied to the post-placement questionnaire.

For the focus groups and interviews, verbal consent was first obtained on the phone and an explanation of this study’s aim and objectives was provided. Potential participants were informed about the need for audio recording during a focus group or interview. Information sheets were sent to all potential participants a week before the interview date. This allowed participants to have a deeper understanding of the study and provided time for them to think about any questions they would like to ask or clarify before signing the consent form. On the day of the focus group or interview, I explained the study to the participants again and gave them time to raise questions. A consent form was signed before the start of audio-recording. Participants in all three phases were notified that their participation was voluntary, and they were free to withdraw from the study at any time.

Confidentiality and anonymity were ensured throughout the study. Since this study involves quantitative and qualitative strands, I used different ways to make sure that confidentiality and anonymity were strictly followed. For the quantitative strand, since it was necessary to compare the data collected from the pre- and post-placement questionnaire, students were given an identification code. The code was allocated randomly to each student. Students were requested to keep their personal code securely until they returned the post-placement questionnaire. In order to ensure anonymity, students were reminded not to write their name and student number anywhere on the
questionnaire. For the qualitative strand, participants were kept anonymous by using pseudonyms. Participants’ names have not appeared in any parts of the thesis in order to minimize the chance of them being identified by other people. All pre- and post-placement questionnaires, demographic questionnaires, consent forms collected were locked in a cabinet along with the audio recorder. All electronic data were stored in a password protected computer, and I was the only one able to access these documents.

3.3 Research methods

3.3.1 Qualitative strand

Two research methods were used to collect data in the qualitative strand of the study. A focus group works best to explore collective views from a group of people having similar experiences. Participants were encouraged to interact and comment on each other’s views (Bryman, 2006). They provided an informal and friendly environment for students to share their clinical learning experiences. In contrast, a focus group did not seem to be an appropriate method to collect data from clinical instructors and mentors, because some of my questions were on their personal experience in the mentoring process. Participants might not be comfortable to share this information in a group (Bryman, 2006). In order to avoid that situation, semi-structured interviews were used to collect data from clinical instructors and mentors.

3.3.2 Quantitative strand

There are two reasons for not using focus group as the only method to collect data from students. Firstly, it is because there are quite a number of mentors and clinical instructors involved in mentoring. Students might have very different clinical learning experiences as they are facilitated by different people. If the data were only collected from a focus group, this would only reflect a tiny part of the reality of clinical learning. Secondly, quantitative methods not only provide a systematic measure of students’ perceptions towards placement and the clinical learning environment, they can also improve the generalizability of the data collected from the focus groups.
3.4 Study setting, sampling and sample characteristics

This study was carried out in a nursing college in Macau offering a four-year undergraduate nursing programme. There were one hundred and sixty-seven second to fourth year students in the nursing college in the academic year 2012-2013. According to the curriculum of the nursing college, the clinical learning component constitutes about fifty percent of the total learning hours of the programme. During placements, first to third year students were facilitated by clinical instructors (college teachers). On average, each clinical instructor was responsible for seven to eight students on placement. Fourth year students were facilitated by mentors (ward nurses). Students were mentored on an individual basis most of the time. On some occasions, students might have a placement in a group of two or three, depending on the nature of wards and ward arrangements.

The clinical instructors from the nursing college had differing backgrounds. There were fifteen clinical instructors involved in all placements in the academic year. Their employment status ranged from part-time clinical instructors, lecturers, assistant professors, to associate professors. In this study, I use the term ‘clinical instructor’ to address all types of college teachers involved in placement facilitation, because my interest was in their role on placements, rather than their academic position in the nursing college. The training background of the clinical instructors also varied. Most of them had received their pre-service training in Macau and had worked in the teaching hospital. Others were trained and worked in Mainland China. The variation in employment status, the diversity of training and in the working background of the clinical instructors were taken into account in the sampling process. I welcomed clinical teachers with different backgrounds to take part in my study to reflect the characteristic of that particular community of practice.

In Macau, student nurses sometimes address all nurses who facilitate their clinical learning as mentors in order to show their respect. These nurses could be official mentors, nursing officers or any senior nurses. In contrast in my use of the term ‘mentor’, I only categorized ward nurses who had been appointed by the ward and then
officially assigned by the nursing college as a mentor in the workplace. To make sure students were clear about my use of ‘mentor’ in this study, I clarified the definition of ‘mentor’ with them before starting the data collection process. There was a total of forty-five mentors involved in placement facilitation in the academic year 2012-2013. The number of mentors in each ward ranged from one to three and they were responsible for all students having placements in their workplace. Although these mentors were assigned by the nursing college, not all of them had completed the mentor training programme organized by the two nursing institutions in Macau.

3.4.1 Sampling

In order to recruit a representative sample to the study, different sampling methods were employed in the quantitative and qualitative strands.

3.4.1.1 Students

Students were involved in both the quantitative and qualitative strands in this study, i.e. the phase one focus groups and phase two survey. For the focus groups, the inclusion and exclusion criteria were as follow:

Inclusion criterion:

- Full time pre-service undergraduate nursing student

Exclusion criterion:

- First and second year students

First and second year nursing students were excluded because the focus groups were conducted at the beginning of the academic year. First year students had not started any placement yet, while second year students only had about two weeks placement experience in the hospital environment in the previous academic year. Students did not
have much clinical learning experience to reflect on and therefore could not respond to the questions being asked in the focus group.

Focus group participants were selected by stratified sampling since I wished to make sure that participants were able to present a range of experiences in order to answer the research questions (Bryman, 2006). In order to minimize the chance of gathering a group of ‘good’ students in the focus group, and maximize the diversity of students being recruited, I used students’ grade point average (GPA) in the second semester of academic year 2011-2012 as the reference point. Students in each year of study were divided into three groups according to their academic performance. Although students’ academic performance did not have an absolute relationship with their clinical performance and there was a possibility that I would still recruit a group of students having similar clinical learning experience, it was found in a Taiwanese study that student nurses’ self-perception of clinical competence had a positive relationship with students’ grade point average (Liou et al., 2013). Since perceived self-efficacy directly affects one’s performance (Bandura, 1977), it seemed that sampling participants of varying academic performance could increase the probability of recruiting students of diversified background and experience. The use of students’ GPA was approved by the president and research committee of the Kiang Wu Nursing College of Macau. The student selection process was as follows.

I divided students evenly into three groups according to their GPA in the previous semester, i.e. students with higher, medium and lower academic achievement. After dividing students into groups, I selected students systematically within each group and invited them to participate in a focus group. Every fifth student in each group (starting from the first student) was contacted. In the invitation ‘phone calls, I briefly explained the phase one study to the student and asked for their willingness to participate in the focus group. Voluntary participation was again emphasized, and students were allowed to ask any questions about the study before giving their verbal consent for focus group participation. I aimed to recruit two to three students from each GPA group. Since students were allowed to decline the invitation, if the number of student recruited in the first round did not meet the target number, second round recruitment
would be commenced. Similarly, in the second round recruitment, every fifth student in the group was selected (this time starting from the second student). The recruitment process continued until all focus groups places were filled. Table 3.1 presents the number of participants in each focus group and the composition of students recruited with respect to their GPA.

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Academic achievement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>Higher</td>
<td>Medium</td>
</tr>
<tr>
<td>Focus group 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Third year students)</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Focus group 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Fourth year students)</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3.1 The characteristics of focus group participants

For the survey, participants were selected by convenience sampling, i.e. on the availability and accessibility of participants to the researcher (Bryman, 2008). All second, third and fourth year students were invited to participate in the study unless they were not present in the classroom or chose to leave the classroom when I introduced the study and distributed the questionnaires. The inclusion and exclusion criteria of the survey were as follows:

Inclusion criterion:

- Full time pre-service undergraduate nursing student

Exclusion criteria:

- First year students
  
- Student with clinical working experience before entering the undergraduate programme
• Placements which were not take place in hospital settings

• Placements took place outside Macau

• Placements that last less than two weeks

First year students were excluded because their placements were either too short or took place in a non-hospital environment. In addition, the aim of first year placements was to introduce the clinical environment to students (Kiang Wu Nursing College of Macau, 2012a), and placements mostly lasted for a few days to a week. Accordingly, students might not have enough time to interact fully with the clinical learning environment. For the same reason, all placements lasting less than two weeks were excluded. Apart from that, the focus of this study was to explore student participation in the hospital learning environment in Macau. Although collecting data from various settings and cultures could generate rich data, they were not addressed within the focus of the study; therefore, placements that took place outside Macau or in a non-hospital environment were excluded. Accordingly, the placement areas involved in this study did not include old age homes, nurseries, community health centres, psychiatric and obstetric wards.

3.4.1.2 Clinical facilitators

There are two institutions providing pre-service nursing programme in Macau, and they are different in curriculum design, placement settings and approaches to clinical teaching. Due to limited time and the difference in the clinical learning environments, only one institution was chosen in this study.

As mentioned earlier, the training and working background of clinical instructors and mentors were not taken into account when sampling participants. All clinical instructors and mentors who had facilitated placement in the academic year were included in this study. In order to match with the placement selection criteria of the phase two survey, clinical instructors who facilitated placements which lasted for at
least two weeks were purposively sampled. Also, clinical instructors were purposively sampled according to their year of clinical facilitation experience. I recruited clinical instructors with different years of placement facilitation experience instead of selecting all experienced clinical instructors. I wished to collect data from people with different backgrounds and experiences to see whether there were variations in their perceptions of student learning in the workplace, their interactions with the social environment and their mentoring experiences.

Similarly, I intended to recruit mentors from various backgrounds. However, I experienced some difficulties in recruiting mentors. I was informed by the hospital that I was not allowed to contact mentors by myself. Participants in the study were selected by the hospital. In spite of that, I explained to the hospital about the importance of recruiting mentors with differing backgrounds which included different workplaces and years of experience, and tried to negotiate as far as it was allowed. In summary, all clinical instructors and mentors who facilitated clinical placements of the students at the nursing college were included in this study, and there was no exclusion criterion for the recruitment of clinical facilitators. In the practice area, no matter how experienced the clinical instructors were, they were not full members of the community of practice of the workplace. So, it was not meaningful to set any criteria to exclude some of the clinical facilitators from this study. Regarding the selection of mentors, as only experienced nurses were appointed as mentors of a practice area, they were all fully engaged in the community of practice and were able to introduce students into the workplace. I could not see any need to exclude any of the mentors from participating in this study.

3.5 Data collection

The process of data collection was divided into three phases. Phase one focus group, phase two survey and phase three semi-structured interviews. Students participated in both phase one and two, while clinical instructors and mentors were involved in the third phase of the study.
3.5.1 Phase one – focus group

Phase one constituted of two focus groups. As stated in the sampling method, only third and fourth year students were recruited in this phase. The study was introduced to all third and fourth year students after class in October 2012. Information on the first and second phase of the study, voluntary participation, confidentiality and anonymity were emphasized. In addition, time was given to raise questions in the introductory sessions. Students were also informed that they would possibly receive an invitation phone call for focus group participation in two to three days.

For the third year class, a total of nine students was contacted, and seven of them agreed to join the focus group. For the fourth year class, since half of the class were having placement in mainland China on the scheduled date of the focus group, and the date of the focus group could not be postponed because of the restricted time schedule of the phase two survey, half of the class was excluded from the invitation. By the end of fourteen invitation calls, six of the fourth year students gave verbal consent to join the focus group. The number of students in each focus group and their corresponding academic achievements are shown in Table 3.1. The two focus groups were carried out on the sixteenth and eighteenth of October. Text messages were sent to all potential participants on the day before to remind students of the time and place of the focus group. Eventually, all students who had given verbal consent to participate were present at the focus group.

Before the focus groups began, I had assigned an identification (a card with a letter on it) to each student and advised them to address each other by the corresponding letter instead of their real names. This action was to ensure the confidentiality and anonymity of all participants and also to provide me a convenient way to track the conversation flow, aiding the transcription process. In addition, the study aim, the use of data, the replacement of participants’ names with pseudonyms on all reports and related publications, and the need for audio-recording were explained. Time was given to all participants to read through the information sheet (Appendix A.1) and the questions to be asked in the focus group (Appendix C.1). Furthermore, students were invited to
raise any questions regarding the study. Consent forms (Appendix B.1) were signed after everything had been made clear. Apart from the information provided in the information sheet, I had also given some advice to the students joining the focus group.

1) Respect each participant’s privacy and do not disclose any of the focus group content to the public.

2) Do not address any clinical instructors, mentors or students by names during the focus group.

3) Discussion has to be focused on their clinical learning experiences which took place in Macau and those within hospital settings.

4) Questions to be asked are mainly based on the question list, but if I found something interesting during the discussion, further questions would be asked.

5) There were no right or wrong answers for all questions. Participants could feel free to express their views.

6) The focus group was not in a round table question and answer format. Interaction between participants was encouraged. Participants can agree or disagree with others’ views.

7) For the best quality of audio recording, please try your best to avoid overlapping speech.

All students had returned their signed consent forms before the focus group began. The focus groups lasted for one hour and thirty minutes and one hour and forty-five minutes for third and fourth year respectively. The degree of participation varied among students. Though I had encouraged all participants to express their ideas during the focus group, some were quite dominant, while some were comparatively quiet. At the end of each focus group, I thanked each student for their participation. Some of the students continued to share their clinical learning experiences after the focus group.
ended. Since the sharing was mostly unrelated to the placements that took place in Macau, these conversations were neither recorded nor marked in the field notes. All students seemed happy after the focus group and none of them showed any signs of distress related to the discussion of their clinical learning experiences. After transcription a summary of the focus group was sent to all participants to check the accuracy of the information collected. No amendments were received by the date of thesis completion.

3.5.2 Phase two - survey

The phase two survey was divided into two parts, the pre-placement questionnaire and the post-placement questionnaire. The questionnaires were further divided into two sections in the pre-placement questionnaire and three sections in the post-placement questionnaires. Both questionnaires consisted: a demographic questionnaire (Appendix D.1); the Clinical Learning Environment Inventory (CLEI) (Appendix D.3); and a section of self-designed questions (Appendix D.2) in the post-placement questionnaire. I gained approval from Dr Dominic Chan, the developer of the CLEI, to use the inventory. In addition, I included nine self-designed questions in the post-placement questionnaire to elucidate the nature of student participation on placement. According to Chan (Chan, 2002b), the CLEI is divided into two parts, the preferred and actual form. The suggested data collection timeframe for both preferred and actual CLEI is at the end of placements. However, I argued that doing the preferred and actual form together could only reflect students’ very general expectations of the clinical learning environment, and that the expectations may varies between different clinical learning environments (Perli and Brugnolli, 2009). It seemed that a more meaningful comparison of students’ preferred and actual perception of the clinical learning environment could be achieved if the use of inventory was focused on specific placement areas. In view of that, I separated the preferred and actual form, and put them in the pre- and post-placement questionnaire respectively. Details of the data collection timeframe are provided in this chapter. I sought approval and advice from Dr Chan for the proposed change. Dr Chan agreed and believed that the change in the data collection timeframe would not affect the validity of the inventory.
Questionnaires were distributed to all second, third and fourth year students before, and at the end, of one of their placements in the academic year 2012-2013. The placement selection criteria were as follows:

1) Placement must have taken place in Macau.

2) Placement must have taken place in a hospital setting.

3) Placement must have lasted for at least 2 weeks.

First Year students were not included in the survey because all of their placements lasted less than two weeks and most of them did not take place in the hospital setting. After selecting the placement areas which met the above criteria according to the placement schedule of the nursing college, a data collection schedule for the phase two survey was created. The data collection process of this phase spread over the whole academic year, from November 2012 to May 2013. The pre-placement questionnaire was given to students about three to five days prior to the placement start date. Questionnaires were distributed after class and students were encouraged to stay in the classroom to fill in the questionnaire. The researcher had again explained the aims and objectives of the study, voluntary participation, and that the confidentiality and anonymity of the data provided would be strictly followed. Questions were allowed and the importance of signing the consent form was reinforced. In addition, the researcher reminded the students that the CLEI of the pre-placement questionnaire was about their expectations about the coming placement, but not their previous experiences; while the CLEI in the post-placement questionnaire was about their actual experience on the placement they had just finished. Also, students were alerted to the fact that the CLEI includes both positive and negative statements. There was no time limit to fill out the questionnaire. Students could leave the classroom any time they wished. Students were also notified that they could return a blank questionnaire if they were not willing to participate. In that case, a signature on the consent form was not required.
In order to ensure the confidentiality and anonymity of the study, an identification code was given to each student. Student used the same code for the pre- and post-placement questionnaires. As there were at least two weeks between the two questionnaires, in order to help students to remember their identification code, I attached a small piece of paper with their individual identification code printed on it. Students were instructed to: pull the small paper off and keep their own identification code in a safe place once they received the questionnaire; and that the same code had to be written on the post-placement questionnaire. In addition, students were reminded that they should not write their name or student number on the questionnaire.

The post-placement questionnaires were distributed to students two or three days before the end of placements. Since the post-placement questionnaire was longer than the pre-placement questionnaire, and students were having placements in various wards, it was difficult to gather all students at a particular time to fill in the questionnaires. Students were therefore allowed to take the questionnaire home and fill it in any time they preferred. My email was attached to the questionnaire, so, if student had any problem in understanding the wording of the questionnaire, they could contact me for clarification at any time. All post-placement questionnaires were collected on the last day of placement. Students were again reminded to write down their identification code. Since students who had not filled in the pre-placement questionnaire could also respond to the post-placement questionnaire, these students were told to leave the identification code blank and I would allocate a code for them afterwards.

3.5.2.1 Clinical learning environment inventory (CLEI)

The CLEI assesses students’ perceptions of the clinical learning environment in six psychosocial aspects: individualization, innovation, involvement, personalization, task orientation and satisfaction, with satisfaction being the outcome variable. Details of the subscales are shown in Appendix D.4. The original CLEI was in English. However, the first language of the students and the medium of instruction of the Macau nursing students were Chinese. Students might not have been able to understand all the
wording of the inventory in English and this might affect the reliability of the data, as well as the response rate. In light of this, I opted to use a Chinese version of the CLEI to collect data. Since previous studies involving the use of the CLEI were mainly carried out in western countries or places where students used English as the medium of instruction, I could not identify any published Chinese version of the CLEI in the literature. Therefore, it was necessary for me to translate the original CLEI from English to Chinese.

According to Sperber (2004), a translated instrument should be able to retain the meaning of the original content of the instrument while being able to reflect the local culture and be comprehensible to the respondents. Back translation is one of the approaches to translate an instrument. This process involves the translation of the instrument from the source language to the target language, and then back translate to the source language by a third person. After that, the back translated and source instrument is compared by another person (Sperber, 2004). The purpose of back translation is to pick up inconsistencies and conceptual errors in the initial translation (Beaton et al., 2000).

Since I am a bilingual speaker and my mother tongue is Cantonese (A spoken form of Chinese), I translated the CLEI from English (source language) to Chinese (target language) by myself. Then, I gave the Chinese version to two bilinguals, one with a nursing background and one without, for back translation. After that, the two sets of back translated CLEI were compared by an English speaking colleague with the original version to check for discrepancies in meanings. Minor amendments in wording were made after the check. The translation and back translation process is shown in Figure 3.3. Apart from ensuring the consistency in the literal meaning of the statements in the English and Chinese version of the CLEI, cultural differences were also taken into account (Sperber, 2004). I used the terms that were commonly used in the Macau clinical area in order to enhance the relevance of the statements to the actual clinical learning environment.
Figure 3.3 The translation and back translation process of the Clinical Learning Environment Inventory (CLEI)
3.5.2.2 Self-designed questions

After collecting information about student learning experience on placement in the focus groups, the data were transcribed verbatim and an initial analysis was carried out to generate a number of the questions in the post-placement questionnaire. There was a total of nine questions generated from the focus group data. All questions were generated in Cantonese, so no translation and back translation was required in the process. Three students were invited to do a pilot test of the self-designed questions. They were encouraged to provide feedback regarding the terminology used, clarity of instructions, and any other kinds of problem identified in filling in the questionnaire. The three students invited to do the pilot test gave me a number of constructive suggestions, and amendments were made before finalizing the whole set of questions.

To ensure the validity of the self-designed questions, the content validity index was chosen to measure the content validity of the questions. Content validity was defined as ‘the degree to which elements of an assessment instrument are relevant to and representative of the target construct for a particular assessment purpose’ (Haynes et al., 1995, pp238). According to Grant and Davis (1997), the content validity assessment of a questionnaire should include three components, representativeness of the items to the underlying concept, clarity of item presentation, and the comprehensiveness of the items to reflect every aspect of the domain to be measured.

Following the suggestions by Polit and Beck (2006), the representativeness of items was measured by the average content validity index for scales (S-CVI/Ave). This method emphasizes the quality of each item, instead of judging the items as a whole (Polit and Beck, 2006). Three nurse lecturers were invited to judge whether the self-designed questions were relevant to the underlying idea of the questions, which was nursing students’ participation on placement. The experts rated each question on a four point scale from not relevant (1), somewhat relevant (2), quite relevant (3) to highly relevant (4). Upon calculation, only responses on ‘quite relevant’ and ‘highly relevant’ were treated as relevant.
S-CVI/Ave was calculated as: ∑ I-CVI / number of total items

The content validity index for items (I-CVI) = the number of expert giving a rating of 3 or 4 on an item / number of experts rating the items. Results of the I-CVI and S-CVI/Ave are shown in the Table 3.2

<table>
<thead>
<tr>
<th>Question</th>
<th>Number of questions rated 1 or 2</th>
<th>Number of questions rated 3 or 4</th>
<th>I-CVI</th>
<th>S-CVI/Ave</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
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<td>3</td>
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<td></td>
</tr>
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</tr>
</tbody>
</table>

Table 3.2 Content validity index of the self-designed questions (Total number of experts rated the questions = 3)

According to the advice from Polit and Beck (2006), a S-CVI/Ave value of 0.9 and above is considered as an acceptable standard. The S-CVI/Ave of the self-designed questions is 0.93, reflecting that the questions were relevant to the underlying construct, and thus valid to measure student participation on placement. For the evaluation on the components of clarity and comprehensiveness, all nurse lecturers assessing the items indicated that the items were clear and the wording was used appropriately.

Due to the short time lag between focus group completion and questionnaire administration, it was not possible to carry out a large scale pilot test to confirm the reliability of the self-designed questionnaire before data collection commenced.
Analysis of the data set revealed that the reliability coefficient of the self-designed questions does not reach the acceptable level of 0.7 (Nunnally, 1978). One of the possible reasons is that the items of the questionnaire are reflecting different aspects of student participation on placement and are not perfectly correlated with each other as a single construct (Tavakol and Dennick, 2011). A factor analysis should be performed to address the issue, but because of the small sample size of this study, it is not appropriate to do this. Despite the internal consistency of the self-designed questionnaire is not seen as satisfactory, given that the purpose of the quantitative strand was to serve as the background of the study, findings were used to provide valuable information to address the relationship between years of study and the nature of student participation on placement.

3.5.3 Phase three – semi-structured interviews

In phase three, five clinical instructors and five mentors were invited to participate in a semi-structured interview. Since one of the mentors refused audio recording just before the interview began, in order to have 10 complete transcripts for the analysis, an extra mentor was invited to participate in the study. As stated in the sampling method, the sixth mentor was also selected by the hospital. I approached the clinical instructors in person and explained the study details to them. For the mentors, after getting their names and contacts from the hospital, I contacted them and explained the study to them on the phone before asking for verbal consent for interviews. To ensure their participation was voluntary, I did not assume the potential participants had given their verbal consent to participate to the hospital contact person before I explained the study to them in person.

Interviews are useful tools to collect data in social research because they can capture participants’ descriptions and perception of the social world which helps address the research topic (Kvale and Brinkmann, 2009, Holstein and Gubrium, 2011, Charmaz, 2014). To obtain the best available data from interviews, researchers have to select participants whose experiences match with the research focus, and let the participants understand that their views and experiences are important to the construction of
knowledge (Charmaz, 2014). Researchers have to provide a stimulating, open, non-judgemental and comfortable environment for the participants to express their views and talk about their experiences (Holstein and Gubrium, 2011, Charmaz, 2014). Open-ended questions should be used to allow in-depth exploration of participants’ life experiences. Also, appropriate expressions have to be chosen to use in interviews. These expressions should be able to fit with participants’ cultural background and be applicable to the social context where the participants are situated. It not only helps researchers form appropriate questions, but also enhances researchers’ understanding of participants’ viewpoints and enables researchers to spark participants’ reflections during interviews (Charmaz, 2014).

Charmaz (2014) suggested that novice interviewers are very likely to benefit from having a structured interview guide which consists of well-planned open questions. It helps researchers focus their conversations with participants and prevents them from being distracted by considering what and how to ask the next question. In addition, by developing an interview guide, the reflective process of the study can start at an early stage as researchers are aware of their own assumptions and interests in the research topic. Apart from using an interview guide, audio-recording and note taking also help researchers give full attention to the information provided by the participants during interviews. By taking important points raised in the interviewing process, researchers are able to return to important issues and ask follow-up questions to clarify details and obtain further explanations.

In this study, interview questions (Appendix C.2) and information sheets (Appendix A.3) were sent to all participants a week before the date of interview. I wished my participants to have a general idea of the questions they were going to be asked in the interview, because they were required to reflect closely on their clinical learning and mentoring experiences. Participants might be able to reflect better if time was allowed for them to recall their memories. Before the interviews began, I explained the aim and objectives of the study to the participants again and allowed them to raise any concerns about the study. Confidentiality and anonymity were again reinforced. In addition, the participants were asked to fill in a demographic questionnaire. Basic information like
age, gender, year of experience and current workplace were reported (Appendix C.3). Having this information, I could refer to their particulars and ask relevant questions during the interview. After signing the consent form, the interview started and audio recording began. Apart from the questions listed in the interview guide, I also asked follow-up questions if I found something interesting and wished to have a deeper exploration. Along with the audio recording, interview notes were also written. This not only helped me to note the key points that I would like to reflect on and ask further questions in the interview, it also aided the data analysis process.

3.6 Data analysis

‘The combination of insider knowledge and detailed study can yield profound analyses’ (Charmaz, 2014, pp63). As stated in section 1.2, my motivation for carrying out this study was based on my learning and working experience in the clinical area. However, due to my lack of experience in the Macau clinical context, I could only classify myself as a ‘partial insider’. I was conscious of my limitations, therefore, before commencing detail analyses of both qualitative and quantitative data, I had to gain a thorough understanding of the nursing context and the clinical environment in Macau. I tried to gather information on the cultural background and social context of the clinical environment in Macau throughout the data collection process. I explored the facts and background of the hospital working environment, nursing education system, clinical learning system, and the characteristics of students, clinical instructors and mentors through reading documents and memos from the nursing college, and communicating with individuals of different backgrounds. By doing this, I could make sure I had sufficient insider knowledge to recognize the characteristics of the social environment and was able to express the correct meaning of the data (Dey, 1993).

Data analysis of the qualitative and quantitative strands was done separately. Thematic analysis was utilized in the qualitative strand, while the quantitative data were analysed by using descriptive and inferential statistics. Software packages were used to assist the data analytic process. Qualitative analysis was performed manually, and Nvivo 10
was used to manage the qualitative data set. Quantitative data were transferred into SPSS version 21 to facilitate data analysis.

3.6.1 Qualitative data analysis

Once data were collected, transcription began and was followed by data analysis. According to Ritchie, Spencer and O’Connor (2003), qualitative data analysis involves two main stages: data management and making sense of data by providing descriptions or giving explanations. The authors added that the quality of analysis not only relies on the analytic method being used, but also depends on the strength of the analyst’s conceptual thinking. Dey (1993) suggested four key steps to make sense of qualitative data: describing data, categorizing data, identifying interconnections and reconceptualization. Qualitative data analysis in this study served two purposes. Firstly, the focus group data were analysed to inform the development of the self-designed questions of the phase two survey. Secondly, the data gathered from focus groups and interviews were analysed to meet the complementary function of the entire study. Although data were used in two different ways, the findings were derived from the same analysis. In this section, I will go through the journey of data analysis, starting from transcription and translation to the use of abductive reasoning, identifying codes and forming abstract themes.

3.6.1.1 Transcription and translation

3.6.1.1.1 Transcription

Interviews and focus groups were transcribed verbatim. Transcription symbols provided by Silverman (2011) (Appendix F) were used in the transcription process to indicate pauses, stress and overlapping speeches. Apart from that, response tokens were also included in the transcription process. In the final transcripts, names of hospitals and interviewees were replaced to ensure confidentiality (McLellan et al., 2003). Also, in order to facilitate the analytic process, basic background information such as age, gender, education background, working experience and practice area were
included in the front page of each transcript (McLellan et al., 2003). Refer to Appendix G for a sample transcript.

The common challenges of transcribing interviews include “incomplete sentences and overlapping speech” (McLellan et al., 2003). In addition to that, in the initial stage of transcription, I encountered difficulties in understanding some of the slang words and jargon commonly used in the Macau clinical setting. To overcome this problem, I listened to the audio recording right after each interview to pick up the terms and phrases that I could not understand completely, and asked my colleagues in the nursing college about their meanings. This enhanced the accuracy of the transcripts. Also, I gave the full transcript to all the interviewees and asked for feedback in order to see if there were any misunderstandings. Some of the interviewees identified and corrected some misused Chinese characters in the transcript. Otherwise, no misinterpretations of meanings were identified in the transcripts. In addition, the transcripts were checked against the recordings after transcription to minimize misheard words or phrases (McLellan et al., 2003).

3.6.1.1.2 Translation

All focus groups and interviews were conducted in Cantonese. Similar to the CLEI, I did the translation by myself. Translation is one of the biggest challenges in cross-language studies, and its aim is to provide a clear and accurate transcript which is comprehensible to everyone (Esposito, 2001). Although this study was not a cross-cultural study, it involved the use of two languages. Cantonese was used in conducting the focus groups and interviews, whilst the findings were reported in English. Taking advantage of being a bilingual researcher, the problem of misinterpreting participants’ meaning has been minimized (Esposito, 2001). However, translation challenges still existed.

Twinn (1997) examined the influence of translation on qualitative data. Similar to my study, Twinn’s study was conducted in Cantonese and then translated to English. It was found that the difficulties in finding equivalent expressions for colloquial phrases
and the differences in the grammatical structures of the two languages affected the representativeness of the narratives, as well as the reliability and validity of the data (Twinn, 1997). In addition, it was also found that no matter whether the analysis was done in English or Cantonese, similar themes and categories were generated during data analysis. Translation had just added complexity to the situation (Twinn, 1997).

In my study, two of the focus groups and two of the interviews were translated fully into English. I experienced the same difficulties during translation as stated above. For some of the phrases, I could only translate the central meaning instead of the exact wordings used by the interviewees. Also, all transcription symbols, non-verbal interactions and some of the response tokens used in the Cantonese transcripts were omitted in the translation process. This was because the sentence structures of Cantonese and English were very different. It was impossible to put all pauses, stress and response tokens into the translation texts sensibly. In order to ensure the original meaning of the text was not affected, the importance of the response tokens and non-verbal interactions were reviewed before their removal (Oliver et al., 2005). After finishing four pieces of translation, I found that during the process of conceptualization (Cantonese data) and reconstruction (English translation), some of the emotions and feelings expressed by the participants were lost because conversations had to be fitted into the English structure. I believed that if I had only used the translated transcripts to carry out the analysis, some of the original meanings might not have been conserved. As suggested by Twinn (1998), the quality of data could be maximized if analysis was done with the source language. Therefore, the data analysis of this study was done by using the original Cantonese transcripts. Important findings and salient phrases were later translated to English for further interpretation and discussion.

3.6.1.2 The use of abductive reasoning

‘Abductive inference entails considering all plausible theoretical explanations for the surprising data, forming hypotheses for each possible explanation, and checking these hypotheses empirically by examining data to arrive at the most plausible explanation’ (Charmaz, 2014, pp201). In this study, abductive reasoning was used to create
connections between student nurses’ and clinical facilitators’ clinical learning and teaching experiences on placements and the theory of the communities of practice. Beginning with an inductive approach, data were analysed to identify patterns and relationships. By doing this, the essence of participants’ experiences was captured. Also, it ensured the patterns emerged were free from theoretical influences and completely grounded in data (Bazeley, 2013, Ormston et al., 2013). After finishing the inductive phase of the data analysis, patterns emerged that were grouped and compared with the four key concepts of the theory of the communities of practice, namely mutual engagement, joint enterprise, shared repertoire, and the formation of identity.

Deductive reasoning is based on what is already known (Bryman, 2008). Although it does not facilitate the exploration of new ideas, it helps to strengthen or reject existing knowledge (Reichertz, 2004, Ormston et al., 2013). My intention to include a deductive component in the analytic process is to see whether the concepts in the identified theory exist in the data (Reichertz, 2004), how these concepts were present in the context of the Macau clinical learning environment, and whether additional components have to be considered when adopting the theory of communities of practice in the nursing context.

By employing abductive reasoning, the empirical data are not only used to draw inferences from the social world being explored, it also provide insights to facilitate the interpretation and re-contextualisation of existing knowledge in order to meet social changes and provide a better fit for the local context (Reichertz, 2004, Bazeley, 2013).

3.6.1.3 Thematic analysis

Transcription and data analysis were performed simultaneously. Thematic analysis is widely used in qualitative analysis. It is flexible and compatible with various theoretical frameworks (Braun and Clarke, 2006). By developing a thematic framework, data are organized into themes, categories and subcategories. The analytic process is systematic, rigorous and transparent (Ritchie et al., 2003). Raw qualitative
data are rich, but because of their richness, information is always disorganized and intertwined. So, before starting the analytic process, data have to be managed systematically. Ritchie et al. (2003) suggested six steps to manage qualitative data: familiarizing oneself with the data, forming a conceptual framework by identifying recurrent themes, applying the conceptual framework to the raw data by ‘indexing’, adding or collapsing categories in the conceptual framework, sorting similar content together to form themes or concepts, and finally summarizing the original data to reduce the amount of material and at the same time identify the essence of the data and their relevance to the research questions. At the stage of data management, the terms and phrases used in the conceptual framework should be retained as close to participants’ own language as possible, the analyst’s interpretation has to be kept to a minimum, and it is important not to discard unclear materials because they may be useful at a later stage of the data analysis (Ritchie et al., 2003).

All the focus groups and semi-structured interviews were conducted by me. Before analysis began, I had already had some initial thoughts about the content of the data; and memos were written to record my general feelings towards each interview. In addition, the atmosphere, and the interviewees’ thoughts which impressed me during the focus groups and interviews were also noted down. Apart from that, data were read repeatedly during the processes of transcription and translation, as well as code generation and pattern identification. By all these ways of reading, a thorough understanding of data was achieved which facilitated data management, further analysis and interpretation at the later stage of the study. A conceptual framework for data management was constructed after the generation of initial codes. Coding was performed manually and then managed systematically by using Nvivo 10. The codes and categories were revised continuously in the data management process. Eventually, data were reduced and brought to the analytic stage. The conceptual framework for data management is shown in Table 3.3.
1. The clinical learning environment
   1.1. Fitting in
       1.1.1. Perception of fitting in the nursing team
       1.1.2. Experience of fitting in the nursing team
       1.1.3. Students have to engage in practice
   1.2. Relationship between students/ clinical instructors/ mentors/ ward nurses
   1.3. Working in another community of practice
   1.4. Students as a source to aid reflection and development in the workplace

2. Student participation on placement
   2.1. How do students participate in the workplace
       2.1.1. Transforming knowledge to practice
       2.1.2. Guided participation
       2.1.3. Getting work done on placement
       2.1.4. Learning to be a nurse
       2.1.5. Working with patients
       2.1.6. Hesitating to be involved in practice
       2.1.7. Students’ limitations on practice
   2.2. Work with clinical instructors/ mentors/ nurses
       2.2.1. Shortcomings of working with clinical instructors/mentors
       2.2.2. Working with ward nurses
       2.2.3. Ward nurses as relief mentors
       2.2.4. Benefits of having ward nurses to facilitate student learning
   2.3. Not being able to be involved in patient care/ critical situations
   2.4. Negotiation
       2.4.1. Seeking learning and practice opportunities
       2.4.2. The need to negotiate learning and practice opportunities
       2.4.3. Negotiation and legitimacy

3. Students’ responsibilities
   3.1. Expectation on students (nursing college/ clinical facilitators / mentors / ward nurses)
   3.2. Students’ responsibilities as perceived by clinical instructors’/ mentors/ ward nurses/ others
   3.3. Helping with ward routines

4. Clinical instructors’ and mentors’ responsibilities
   4.1. Harmonizing working and learning
   4.2. Being accountable for students and the quality of care delivered to patients

5. Supernumerary status
   5.1. Perception of supernumerary status (Students/ clinical instructors /mentors)
   5.2. Understanding of supernumerary status (Students/ clinical instructors /mentors)
   5.3. What if students were not under supernumerary status
   5.4. Implicit use of supernumerary status

6. Identity
   6.1. You are a nurse
   6.2. A helper
   6.3. Students’ identity formed from participation in different types of clinical activities

7. Others

Table 3.3 Conceptual framework for data management
Data were analysed thematically in this study. Data were first analysed using an inductive approach, and at a later stage, I added a degree of deductive reasoning in the analytic process by using the concepts of ‘mutual engagement’ and ‘joint enterprise and shared repertoire’ from the theory of communities of practice as themes to either provide a structure, or be complementary to, the emerging key themes and categories formed from the inductive data analysis, thereby developing ‘local explorations in accordance with the chosen theoretical framework’ (Ritchie et al., 2003, pp255). As a result, the analytic process of this study involved two stages.

In the first stage, I employed the constant comparative method to aid data analysis. The constant comparative method helps analysts shape their work systematically and increases the internal and external validity of the study (Boeije, 2002). According to Glaser (1965), the constant comparative method can be used to generate theories as well as suggest properties of general phenomena. In this study, the codes and categories found in the conceptual framework for data management were compared and contrasted repeatedly during the analytic process in three steps: within each interview/focus group, across interviews/focus groups with similar experiences (i.e. students, clinical instructors and mentors), and lastly, comparing and contrasting among students, clinical instructors and mentors. In the first two steps, originally established and newly-emerging categories were compared. By identifying similarities, differences and linkages between codes and descriptive categories, more abstract categories and patterns emerged. In the third step, the comparison between different types of participants in the study helped generate complementary views of the clinical learning situation in Macau and complete the picture of student learning in the clinical environment. Data analysis ended when regular patterns were formed and new categories were found to be unlikely to be identified in further analysis. Categories were reviewed again to avoid missing important data (Lincoln and Guba, 1985). At the end, six key categories emerged: loving to be involved in clinical activities, working with different people in the workplace, the degree of legitimate participation on placement, supernumerary status, and the formation of identity. Detailed findings can be found in chapter five.
After analysing the data from an inductive approach, theory driven themes were added to the final analysis of the data set. The addition of theory driven themes was undertaken in the last stage of data analysis because the inclusion of abstract concepts from theory at early stage of data analysis would have restricted the emergence of new categories from the data set. Analytical thinking would potentially have been hindered, and participants’ experiences in the social context might not have been reflected in the study (Ritchie et al., 2003, Rapley, 2011). The presentation of themes and categories generated from inductive reasoning along with the key concepts of the communities of practice provided a rich ground to elucidate the findings of the study. A summary of the themes, categories, sub-categories, and corresponding examples of initial codes and transcripts is provided in Table 3.4

After analysing the full data set, I found that it would be best to present and discuss the study findings by putting quantitative findings as the background and qualitative findings as foreground, rather than merely following the sequence of each phase. Although the qualitative findings can stand on their own, without the quantitative input, the prominence of the differences in the nature of participation and interpersonal interaction between second/third and fourth year students that emerged from the survey could not readily be demonstrated from the qualitative interviews.
<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Sub-categories</th>
<th>Examples of initial codes</th>
<th>Transcripts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutual engagement</td>
<td>Loving to be involved in clinical activities</td>
<td>Students’ aspirations</td>
<td>Seeking learning and practice opportunities</td>
<td>I would like to learn what I wanted to learn, practice what I desired for and apply my knowledge on placement. (Student E, Y3)</td>
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<tr>
<td></td>
<td>Preparing for the future</td>
<td>Getting work done on placement</td>
<td></td>
<td>When you have to prepare the materials needed before a procedure, you can do it quicker. We don't want to waste our clinical learning time. That’s why we have to prepare beforehand. (Student B, Y3)</td>
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<td></td>
<td>Learning to be a nurse</td>
<td></td>
<td></td>
<td>I always tell students that they must have strong theoretical background in order to become strong in practice. They are only a technician if they only perform well technically, and an undergraduate degree is not necessary for that. (Clinical Instructor E)</td>
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<td></td>
<td>Acknowledging the differences between classroom and the reality</td>
<td>Work with patients</td>
<td></td>
<td>If it is allowed, of course it is good to see a real case that we have examined at school. I think practising a procedure [in a lab] is different from doing it on real patients. Our training on technical skills is to provide us a foundation. We are not sure if we can perform the skills as well as we did at school, or if we can have opportunities to try them out. (Student B, Y4)</td>
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<td></td>
<td>Transforming knowledge to practice</td>
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<td>For students, placement does not only help them to relate theory with practice, it also provides a setting for students to learn. It is because students won’t become familiar with some of the skills unless they see them in person and try out by themselves. This is the way to transform knowledge to something really owned by students. (Mentor E)</td>
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<tr>
<td>Making contributions to the workplace</td>
<td>Students’ responsibilities in the workplace</td>
<td>Miss [students sometimes use ‘Miss’ to refer to clinical instructors] thought that it is our responsibility. We should offer help and so we have to do the work. Once we are in the ward, we are part of it. Although we are not counted as manpower, we have to show others our worth of existence in the workplace. We have to work and help. Everything is related to us, and we have to offer help. (Student D, Y3)</td>
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<tr>
<td>Fit in the nursing team</td>
<td>Students have to engage in practice</td>
<td>For me, fitting in is, you know, clearly about the workflow of the workplace…It means you know what others are doing, and others know what you are doing. Both sides will take initiatives to communicate. (Clinical Instructor C)</td>
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<tr>
<td>Working with different people in the workplace</td>
<td>Working with clinical instructors</td>
<td>Shortcomings of clinical instructors’ facilitation</td>
<td>When a clinical instructor was supervising a student on a procedure, other students would then group together and had no idea what to do. (Student F, Y3)</td>
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<tr>
<td>Working with mentors</td>
<td>Ward nurses as relief mentors</td>
<td>If our mentor is too busy or on leave, they will find other nurses to supervise us. There is always a nurse arranged to supervise us on every shift. (Student A, Y4)</td>
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<tr>
<td>Working with nurses</td>
<td>Relationship between students and ward nurses</td>
<td>I’ve been to many wards for placement. Many of the nurses are graduated from our nursing college. They understand our difficulties, and most of them are willing (to teach us). When we ask, they are willing to teach us. Of course, nurses who are on main shift are very busy. We shouldn’t disturb nurses on main shift. Other nurses are helpful too, though they are not our mentor. They are willing to hold things for us to do, or watch us doing a procedure, or teach us if we don’t know how to do. Although they are busy, they are willing to do these. I think we are learning in a more comprehensive manner, and there are more opportunities. (Student B, Y4)</td>
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<tr>
<td>The degree of legitimate participation on placement</td>
<td>Expectations placed on students</td>
<td>Help with ward routines</td>
<td>Students are expected to take up some clinical tasks...like feeding patients...students have to finish these before doing other things. (Clinical Instructor C)</td>
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<td>Doing observations</td>
<td>Not able to involve in patient care/critical situations</td>
<td>Actually, resuscitation happened once. We just watched the process and didn’t help anything. It was because the situation was too critical. We couldn’t do anything and we didn’t know how to do. So, we just observed. (Student C, Y3)</td>
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<td>Performing basic care and qualified nurses’ work</td>
<td>Doing nurse assistants’ and qualified nurses’ work</td>
<td>I think we did nurse assistants’ work most of the time, and occasionally get in touch with nurses’ work. We felt contented when we were allowed to do nurses’ work. (Student A, Y3)</td>
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<td>Power and negotiation</td>
<td>Negotiation and legitimacy</td>
<td>I seldom let second year students perform invasive tasks. However, I will give more opportunities to fourth year students. I ask them whether they would like to do a procedure, and I am eager to delegate work to them...If junior students want to do invasive procedures, I will see whether time is available. If the ward is busy, I will apologize to them and say, ‘I’m very busy at the moment, I can’t supervise you, and maybe we do it next time.’ In contrast, I will spend more time with fourth year students. (Mentor D)</td>
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<td>Supernumerary status</td>
<td>Supernumerary status</td>
<td>Implicit use of supernumerary status</td>
<td>We seldom talk about it formally. Perhaps I tell students that they come to learn on placement, but never stress on supernumerary status. (Clinical Instructor C)</td>
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<tr>
<td>The joint enterprise and shared repertoire</td>
<td>The negotiation of joint enterprise on placement</td>
<td>Working with differences</td>
<td>Working in another community of practice</td>
<td>In all, I think we, as clinical instructors, need to build a good relationship with nurses and doctors of the placement ward... We shouldn’t do whatever we like in the ward. Because we were, we were there to disturb them (the ward staff), not helping them. I think we need to have this kind of mind-set. (Clinical Instructor B)</td>
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<tr>
<td>Clinical facilitators serve as middlemen and gatekeepers in the clinical learning process</td>
<td>Harmonizing working and learning</td>
<td>Some nurses expressed their disappointment with students to me. I had to let them know about the difficulties faced by students and their constraints. I told nurses about students’ situations, suggested them to provide more opportunities for students to practice and hoped that they could understand students more... For students, I had to analyze the situation with them and explained that nurses were not unwilling to let them practice or being rude. (Clinical Instructor C)</td>
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<td>Mutual accountability</td>
<td>Being accountable for students and the quality of care delivered to patients</td>
<td>When I was mentoring students, on the one hand I had to take care of patients’ needs and on the other hand, I had to consider the preferences of the nurses. Also, I had to keep an eye on students and see whether they did anything wrong. I needed to keep focus... I think I’m accountable for all these and it is my responsibility. It created huge stress for me. The level of stress is much higher than when I practiced by myself. I had to keep reminding students, “Don’t do anything wrong. When you do something wrong, it does not only affect you, but also the nursing college, patients, the ward and the hospital.” (Clinical Instructor B)</td>
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</table>
The shared repertoire | Developing shared repertoire | Students as a source to aid reflection and development in the workplace | If we are friends with students, when they notice the way we work is different from the way they were taught in the nursing college, they will ask, “Should it be done this way?” I think it is good. Since we have been working in the ward for a long time, some bad habits were developed. Sometimes we need students to remind us. Students can remind us through their observation on our practice and let us realize that we have to break the bad habits. (Mentor D)

The formation of identity | Students’ self-perceived role in the workplace | I think I’m an assistant of the nurse assistants… It is because they [patients] usually ask nurse assistants for help, but when nurse assistants are too busy to help them, they find us [laughter]. Asking us to get them bedpans and assist them to go to the toilet. They always ask us for help. We are students and we won’t refuse them. It is what we did on placement. (Student D, Y3)

You are a nurse | | I always tell the student that I won’t take their year of study into consideration when they are on placement. “After you put on the uniform, I will see you as a nurse. You have to bear the responsibility of a nurse”… they have to adapt to the change in their role. They can’t just rely on clinical instructors. (Clinical Instructor A)

Table 3.4 Summary of themes and categories
3.6.2 Quantitative data analysis

The pre- and post- questionnaires were administered to one hundred and forty-five and one hundred and fifty students respectively. Data were entered to SPSS version 21 for analysis and the level of significance was set at $p < .05$. The aim of the quantitative analysis of this study was to provide the background to bring out the story illustrated by the qualitative findings. Hence, the focus of the analysis was on students’ perceptions of the clinical learning environment and the nature of student participation on placement. Students’ perceptions of the clinical learning environment were examined by using the CLEI. The CLEI consists of six subscales. There are seven statements under each subscale, and the statements can be either positive or negative in nature. Responses were indicated using a four point Likert scale: strongly agree, agree, disagree and strongly disagree. In order to have a clearer interpretation of the results, scores of negative statements were reversed prior to the analysis. Thus, responses of positive and negative statements were scored 4, 3, 2 and 1, and 1, 2, 3 and 4 respectively. Invalid responses, such as omitted responses or were more than one of the options were indicated, were treated as missing data. The scoring method I used was different from that suggested by Chan (2001). From Chan’s perspective, a score of three would be given to invalid responses. However, I argued that it seemed to be inappropriate to assume an invalid response as holding a neutral position for a statement, because there could be multiple possibilities behind a non-response (Henderson et al., 2006). The assumption would affect the validity and reliability of the inventory.

The mean score of each item and the sum of mean of each subscale were computed. The difference between the preferred and actual clinical learning environment was examined by computing the mean difference between the subscales in the preferred and actual form, and the effect size. Cohen’s $d$ (a standardized measure of the difference between two means) was used to illustrate the effect size of the data. Effect sizes of 0.2, 0.5 and 0.8 were considered as small, medium and large effect size respectively (Cohen, 1988). In order to examine the significance of the differences between the mean scores, a paired-sample t-test was conducted. Also, multiple linear
Regression was conducted to show which of the subscales were the predictors of the independent variable (student satisfaction) in the actual clinical learning environment.

Apart from examining the differences between students’ perceptions of the preferred and actual clinical learning environments, the second aim of the quantitative analysis was to obtain a general understanding of the nature of student participation on placement. Data gathered from the self-designed questions were analysed by both descriptive and inferential statistics. Descriptive statistics were used to summarize data (Polit, 1996) while inferential statistics are used to explore correlation and causal relationships (Parahoo, 2006). The pattern of students’ placement participation experiences were firstly described by central tendencies and the spread of the data. Then, correlations were sought between the outcome variables (activities students spent most time doing on placement, people with whom students mostly worked and student involvement in qualified nurses’ work) and the predictor variable (year of study).

3.7 Rigour of the study

Rigour has to be ensured in every step of the research process. The decisions on research methods, sampling criteria and the tools of data collection and analysis had been made to meet the study aims and address the research questions. Teddlie and Tashakkori (2003) introduced two components to evaluate the quality of mixed methods studies. They are data quality and inference quality. Data quality represents the concepts of validity, reliability and trustworthiness of data. Data collected should be representative and able to capture the phenomenon accurately. Inference quality consists of two components, design quality and interpretive rigour. These qualities can be reflected in the appropriateness of the selection of research methods, the quality of data collection strategies, and the accuracy of researchers’ interpretation and presentation of the study results (Teddlie and Tashakkori, 2003).

In the research process, I had to make sure the research questions were addressing the knowledge gap, the selection of research design and methods was appropriate, the
sample was representative, and the data collected were able to reflect the actual situation. I reflected on the research process continuously, moved back and forth constantly between literature, research questions and all of the steps in the data collection and analytical process, and compared and refined findings repeatedly (Morse et al., 2002).

Apart from the suggestions provided by Teddlie and Tashakkori (2003) on the evaluation of the quality of mixed methods research, since this is a qualitative dominant mixed methods study, I would like to place extra emphasis on the strategies that I employed to ensure the quality of the qualitative strand of the study. In the sections below, I will discuss the means I used to ensure, and evaluate, the quality of this study.

3.7.1 Trustworthiness

According to Lincoln and Guba (1985), the trustworthiness of a study can be evaluated by four criteria: credibility, transferability, dependability and confirmability. Creditability and confirmability are seen as the most important factors to produce a trustworthy study (Shenton, 2004). Creditability evaluates the extent which a study can accurately reflect reality, while confirmability evaluates the objectivity of a study (Bryman, 2008). Although it is impossible for researchers to be completely objective in the research process, they have to ensure the study results are derived from the data which have been analysed logically, and interpreted appropriately, and are free from bias (Lincoln and Guba, 1985). Transferability evaluates the extent which a study is enabled to transfer to a wider population. Qualitative findings are generated from a small number of participants at a specific time and in a specific context. They are difficult to apply to other populations or in different contexts (Bryman, 2008). Lincoln and Guba (1985) suggested that what a qualitative researcher could do is to provide sufficient information about the study setting and other related contextual information for readers to make their judgement on the transferability of the study findings to their local context. Dependability evaluates the reliability of a study. It is determined by the replicability of a study in the same context (Shenton, 2004). Lincoln and Guba (1985)
suggested that researchers have to document the research process precisely and make it accessible to others.

In this thesis, the study setting, study design and methods, data collection and analytic process were all clearly documented. Accordingly, this study allows readers to make judgements on the degree to which its findings may transfer to another context. Transcripts were provided to all participants to check for accuracy. Although I employed both inductive and deductive reasoning in the data analytic process, data were analysed inductively before adding in the deductive component to shape up the analysis. Therefore, the findings were still grounded in participants’ experiences and I did not rely heavily on the framework of the communities of practice during data analysis. In addition, by using the constant comparative method to analyse the data, both internal and external validity of the findings were enhanced (Boeije, 2002).

3.7.2 The use of reflexivity

[The] ‘Researcher is a central figure who actively constructs the collection, selection and interpretation of data…We realized that meanings are negotiated within particular social contexts so that another researcher will unfold a different story’ (Finlay, 2003, pp5). Reflexivity is an ‘ongoing self-awareness’ (Pillow, 2003, pp178) throughout the research process. It allows researchers to explore personal values, the relationships with participants and the social contexts within which the research is situated. It also involves researchers in exploring bias, and evaluating the research process (Morse et al., 2002, Finlay, 2003, Gough, 2003, Pillow, 2003). It is a researcher’s responsibility to identify the best way to make use of reflexivity in their study, with respect to their own research aims, epistemological stance and the choice of methodology, in order to achieve an accurate interpretation of the data (Finlay, 2003, Pillow, 2003).

I have applied reflexivity throughout the thesis and the research process. In chapter one, I provided a reflection on my clinical learning and working experiences. Self-reflexivity helped me to construct the research problem. I used my personal experience as a means to create links with the participants and the social context being studied.
Throughout the study process, reflective notes were written to record every step in the research process, the rationale behind decisions and my feelings after each focus group and interview session. Pillow (2003) noted that reflexivity has to go further than the level of personal exploration and needs to be put into practice. Participants’ reflexivity should also be encouraged. I encouraged my participants to reflect on their experiences and social interactions in the clinical learning environment. At the same time, I was aware of my interactions with the participants. I reflected continuously on the most appropriate way to ask questions in the interviews, and made revisions if required in order to prompt deeper reflections. In the analytic process, I documented all the changes I made to the codes and categories, and anything that influenced my thoughts to make such changes. These reflective notes were found to be very useful in the writing up process. In addition, the change in the weight and contributions of the quantitative and qualitative strands also resulted from reflection on the relative importance of different types of data to the research problem. It ensured the best use of the collected data, and produced an analysis which contributed to the formation of meaningful interpretations of the findings and provided the ‘best answers’ to the research questions.

3.8 Conclusion

This chapter has presented the methodological approach of this qualitative dominant mixed methods study. The chapter started with an exposition of research aim and research questions. Following a discussion of the pragmatism framework of the study, I explained the rationale for choosing a mixed methods design to answer the research questions and for recruiting clinical facilitators as well as student nurses to the study. Next, I provided a detail account of the research methods of qualitative and quantitative strands. Sample characteristics, and the reasoning behind the construction of a sample and the creation of the three phases of data collection was explained. After that, I outlined the method of data analysis in both the quantitative and qualitative strands. At the end of the chapter, the means employed to ensure and evaluate the rigour of the study were considered.
The findings produced from the data analysis discussed in this chapter will be presented in the following two chapters. Chapter four sets out the quantitative findings which form the background of the study, while the qualitative ‘foreground’ generated from focus groups and semi-structured interviews will be addressed in chapter five.
4 Chapter Four – Students’ perception towards participation and the clinical learning environment in Macau

4.1 Introduction

In this and the following chapter, research findings which serve as the background (i.e. quantitative findings) and the foreground (i.e. the qualitative findings from focus groups and semi-structured interviews) of the study will be presented. The findings forming the background of the study are purely from the students’ perspectives. The ‘foreground’, which presents in chapter five, illustrates the qualitative findings yielded from both students’ and clinical facilitators’ perspectives. In this chapter, the findings of the survey are presented, focusing on the activities that students participated in on placement, the type of people the students worked with, and students’ perceptions of supernumerary status in different years of study.

Chapter five presents the main body of the findings. Student nurses’ clinical learning experiences derived focus groups and clinical instructors’ and mentors’ mentoring experiences derived from semi-structured interviews are compared and contrasted. Qualitative data were analysed inductively, complemented with a small degree of deductive reasoning based on the framework of the communities of practice, resulting in findings presented in four themes: mutual engagement, supernumerary status, joint enterprise and shared repertoire, and the formation of identity. Some of these core themes are further divided into categories and sub-categories that emerged from the data analysis.

4.2 Quantitative findings

In this chapter, findings of the self-designed questionnaire and the CLEI are reported (which serve as the background to the main qualitative study), on students’ perceptions of their participation on placement, interaction with the clinical environment, understanding of supernumerary status and of the clinical learning environment of Macau.
4.2.1 Response rate

In total, there were 147 pre-placement questionnaires and 151 post-placement questionnaires returned. The higher number of returned post-placement questionnaires was explained by the fact that students were allowed to respond to the post-placement questionnaire regardless of their participation in the pre-placement questionnaire. Overall, the response rates of pre- and post-placement questionnaire were 86.8% and 90.4% respectively. 82% of the respondents returned both questionnaires. Detailed statistics on response rate are shown in Table 4.1.

<table>
<thead>
<tr>
<th>Response rate</th>
<th>Second year (N=62)</th>
<th>Third year (N=57)</th>
<th>Fourth year (N=48)</th>
<th>Total (N=167)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-placement</td>
<td>62 (100%)</td>
<td>56 (98.2%)</td>
<td>29 (60.4%)</td>
<td>147 (86.8%)</td>
</tr>
<tr>
<td>Post-placement</td>
<td>59 (95.2%)</td>
<td>54 (94.7%)</td>
<td>38 (79.2%)</td>
<td>151 (90.4%)</td>
</tr>
<tr>
<td>Both questionnaires</td>
<td>58 (93.5%)</td>
<td>53 (93.0%)</td>
<td>26 (54.2%)</td>
<td>137 (82.0%)</td>
</tr>
</tbody>
</table>

Table 4.1 Response rate

4.2.2 Demographic information

Respondents varied between 19-24 years old, with a mean age of 20.7 years. In line with the ratio of women to men in this nursing college, the majority of the respondents, 87% of the sample, were female.

In this study, students had placements in a wide range of practice areas, such as medical wards; surgical wards; and different kinds of specialities, including the accident and emergency department (AED), cardiac, gynaecology, neurology, orthopaedic and respiratory wards. Since there was only a small number of students having placements in on each of these specialities, I grouped all students who had placements in these specialities into a category named ‘Other specialities’ to get a clearer comparison with those students having placements in medical and surgical wards. After this re-grouping,
37.8%, 32.7% and 29.5% of the placements took place in medical, surgical and other specialities respectively.

The placement structure, in terms of placement duration, group size and the type of clinical facilitator students were working with, was different between second/third and fourth year students. Second and third year students had a two-week placement in a group of five or six, facilitated by either clinical instructors (about 80%) or mentors who were participating in the college-hospital exchange programme. In contrast, fourth year students’ placement lasted for 5 weeks and all placements were facilitated by mentors. Students were not involved in group learning any more. They were allocated to different shifts and paired with mentors or ward nurses for most of the time. As indicated in Table 4.2, fourth year students might have placements in a group of eight. It was a special case as it only happened when students were having placement in the AED. AED is a complex working environment which involves a high level of division of labour in the workplace. Students were separated and allocated to different sections in this department while learning.

There were four groups of second and third year student (a total of 21 students) facilitated by mentors who were participating in the college-hospital exchange programme. In the exchange programme, mentors, who were ward nurses of the hospital, were invited to work at the nursing college for a semester. They were responsible for some laboratory sessions in the nursing college and took the role of clinical instructor on placements. Like other clinical instructors, mentors who were in the exchange programme were supernumerary on placement. The nursing college arranged these mentors to facilitate placements in their original workplace.
<table>
<thead>
<tr>
<th>Demographic and Placement Information</th>
<th>Second year (n=62)</th>
<th>Third year (n=56)</th>
<th>Fourth year (n=38)</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (Year)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>19-24</td>
<td>20-22</td>
<td>21-24</td>
<td>19-24</td>
</tr>
<tr>
<td>Mean</td>
<td>19.9</td>
<td>20.7</td>
<td>22.1</td>
<td>20.7</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7 (11.3%)</td>
<td>11 (19.6%)</td>
<td>2 (5.3%)</td>
<td>20 (12.8%)</td>
</tr>
<tr>
<td>Female</td>
<td>55 (88.7%)</td>
<td>45 (80.4%)</td>
<td>36 (94.7%)</td>
<td>136 (87.2%)</td>
</tr>
<tr>
<td><strong>Placement ward</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>25 (40.3%)</td>
<td>22 (39.3%)</td>
<td>12 (31.6%)</td>
<td>59 (37.8%)</td>
</tr>
<tr>
<td>Surgical</td>
<td>16 (25.8%)</td>
<td>22 (39.3%)</td>
<td>13 (34.2%)</td>
<td>51 (32.7%)</td>
</tr>
<tr>
<td>Other specialities</td>
<td>21 (33.9%)</td>
<td>12 (24.1%)</td>
<td>13 (34.2%)</td>
<td>46 (29.5%)</td>
</tr>
<tr>
<td><strong>Placement duration</strong></td>
<td>2 weeks</td>
<td>2 weeks</td>
<td>5 weeks</td>
<td>-</td>
</tr>
<tr>
<td><strong>Group size</strong></td>
<td>Range</td>
<td>5-6</td>
<td>5-6</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3-8, but students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>work on different</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>shifts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitator</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical instructor</td>
<td>52 (83.9%)</td>
<td>45 (80.4%)</td>
<td>-</td>
<td>97 (62.2%)</td>
</tr>
<tr>
<td>Mentor</td>
<td>-</td>
<td>-</td>
<td>38 (100%)</td>
<td>38 (24.4%)</td>
</tr>
<tr>
<td>Mentor who participated in the</td>
<td>10 (16.1%)</td>
<td>11 (19.6%)</td>
<td>-</td>
<td>21 (13.5%)</td>
</tr>
<tr>
<td>college-hospital exchange programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2 Demographic and placement information
4.2.3 Self-designed questions

As has been noted in the methodology chapter, there were nine self-designed questions in the post-placement questionnaire. Since quantitative data serve as the background of this study, only findings which are highly relevant to the main body of qualitative data are presented in the thesis. Accordingly, seven variables are included: activities on which students spent most time on while on placement, people with whom students mostly worked, factors affecting student participation on placement, students’ understanding of being supernumerary on placement, degree of involvement in qualified nurses’ work, students’ perceptions of the importance of ‘fitting in’, and students’ self-perceived ability to ‘fit in’ on placement. Since all variables in this questionnaire were categorical in nature, data exploration began with descriptive statistics, which included frequencies and percentages, followed by inferential statistics. The relationship and the strength of association between variables from the demographic and self-designed questions, and within variables in the self-designed questions were investigated by Chi-square test, Cramer’s $V$ and Gamma. Since the sample size of this study is small, the assumptions of the Chi-square test, which is “all expected counts should be greater than 1 and no more than 20% of the expected counts should be less than 5” (Field, 2013, pp735) might not be met in all cases. When the assumptions of these two tests were not fulfilled, Fisher’s exact test was used instead.

4.2.3.1 Descriptive findings

Results showed that second and third year students reported spending most time performing bedside care, followed by doing case reports and treatments. In contrast, fourth year students spent most of their time performing treatments, followed by paper work and bedside care. As seen in Table 4.3, by comparing the types of activities students spent most time on in placement by year of study, it was apparent that the fourth year students spent significantly less time on performing bedside care, but more on treatments and paper work than second and third year students.
There was also a contrast between year of study in the type of people students mostly worked with on placement and student involvement in qualified nurses’ work between second/third and fourth year students. Since second and third year students had placements in groups, they worked with groupmates and their clinical instructors most of the time. Students only spent very limited time with ward nurses. In contrast, fourth year students worked closely with ward nurses and mentors. Nearly 60% of the fourth year students indicated that they worked mostly with ward nurses on placement. Details are shown in Table 4.4. Regarding student involvement in qualified nurses’ work, a similar pattern of change was identified between second/third and fourth year students. As is shown in Table 4.5, it was clear that fourth year students were more likely to be involved in qualified nurses’ work than other students on placement.

Table 4.3 Time spent on different kind of ward activities by year of study (n=145)

<table>
<thead>
<tr>
<th></th>
<th>Spent most time</th>
<th>Second most</th>
<th>Third most</th>
<th>Fourth most</th>
<th>Spent least time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bedside care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>68.4%</td>
<td>26.3%</td>
<td>5.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>64.2%</td>
<td>17.0%</td>
<td>13.2%</td>
<td>3.8%</td>
<td>1.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>14.3%</td>
<td>37.1%</td>
<td>31.4%</td>
<td>8.6%</td>
<td>8.6%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Treatments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>3.5%</td>
<td>31.6%</td>
<td>50.9%</td>
<td>10.5%</td>
<td>3.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>9.4%</td>
<td>35.8%</td>
<td>37.7%</td>
<td>15.1%</td>
<td>1.9%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>57.1%</td>
<td>22.9%</td>
<td>8.6%</td>
<td>2.9%</td>
<td>8.6%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Paper work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>1.8%</td>
<td>3.5%</td>
<td>12.3%</td>
<td>63.2%</td>
<td>19.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>1.9%</td>
<td>1.9%</td>
<td>3.8%</td>
<td>47.2%</td>
<td>45.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>20%</td>
<td>28.6%</td>
<td>37.1%</td>
<td>14.3%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Case report</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>24.6%</td>
<td>36.8%</td>
<td>29.8%</td>
<td>8.8%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>17.0%</td>
<td>37.7%</td>
<td>34.0%</td>
<td>11.3%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>0.0%</td>
<td>11.4%</td>
<td>8.6%</td>
<td>57.1%</td>
<td>22.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Type of people with whom students mostly worked on placement

<table>
<thead>
<tr>
<th>Year</th>
<th>Clinical instructor / mentor</th>
<th>Ward nurses</th>
<th>Nurse assistant</th>
<th>Other students</th>
<th>On their own</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td>29.8%</td>
<td>1.8%</td>
<td>3.5%</td>
<td>57.9%</td>
<td>7.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>21.2%</td>
<td>3.8%</td>
<td>3.8%</td>
<td>65.4%</td>
<td>5.8%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>29.7%</td>
<td>56.8%</td>
<td>8.1%</td>
<td>2.7%</td>
<td>2.7%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.4 Type of people with whom students mostly worked with on placement by year of study (n=146)

<table>
<thead>
<tr>
<th>Year</th>
<th>Always</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td>3.4%</td>
<td>16.9%</td>
<td>66.1%</td>
<td>13.6%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 3</td>
<td>9.4%</td>
<td>9.4%</td>
<td>69.8%</td>
<td>11.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Year 4</td>
<td>25.6%</td>
<td>61.5%</td>
<td>12.8%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.5 Student involvement in qualified nurses’ work by year of study (n= 151)

In terms of participation on placement, in general, results indicated that students’ self-initiative, ward nurses’ attitudes towards students, the assistance of clinical instructors and mentors, and a busy ward environment were the most important contributors for student participation on placement. It was found that students’ perceptions towards these contributors varied across year of study. As is shown in Table 4.6, second year students indicated that their clinical participation was mainly influenced by the help of clinical instructors and their self-initiative to learn and participate on placement. Third year students thought that self-initiative and ward nurses’ attitude towards students were the most important factors, while fourth year students believed that ward nurses’
attitudes towards students and the busy ward environment affected their participation most.

In addition, all students thought that being able to ‘fit in’ on placement was important although they were not always able to ‘fit in’ to the nursing team. Data demonstrated that there was a progressive improvement in students’ perceptions of their ability to ‘fit in’ to the nursing team over the period of clinical education. Details are shown in Table 4.7 and 4.8.
Table 4.6 Factors affecting student participation on placement by year of study (multiple responses) (n=150)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of students in placement group (count, %)</th>
<th>Students’ self-initiative (count, %)</th>
<th>Learning motivation of other students (count, %)</th>
<th>Busy ward (count, %)</th>
<th>The assistance of clinical instructors or mentors (count, %)</th>
<th>Ward nurses attitude towards students (count, %)</th>
<th>Total (count, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td>5 (4.3%)</td>
<td>32 (27.8%)</td>
<td>6 (5.2%)</td>
<td>17 (14.8%)</td>
<td>35 (30.4%)</td>
<td>20 (17.4%)</td>
<td>115 (100%)</td>
</tr>
<tr>
<td>Year 3</td>
<td>3 (2.9%)</td>
<td>34 (32.7%)</td>
<td>4 (3.8%)</td>
<td>15 (14.4%)</td>
<td>19 (18.3%)</td>
<td>29 (27.9%)</td>
<td>104 (100%)</td>
</tr>
<tr>
<td>Year 4</td>
<td>1 (1.4%)</td>
<td>14 (19.4%)</td>
<td>1 (1.4%)</td>
<td>16 (22.2%)</td>
<td>13 (18.1%)</td>
<td>27 (37.5%)</td>
<td>72 (100%)</td>
</tr>
</tbody>
</table>
The importance of fitting in the nursing team

<table>
<thead>
<tr>
<th>Year of study</th>
<th>The importance of fitting in the nursing team</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very important</td>
<td>Important</td>
</tr>
<tr>
<td>Year 2</td>
<td>72.9%</td>
<td>25.4%</td>
</tr>
<tr>
<td>Year 3</td>
<td>73.6%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Year 4</td>
<td>79.5%</td>
<td>20.5%</td>
</tr>
</tbody>
</table>

Table 4.7 Students’ perceptions of the importance of fitting in on placement by year of study (n=151)

<table>
<thead>
<tr>
<th>Year of study</th>
<th>Students’ experiences of fitting in the nursing team on placement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Always</td>
<td>Usually</td>
</tr>
<tr>
<td>Year 2</td>
<td>10.2%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Year 3</td>
<td>7.5%</td>
<td>41.5%</td>
</tr>
<tr>
<td>Year 4</td>
<td>12.8%</td>
<td>51.3%</td>
</tr>
</tbody>
</table>

Table 4.8 Students’ experiences of fitting in the nursing team on placement by year of study (n=151)

Supernumerary status on placement has been introduced to clinical placement at the nursing college for more than a decade. However, a lack of clarity concerning supernumerary status among students was found. Over 80% of the students were not clear about whether they were supernumerary on placement or not. It was noted that a considerably higher proportion of fourth year students compared to second/third year students did not identify themselves as supernumerary on placement. Details are shown in Table 4.9.
### Table 4.9 Students’ understanding of supernumerary status on placement by year of study (n=151)

<table>
<thead>
<tr>
<th>Students’ understanding of supernumerary status on placement</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I am not supernatural on placement</td>
</tr>
<tr>
<td>Year 2</td>
<td>44.1%</td>
</tr>
<tr>
<td>Year 3</td>
<td>40.7%</td>
</tr>
<tr>
<td>Year 4</td>
<td>65.8%</td>
</tr>
<tr>
<td>Total</td>
<td>48.3%</td>
</tr>
</tbody>
</table>

#### 4.2.3.2 Relationship between years of study and experiences of clinical participation

As indicated in the descriptive statistics, changes in clinical learning experiences were identified between second/third and fourth year students. Tests were carried out to examine if there were significant differences between years of study and on the aspects of the clinical learning experiences. Before performing the tests, years of study were regrouped into two categories (i.e. second/third year and fourth year) to highlight the differences between these two groups of students. The test results of the relationship and the strength of association between years of study and 1) activities which student spent most time on placement, 2) people with whom students mostly worked and 3) students’ opportunities to be involved in qualified nurses’ work are summarized in Table 4.10. The results of Chi square test, Fisher’s exact test, likelihood ratio, Gamma and Cramer’s $V$ were all strongly significant, with a $p$-value < 0.001.
<table>
<thead>
<tr>
<th>Activities students spent most time doing on placement</th>
<th>Chi square test</th>
<th>Fisher’s exact test</th>
<th>Likelihood ratio</th>
<th>Gamma</th>
<th>Cramer’s $\nu$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedside care</td>
<td>-</td>
<td>34.92$^a$</td>
<td>34.86$^a$</td>
<td>0.75$^a$</td>
<td>-</td>
</tr>
<tr>
<td>Treatment</td>
<td>-</td>
<td>46.83$^a$</td>
<td>48.64$^a$</td>
<td>-0.63$^a$</td>
<td>-</td>
</tr>
<tr>
<td>Paper work</td>
<td>69.62$^a$</td>
<td>-</td>
<td>71.51$^a$</td>
<td>-0.91$^a$</td>
<td>-</td>
</tr>
<tr>
<td>Case report</td>
<td>71.25$^a$</td>
<td>-</td>
<td>71.96$^a$</td>
<td>0.87$^a$</td>
<td>-</td>
</tr>
<tr>
<td>People with whom students mostly worked</td>
<td>71.49$^a$</td>
<td>-</td>
<td>74.79$^a$</td>
<td>-</td>
<td>0.7$^a$</td>
</tr>
<tr>
<td>Involvement in qualified nurses’ work</td>
<td>-</td>
<td>56.48$^a$</td>
<td>59.98$^a$</td>
<td>-0.84$^a$</td>
<td>-</td>
</tr>
</tbody>
</table>

$^a$p<0.001

Table 4.10 The influence of year of study (second and third year vs. fourth year) on activities which student spent most time on in placement, people with whom students mostly worked with and the opportunities for students to be involved in qualified nurses’ work (n=145)

4.2.4 The Clinical Learning Environment Inventory (CLEI)

In this section, I will start with the overall findings of the CLEI, followed by a breakdown of the t-test and cohen’s d of each subscale across year of study. Of the 147 and 151 returned pre- and post-placement questionnaires, 136 of them could be paired. It has to be noted that the number of paired CLEI is different from the number of respondents who returned both pre- and post-placement questionnaire indicated in Table 1 because one of the students just indicated his/her responses on the self-designed questions but not on the CLEI.

Mean scores, standard deviations, and the mean differences between the preferred and actual form of the CLEI were examined. All of the subscales’ mean scores from the preferred form (ranging from 19.71 to 23.44) were higher than that of the actual form.
(ranging from 16.22 to 21.23). Among the six subscales of the CLEI, personalization and satisfaction scored the highest mean in the preferred and actual form respectively. Innovation scored lowest in both forms. The biggest mean difference was found in innovation, followed by personalization and individualization. Apart from mean differences, the differences between the findings of the preferred and actual form were also examined by paired-samples t test and effect sizes. Results indicated that all of the differences between the preferred and actual form were significant with p<0.001. In order to quantify the differences, effect sizes were processed. According to Cohen’s (1988) suggestion, a value of 0.2, 0.5 and 0.8 corresponds to small, medium and large effect size. As is shown in Table 4.11, among the subscales, the differences in personalization, innovation, individualization and satisfaction demonstrated a high effect size, while the differences in student involvement and task orientation demonstrated a medium effect size.

Other than comparing mean scores, multiple linear regression was performed using the data in the ‘actual form’. Satisfaction was set as the outcome variable, while other subscales were the predictor variables. Results showed that student involvement (p<0.001), task orientation (p<0.001), and individualization (p<0.05) explained 54% of the variance of student satisfaction in the actual clinical learning environment.
<table>
<thead>
<tr>
<th>Subscales</th>
<th>Mean score (standard deviation)</th>
<th>Mean difference</th>
<th>t-value</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preferred</td>
<td>Actual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personalization</td>
<td>23.44</td>
<td>20.66</td>
<td>2.78</td>
<td>8.19&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(3.04)</td>
<td>(3.09)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Involvement</td>
<td>21.21</td>
<td>20.22</td>
<td>0.99</td>
<td>4.90&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(2.15)</td>
<td>(1.89)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task Orientation</td>
<td>22.33</td>
<td>20.07</td>
<td>2.26</td>
<td>7.66&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(2.95)</td>
<td>(2.35)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>19.71</td>
<td>16.22</td>
<td>3.49</td>
<td>8.62&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(3.15)</td>
<td>(2.68)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualization</td>
<td>20.11</td>
<td>17.41</td>
<td>2.7</td>
<td>10.74&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(3.02)</td>
<td>(2.73)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>23.41</td>
<td>21.23</td>
<td>2.18</td>
<td>8.29&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>(2.86)</td>
<td>(2.95)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> p<0.001

Table 4.11 Differences between the scores of the preferred and actual forms of the CLEI

4.2.5 Summary

The quantitative findings of this study highlighted the difference in clinical learning experience between second/third and fourth year student nurses in the Macau nursing college. It is worth noting that the variation of clinical learning experience resulting from the change in year of study not only indicated students’ advancement in clinical experience and competence, it was also associated with the transition of clinical facilitators from clinical instructors to mentors, and the extended duration of placement in the fourth year. As summarized in figure 1, the above transitions resulted in an increase in interaction between students and nurses and an increase in opportunity for students to be involved in qualified nurses’ work. In addition, the importance of nurses’ influence on student participation on placement grew across the years of study.
All student nurses thought fitting into the nursing team was important in the clinical learning process. However, the findings showed that not all students were able to fit in on placement. The findings of the CLEI indicated that students would have preferred to have had a better clinical learning environment than they had experienced. Students’ satisfaction with the clinical learning environment was found to be associated with the subscales of student involvement, task orientation and individualization. In other words, the opportunities for students to engage in practice and negotiate their own learning needs and the provision of clear and organized activities in accordance with their abilities were essential to establish an optimal clinical learning environment for student nurses.

Students’ perceptions of being supernumerary on placement was another important point addressed in the quantitative findings. Approximately twenty percent of the students clearly indicated that they were supernumerary on placement. This suggests that the perceptions of supernumerary status among students and other people involved in the clinical learning process, and of its influence on student learning in the clinical environment, are worth exploring.

Figure 4.1 The impact of year of study on students’ clinical learning experience
4.3 Conclusion

The results of the quantitative analysis set the background for an in-depth exploration of student nurses’ and clinical facilitators’ perceptions of clinical learning experience in Macau. It has been highlighted in this chapter that there are significant differences in clinical learning experience between second/third and fourth year students. These differences are found to be associated with the change in clinical facilitators and extended placement duration. These differences apart, students were found to be eager to engage in practice, participate in qualified nurses’ work and fit into the nursing team. However, all of these are challenging to attain. Students wanted to have a better clinical learning environment which favoured engagement in practice and met their learning needs. The lack of clarity in supernumerary status might also cast an influence on student participation on placement. In the next chapter, the findings of focus groups and semi-structured interviews will be presented in detail. The chapter will examine both students’ and clinical facilitators’ perspectives on student participation and students’ interaction with the social environment.
5 Chapter Five – Students’, clinical instructors, and mentors’ experiences in the clinical learning process

5.1 Introduction

Clinical placement is a necessary component of nursing education. Before placement began, students in this study reported experiencing excitement, worries, stress, and they had high expectations for placements. This study has shown that students ‘love to be involved’ in all kind of ward activities. Their eagerness to participate in clinical activities was voiced repeatedly in both focus groups. By experiencing ‘supernumerary status’, ‘the degree of legitimate participation on placement’ and having opportunities to ‘work with different people’ throughout the clinical learning process, students understand the way they function in the clinical environment and establish an identity on the ward.

In this chapter, the three dimensions of the communities of practice framework, i.e. mutual engagement, joint enterprise and shared repertoire, provide the analytical grounding for the presentation of findings. The five main categories: loving to be involved; working with different people; the degree of legitimate participation on placement; supernumerary status; and the formation of identity serve to capture students’ clinical learning experiences. By combining these categories with the concepts of mutual engagement, joint enterprise and shared repertoire, a comprehensive picture of clinical learning in Macau from a social learning perspective will be provided.

5.2 Mutual engagement

Going on placement and being present in the same workplace as nurses doesn’t mean that students can attain membership to the nursing community automatically, although being together is an essential step for building relationships. Mutual engagement does not come ‘naturally’, and it requires work from different parties. Some aspects of mutual engagement are easily observed, while others are far more subtle. The findings
presented in this section not only relate to relationship building or the way students engage with nurses, but also the difficulties and challenges encountered by students, clinical instructors, mentors and nurses in the clinical learning process. Setting out to present the findings, it is appropriate to start with the strongest impression I got from the participants after conducting the focus groups: students do ‘love to be involved’.

5.2.1 Loving to be involved in clinical activities

The following sub-categories help explain why students are desperate to be involved on placement. These sub-categories are: ‘students’ aspirations’, ‘preparing for the future’, ‘acknowledging the differences between the classroom and the reality’, ‘making contributions’ and ‘fitting in’.

5.2.1.1 Students’ aspirations

The nursing students in this study were ambitious, especially in relation to the clinical component of the education programme. They would have liked to try out everything in the clinical environment, the more the better, whether by observation or hands-on practice. In other words, practice opportunities were never enough from the students’ perspective. The excerpts below illustrate students’ thoughts on this issue:

I found that, like on each day of our placement, we might connect one IV medication, gave one nebulizing medication, did one mouth care, answered a number of call bells, and got a few bedpans for patients. I think we did not have enough work to do. It was so inadequate, as if there was nothing for us to do. I want to connect more IV medications, do more injections, and insert nasogastric tubes and urinary catheters. I have a strong desire to do all these. (Student A, Y3)

I would like to learn what I wanted to learn, practise what I desired for and apply my knowledge on placement. (Student E, Y3)

Since we will work in this profession, of course we want to know everything about it. (Student A, Y4)
Some students used the term ‘breakthrough’ to express their excitement and desire to do something new. A fourth year student expressed the following sentiment:

Do something that I haven’t done before, see a new case, and finish a procedure that I’ve never succeeded before. It [the placement] will be meaningful if there are breakthroughs. (Student B, Y4)

These future nurses wanted to experience what could not be taught at school. They would like to know everything with regard to the practical aspects, as well as the interpersonal and social aspects of the workplace. Students admired ward nurses’ ability, and they liked to learn from nurses and do what nurses do. For example, a student described how:

I would like to see how nurses deal with contingencies, and, and what are their first reaction and intervention when dealing with these situations. These are required to accumulate from experience, so that a prompt action can be made. Also, the way to interact with doctors. We haven’t tried that before and really want to know about it. [I] want to know what it is like. (Student D, Y3)

Apart from achieving students’ ambition of learning and practising, students love to be involved in clinical activities because they know that they are preparing for their future. The term ‘future’ may have different meanings for students in different years of study. Nonetheless, being well-prepared is essential for both current practice on placement and students’ future careers.

5.2.1.2 Preparing for the future

The meaning of ‘future’ in this sub-category is two-fold. It is a composite of the immediate and distant future. The immediate future reflects the availability of learning and practice opportunities on placement. Students have to get prepared in order to get the work done on placement. The distant future implies learning to be a qualified nurse and preparing for the future professional role.

Students agreed that it was important to prepare before placement. They believed that this could ensure a smooth clinical learning experience and help secure their
professional image. Also, it was perceived to be the students’ responsibility to do relevant preparation before and throughout placement in both theoretical and technical aspects, as students had to meet expectations from clinical instructors or mentors. Moreover, being well prepared opened up learning and practice opportunities for students. On this theme, some of the students gave the following accounts:

Like the first time we went to a new ward. Because it was new to us. We didn’t know where the equipment and materials were stored. Toilet. It is because somebody might ask, patients might ask us where the toilet was. I think it is not good if we are not able to answer them. (Student G, Y3)

When you have to prepare the materials needed before a procedure, you can do it quicker. We don’t want to waste our clinical learning time. That’s why we have to prepare beforehand. (Student B, Y3)

I always prepare with regard to the placement handbook, because these are the items that we must have to do. Definitely prepare them first as they will be graded. (Student A, Y4)

Every student wanted to learn to be a nurse and therefore loved to see what they hadn’t seen and do what they hadn’t done before. Students thought that they should grasp every opportunity to learn because they worried that opportunities were not always guaranteed, and they wished to start preparing as soon as they could. This proactive approach to preparation is illustrated in the following excerpts:

Actually I would like to see something like resuscitation. It is because I’m afraid that I don’t know what to do if I encounter it in the future. (Student C, Y3)

I want to do something that I’ve never done before. Also, I want to observe something that I haven’t learnt yet. It is because although we’ll have a full year placement in the 4th year, opportunities are limited. If we have done some observations in our third year, we will at least have some ideas in our mind. (Student E, Y3)

When we were in first, second and third year, maybe there were other chances to practise in the next year. But we are now in the fourth year. I do think that if we don’t do [it] now, no one will teach us after we graduated. (Student C, Y4)
By comparing the data between years of study, it is apparent that students’ focus of attention on the immediate and distant future changes across year of study. Although preparation for the immediate future remained important throughout the clinical learning process, students appeared to take their preparation for the distant future more seriously as they progressed through the later stages of the clinical learning trajectory. The following excerpt exemplifies this:

We have to try to be a nurse, not just finishing a single procedure. (Student B, Y4)

The most important thing is that you know what’s happening in the ward. There are plenty of opportunities to work on our technical skills in the future. (Student F, Y4)

From the perspective of clinical instructors and mentors, getting prepared for placement was essential to the clinical learning process. In line with the students, clinical instructors and mentors thought that preparation smoothed the clinical learning process because it boosted students’ confidence, reduced the time students needed to engage in work, and ensured the quality of practice. The following excerpts illustrate this:

Students have to tell the group leader what they would like to practise on the next day, and they have to prepare the night before. I hope students can be well prepared before doing. It gives them confidence. If students can do their work well, both patients and students will be benefited. (Clinical Instructor E)

Our expectation is not high. Students have learnt all of them already. They just have to revise. Preparation done before placement is essential. Work will be delayed if I have to explain everything to students before starting. Some skills are needed to [be able to] perform instantly on placement. (Mentor B)

In contrast with students’ perceptions of involvement in clinical practice, clinical facilitators tended to put the focus of practice involvement on nurturing future nurses. They viewed the technical aspect of the nursing as undoubtedly important, but nurses had to be equipped for more than that. Clinical facilitators believed that students should also be theoretically, practically, and socially prepared, as the following excerpts illustrate:
I always tell students that they must have strong theoretical background in order to become strong in practice. They are only a technician if they only perform well technically, and an undergraduate degree is not necessary for that. (Clinical Instructor E)

My concept changes in recent years. I think technical skills can be practised repeatedly if students think they are not doing well enough. There are plenty of opportunities for them to practice after becoming a staff nurse. They can definitely become proficient at skills if they do them every day. In contrast, if students’ critical thinking and organizing ability are weak, we may not have time to train them afterwards. So, when we are mentoring students, in addition to providing opportunities for hands-on practice, we want to spend more time on training those skills. (Mentor E)

Many students are too quiet nowadays…Perhaps it is their personality, but the clinical environment needs someone active… I give them a push sometimes. It is not good to be passive in this profession. It does not only have a negative impact on your relationship with patients, but also hinders the relationship between doctors, nurses and you. Others won't know what you are thinking. If you are not willing to speak out or present as inactive, it will be problematic when we work together. (Mentor A)

This sub-section has shown that students loved to be involved so they prepared themselves before placements. In addition, they saw the practice and learning opportunities on placement as a means to prepare themselves to be a nurse. Clinical facilitators understood that students loved to be involved in practice, and students’ preparation had a positive relationship with their performance on placement. Clinical facilitators believed that learning to be a nurse was the most important part of clinical education. Apart from getting prepared for the future, students loved to be involved in clinical practice because they knew there were some variations between the knowledge being taught at school and the reality.

5.2.1.3 Acknowledging the differences between the classroom and ‘reality’

As stated in chapter two, nurse educators, clinical facilitators, nurses at managerial level, ward nurses and student nurses have raised concerns about the problem of theory-practice disparity in the workplace (Ousey, 2000, Webb et al., 2009, Allan et al., 2011). From the students’ perspectives, the theory-practice disparity has been reported to cause confusion in the clinical learning process (Levett-Jones et al., 2007,
Ralph et al., 2009, Scully, 2011). Students in this study verbalized that because they acknowledged the differences between classroom and the reality, they had a strong motivation to be involved in practice in order to see what is happening in the workplace. Students wanted to experience real patients’ reactions and learn what had not been taught in the classroom. This finding is illustrated in the following excerpts:

I want to practise what we’ve practised in the skill lab, the procedures that we keep practising in the lab. I want to apply them on real patients. It is because it is different from practising on a manikin. I would like to know how it is different. (Student D, Y3)

Also, I would like to strengthen my assessment skills. The college teaches us how to handle different cases, and we are told to do such and such and such. However, when you are facing a patient, there are so many things that cannot be learnt at school. Therefore, I really want to see how nurses and doctors deal with cases. How do they assess the patient? How do they notice abnormalities and carry out interventions? (Student F, Y3)

If it is allowed, of course it is good to see a real case that we have examined at school. I think practising a procedure [in a lab] is different from doing it on real patients. Our training on technical skills is to provide us a foundation. We are not sure if we can perform the skills as well as we did at school, or if we can have opportunities to try them out. (Student B, Y4)

Although these differences were expected before going on placement, students still wanted to fulfil expectations from both the institution and the ward during practice. A fourth year student had experienced some inner struggle when facing this challenge:

I would like to fulfil the requirements from the college teachers, as well as finish the clinical tasks speedily as ward nurses expect of us. I really want to fulfil expectations from both sides, not just doing because I have to finish it. It’s about doing something meaningful for patients, but not just asking questions like waitresses. (Student D, Y4)

Similar to students, clinical facilitators also noticed the differences between classroom and ‘reality’. They thought that not everything could be taught in the classroom and that was the reason why placements were inevitable in nursing education. Placements allowed students to interact and work with people, gain an insight into the flexibility
of nursing practice, and relate the knowledge students learnt in the classroom with reality. Some of the clinical facilitators gave the following accounts:

No matter it has or has not been taught at school, the knowledge taught in the classroom is based on the theoretical perspective. When students are in the ward, standing in front of ‘living’ patients…it is impossible to expect students to be able to manage all the things. If students are able to handle everything at the workplace, it is not necessary for them to learn. (Clinical Instructor B)

Nursing is a practice-based discipline. It is better to try out than merely learn in the classroom. They are completely different. So that we always negotiate learning opportunities for students. (Clinical Instructor E)

For students, placement does not only help them to relate theory with practice, it also provides a setting for students to learn. It is because students won’t become familiar with some of the skills unless they see them in person and try out by themselves. This is the way to transform knowledge to something really owned by students. (Mentor E)

Both students and clinical facilitators expressed the importance of doing hands on practice on placement. Nevertheless, one of the clinical instructors reflected that working on placement is meaningless unless students realized the rationale behind actions:

In the current clinical environment, nurses work mechanically. I need students to understand the reason behind an injection. It is because they can practise in the lab, or they can do the injection on other students, so what is the difference [between doing on patients and practising in school]? I want students to distinguish the meaning between them. (Clinical Instructor A)

In addition, clinical facilitators found that students exhibited difficulties in translating knowledge to practice in the clinical environment. As students were used to practising in the skill laboratories, where the environment was highly controlled, and when they came to the actual practice environment, some students found it difficult to tackle the variations and thus were unable to perform as well as they did in the skill laboratory. Some clinical facilitators described their experience:

The clinical area is a versatile environment. However, students’ preparation is basically based on the perfect scene from the textbook…They haven’t expected
the stress in the real environment, and they can’t even rule out where they should place the equipment for a procedure. (Clinical Instructor A)

Clinical learning is more precious than classroom learning. It is because some students are very knowledgeable. They are able to tell you everything from the book, but I can’t see them do anything. I expect these students to actualize what they have told me, but they can’t. (Clinical Instructor C)

Apart from showing their aspirations, being well prepared and demonstrating their motivation to learn, students loved to be involved because they wanted to contribute to the workplace.

5.2.1.4 Making contributions to the workplace

Contribution had multiple meanings for student nurses. First of all, making contributions to the workplace was perceived by students themselves, by clinical facilitators and by ward nurses as the students’ responsibility. Students were expected to help out with ward routines. Secondly, this contribution was not limited to showing competence in performing technical skills, but providing psychosocial care to patients was another area where students were able to contribute. Lastly, making contributions was also considered as a method to open up learning and practise opportunities for students.

From the focus group data, it is obvious that students viewed their responsibility on placement as not only to learn but also to share some of the workload of the workplace. Some of the students had the following experiences:

Miss [students sometimes use ‘Miss’ to refer to clinical instructors] thought that it is our responsibility. We should offer help and so we have to do the work. Once we are in the ward, we are part of it. Although we are not counted as manpower, we have to show others our worth of existence in the workplace. We have to work and help. Everything is related to us, and we have to offer help. (Student D, Y3)

We are students. We have to go anywhere that needed us. We can’t reply like, ‘No, I can’t. I’m transferring doctors’ prescription to the record.’ We can’t say that if there’s no one available to do the work. We must have to go and do it. (Student B, Y4)
Although making contributions was important to students and was expected of them, there were times where students could hardly contribute to the workplace. In the following extracts, two third year students reflected on these limitations on their contributions:

When nurses are busy writing up the kardex, they do not have time to care about us. And if you keep wandering in the ward, you will find yourself bothering others. (Student F, Y3)

Nurses are too busy. Sometimes there are so many patients that ward nurses are too busy to care about us. They ignore our presence, so that we have nothing to do. We can’t offer any help. I would like to connect more IV medications and do more injections. When the nurses are busy, they tend to do all things by themselves. (Student D, Y3)

In contrast, when opportunities were available, the more the students contributed, the more the learning and practice opportunities were likely to be opened up for them. Also, when students contributed to the workplace, they were appreciated and valued by nurses as well as patients, and this was when students found their sense of worth in the workplace.

If we are performing well, we can really help reduce nurses’ workload. That’s why nurses are willing to teach us more. (Student B, Y4)

I think no matter our work is simple, complicated, or doing nurse assistant’s work, I think it is meaningful if I can help comfort patients, make them feel better and see them recover. (Student G, Y3)

If somebody recognizes my work, I will think it is meaningful. I will be satisfied if patients give me a response or a smile after I did something for them. I think it represents I am being valued in the clinical area, and I have not wasted my time there. (Student D, Y3)

Sometimes nurses tell us, ‘It's great to have students, today was dead busy, [you] helped us a lot.’ My feeling is like, I’ve found my identity and value. (Student B, Y4)

Clinical facilitators and students shared certain common ideas about contributions on placement. Clinical facilitators perceived that students had to provide ‘helping hands’
to the placement ward. It was also found that being valued and recognized by patients brought satisfaction to students. It helped create motivation to learn. These perceptions are illustrated as follows:

When students were appreciated after finishing a task, especially being appreciated and valued by patients, not by me, they were motivated to engage in practice. (Clinical Instructor C)

Regarding the ward, its expectation towards students is simple. We hope students are able to provide help. (Mentor E)

Consistent with the students’ comments, clinical instructors and mentors found that it was difficult for students to contribute in all situations because of lack of confidence. One of the mentors noticed that some students hesitated to provide help when mentors were not with them:

Students may not know the workplace very well. They may not be confident to help everything in the ward. Sometimes, students think that they are not clear about the procedures, worry about making mistakes, and mess things up. So, when mentors are not with them, they may not have confidence to do much. (Mentor E)

Although students’ contribution to the ward was appreciated, clinical facilitators also pointed out that they didn’t like seeing students show off their competence inappropriately and bring trouble to the workplace. Some of the clinical facilitators described their experience as below:

Of course nurses want students to be able to help patients, provide a little help for nurses, and not to create any trouble. (Clinical Instructor E)

I don’t like students who always work in a rush. Rush means they don’t follow the sequence of procedures. They jump steps…Some students want to present to others that they are capable and able to work efficiently, but in fact they are not. (Mentor A)

I understand that students want to help us when they see the ward is busy. However, they may not realize that they are incapable to do some procedures on their own. Students are even unable to make appropriate judgements. If
students went for it and caused harm to patients, the mistake would be, could not be rectified. (Mentor E)

From the above, we can see that an appropriate degree of contribution not only opened up learning and practice opportunities, it also facilitated mutual engagement at the workplace and motivated students to learn. Apart from contributing to the workplace, being able to fit in was another major component of mutual engagement on placement.

5.2.1.5 Fit in the nursing team

Fitting in signifies acceptance (Elcock et al., 2007), and the term ‘fit in’ has been widely used in the literature to describe how well student nurses and nurses work together and interact with each other in the clinical environment. Using the definition given in the Oxford dictionary, ‘fit in’ means ‘being socially compatible with other members of a group; be in harmony with other elements in a situation; and constitute part of a situation or larger structure’. It is apparent that fitting in requires social and physical engagement in an environment. In this study third year students found it more difficult to fit in than fourth year students. Both third and fourth year students tended to link fitting in with physical engagement in the clinical learning environment, and found social engagement far more difficult to achieve.

Students thought that being able to fit in was important because it facilitated clinical learning. Being able to fit it implied more learning and practice opportunities, and it was also an indicator of personal and professional growth in the workplace. These perceptions are illustrated in the following excerpts:

I think ask nurses more is essential. The more you ask, the more working opportunities would be given to you (Student E, Y3)

I would like to engage with nurses, at least not giving others [nurses] an impression of being a burden. I don’t want others to think that I’m hindering the work progress. I wish I can provide a little help. (Student A, Y4)

We are no longer waiting others to give us work to do. We have to engage into nurses’ working process and routines. You have to know what you are supposed to do in a particular moment. (Student B, Y4)
If we know how nurses handle certain things or what needs to be done immediately in some situations, and understand what nurses are thinking, we won’t be a hindrance to nurses. We may even be able to help them. Also, although we’ve learnt some technical skills at school, wards or nurses may have their own way to perform them. If we have the same mind-set, and having a consensus on what must be done and what can be omitted, it facilitates our work. We can work better with nurses. (Student C, Y4)

The concept of fitting in is closely related to the sub-categories of ‘preparing for the future’ and ‘making contributions’. These sub-categories highlighted the need for, and importance of, students’ input in the matter of fitting in. Since fitting in is about engagement, it requires contribution from both sides. Therefore, nurses’ attitudes towards students also affected the success of fitting in. The following quotations exemplify students’ observations on how nurses’ attitudes and actions inhibited or enabled their ability to ‘fit in’:

When I found a nurse looked cool or I thought I was disturbing her, I wouldn’t ask her anything. (Student F, Y3)

I think it is easier to fit in with nurses who graduated in recent years. It is because they understand students’ feelings better. They know that we want to participate but are not brave enough to tell. They know what we want to learn. They understand our situation in the afternoon session. These nurses remembered what they have experienced when they were students. They still remember. They remembered the time they stood there and did nothing in the ward when they were a student. (Student G, Y3)

I really hope that nurses will think of us if they have work to do or need someone to help, such as when they are busy, they can remember us and ask us for help. (Student E, Y4)

Although it was desirable to be able to fit in on placement and students had a strong belief in its importance and longed for it to happen, fitting in did not always occur as students expected. Some students found it frustrating when fitting in appeared to be difficult. A third year student reflected on her placement experience in the focus group. Although this student was not satisfied with her experience, she realized that it was possibly due to her limitations. She gave the following account:
I had that kind of idea [the idea of being able to fit in] before placement, but when I was on placement, it was totally different. I could only stand next to them [nurses] and observe quietly… I think it was mostly because, maybe we were not familiar with the things in the ward and we were not sure whether we could do it well. So, we were not brave enough to do. (Student C, Y3)

The boundary between students and nurses was another major hindrance to fitting in. It seemed that the difference in power relationship between students and nurses as perceived by most students, created a virtual wall which prevented students from engaging socially with nurses. In contrast to social engagement, students were more active in using different methods to break down the virtual wall in order to engage physically in the environment. The following excerpts illustrate these issues:

In fact, I think, student and nurses are separate groups. (Student D, Y3)

There’s always a barrier between us, the difference between student and teachers (clinical instructors, mentors and nurses). (Student E, Y4)

If you communicate well with nurses, fitting in will be much easier. Fitting in doesn’t merely depend on our competence, sometimes it is related to the way you interact with others. (Student C, Y4)

Some nurses look strict, some nurses are more willing to teach us, some nurses won’t teach us unless we ask. Perhaps we worry. We are afraid that we are disturbing or bothering nurses. (Student F, Y3)

Ask everything. For example, when a nurse does something that I don’t understand, I ask immediately. I keep asking questions. Then, they will…because if you talk more to nurses, they are more likely to answer you, and give you detailed answers. I think we can fit in easier after having more interactions. (Student C, Y3)

Although clinical instructors take up the role of a middleman between student and nurses, they were not always able to help to break the student-nurse boundary for junior students. Some students had this to say:

Clinical instructors and nurses do not know each other very well. (Student B, Y3)

We were not familiar with the environment. When we were facilitated by those clinical instructors who haven’t worked in this hospital before, sometimes I
found that the clinical instructors were even worse than us. They told us to ask ward nurses (if we have any queries). It turned out…there was a period of time that our group and the clinical instructor stood in the ward together and didn’t know what to do at all. Then the clinical instructor said, “Why don’t you ask the nurses and see if there is anything for us to do?” I think it was a waste of time. (Student F, Y3)

We mainly followed clinical instructors in junior years and did not have much interaction with nurses if they were not supervising us. Although we will talk to them occasionally, we mostly work with clinical instructors. (Student D, Y4)

Clinical facilitators believed that being able to work and communicate effectively in the workplace and being able to demonstrate students’ enthusiasm to engage in practice were the prerequisites for successful fit-in on placements. The following extracts exemplified clinical facilitators’ perceptions of fitting in on placement:

I think working in a ward is not only about the provision of nursing care, but also communication. Does the information you’ve got about patients match with that from nurses, doctors, nurse assistants or patients’ relatives? How can you and other ward staff communicate and bring the information together? (Clinical Instructor A)

For me, fitting in is, you know, clear about the workflow of the workplace…It means you know what others are doing, and others know what you are doing. Both sides will take initiatives to communicate. (Clinical Instructor C)

You [students] have to give us an impression that you have the same level of engagement in work like other nurses do. You should be able to take initiatives to help, participate actively and communicate with ward staff. Giving us an impression that you see yourself as one of the nurses. Regarding patient care, you should be able to show your courage to bear the responsibilities of a nurse…if you find something wrong with a patient, you will report to the case nurse immediately and you two solve the problem together. It is simple. Students have to work with nurses and do everything together. These symbolize engagement and are equivalent to fitting in. (Mentor B)

On placement, what we love to see is when students are unable to finish their work, they know how to ask for help. They can ask other students to help, tell mentors about their problems or ask nurses to give them a hand. (Mentor E)

Despite communication being perceived as important, clinical facilitators found students sometimes hesitated to communicate with nurses. Since clinical facilitators
were aware of the advantages and the power of effective communication in the workplace, they tried to create opportunities for students to practise and build up students’ confidence to communicate with ward staff on placement. These perceptions are illustrated in the following excerpts:

Usually students approach me first at the beginning, but after I’d redirected them to nurses for two times, they knew they shouldn’t always come to me. They tried to interact with others gradually. Students definitely know how to communicate with nurses, they are just afraid of it… After a period of time, when students’ communication skills have improved, they notice nurses trust them, doctors listen to them, and patients and their families understand their illustrations. (Clinical Instructor A)

Other than reporting to me, I always encourage students to communicate with nurses directly. I won’t report everything to nurses on behalf of students. I think it is a kind of practice. Students would find nurses not as terrifying as they thought…The more they (students and nurses) communicate, the closer the relationship. When there is more communication and nurses find our students good, they would be more active to provide opportunities for students to practise. (Clinical Instructor E)

Sometimes I tell students that when they think they go to a ward, they don’t know any of the ward staff, and don’t have any idea to start a conversation or the way to build the relationship, it is the same for the ward staff. They know nothing about students either. If students want the ward staff to make contact with them, they have to equip themselves with certain communication skills…so as to give others an opportunity to know about them and get in touch with them. (Mentor E)

Apart from students’ limitations in communicating with ward staff, clinical instructors and mentors identified other factors influencing the degree of student engagement on placement with respect to their mentoring experience and observation on placements. Mentors found that nurses’ attitudes towards involving students in practice and whether nurses saw students as a member of the ward impacted on student engagement on placement. From clinical instructors’ perspectives, some of them considered their own role on placement as a hindrance to student engagement in the clinical environment. These issues are raised, for example, in the following excerpts:

We have to see students as one of the members in the team, so that we can engage with each other and work together. If we see them merely as a student,
we tend to omit some information or won’t tell them to pay attention to some specific things at the workplace. (Mentor B)

If you think they [students] are one of us and do not have a perception that they bother our work, they can naturally engage in. (Mentor C)

In the past, there were no clinical instructors. We had to be active in order to build relationships with nurses. It was easy to get familiar with nurses, and we were very close. Now, students go on placement with us. Students instantly come towards us for everything on placement. They have less communication with nurses because of our presence. (Clinical Instructor B)

When students are having placement with us, they mostly follow our arrangements and thus to some extent distance themselves from the ward. Students focus on the cases which I delegate to them, and they don’t know what nurses are doing outside. Since students are not clear about other patients’ condition in general, they are not confident to talk to nurses. (Clinical Instructor D)

On placement, not only students had to fit in and engage, clinical instructors faced the same challenge too. Unlike mentors, clinical instructors were not always working in the clinical area. They had to prepare before placements and establish relationships with nurses and patients on placements as students did. In contrast, as mentors facilitated placement in their practice area, they were already engaged with the nursing team. They could seek help from and exchange ideas with other nurses in the workplace while mentoring students. The following excerpts illustrate this:

Since we (clinical instructors) do not work in wards all the time, we stop for a period of time and then go again, we have to adapt to the ward environment, establish relationship with nurses and communicate with patients. It is a challenge for us. (Clinical Instructor B)

I know some nurses of the placement ward, but not all of them. I have to prepare before placements. I have to visit the ward, see what kind of patients they have, what kinds of nursing care and procedures have to be performed. (Clinical Instructor D)

After establishing a better relationship with nurses, they will come to us and ask, ‘We are going to do this, do students want to do it?’ Also, if I see nurses or nurse assistants busy, I will ask them whether we can provide any help. Gradually, they will hold some procedures for students to practise. (Clinical Instructor E)
Before assigning a student to a nurse, I will explain to my colleagues what the student is going to practise on the shift... After finishing the tasks, I will ask my colleagues on student’s performance. Is the student performing well? Is there anything the student has to improve?” My colleagues will tell me their views on the student. (Mentor B)

Some students are nervous when they work with me, but feel relaxed working with my colleagues. I think it is because I am the one who assess them. I grade their performances. So, students are afraid of me and they work very carefully in front of me… Usually, before grading students, I ask all nurses in the ward about their perception on different students. (Mentor D)

With respect to the student-nurse boundary mentioned earlier, clinical instructors expressed different views towards student engagement with the nursing team. Although clinical facilitators noticed that students did not interact very well with nurses on placement, they did not think that engaging socially with nurses was as difficult to achieve as students perceived. Students’ initiatives were recognized as the key to success. Some of the clinical facilitators gave the following accounts:

They (students) are not familiar with the ward, working pace, documents and patients, and thus do not have confidence to communicate with nurses…they need a few days to figure out the practice of the nurses, and then they start trying to work and communicate with them. (Clinical Instructor D)

If you want to fit in, you have to show your initiative to engage with nurses. If you are passive, students and nurses can never be together. (Clinical Instructor E)

From mentors’ perspectives, they viewed students as future partners and believed that it was essential to establish a good relationship between students and ward nurses on placement. Also, students were expected to take initiative to communicate with ward nurses in order to break the student-nurse boundary. These perceptions are illustrated as follows:

I want students to be active and this is my biggest expectation on them…we believe that we are future partners. We would like to establish a good relationship with students when they are in 4th year. (Mentor D)

There won’t be any problem in communication between mentor and students because even though students are quiet, the mentor will talk to them anyway.
However, it is different for other ward staff. They do not have the responsibility to provide guidance to students. If students seldom talk to nurses or do not present their eagerness to learn or ask questions, nurses will think that they do not have to talk to students either, unless students come to them. (Mentor E)

In addition, since fourth year students had to work with nurses on placement, mentors noticed that some students did not open up themselves to communicate and interact with others and preferred to stay in their comfort zone. The following extracts present the experience and perceptions of two of the mentors:

I don’t want students to have a concept that they are students and we are nurses, and we can’t mix together. When you (nurses) are sitting, I (student) have to stand, and students must follow nurses’ instructions. I don’t want students to behave this way. I want students to let me know their thoughts, like friends. So that I am able to know about their needs. I would love to show my concern to students, but at the same time, students have to let me care about them. (Mentor D)

Sometimes nurses bring some food to the ward and share with everybody. Students are usually invited to join, but they always refuse. Although sometimes students say yes, they only eat after nurses are done. Students give me an impression that they separate themselves clearly from nurses. Sometimes I encourage them to join the nurses, but the students’ reply is, ‘No, we better wait for a little while.’ (Mentor E)

Both clinical instructors and mentors recognized a power difference between students and themselves and believed that it might not be an optimal way to work with students on placement. However, they had different attitudes towards this power difference. Since clinical instructors were also teachers of the institution, although they would like to create a friendly relationship, they thought they had to keep a distance with students. One of the clinical instructors believed that being strict and demanding were necessary, because they gave students a push. In contrast, mentors emphasized the importance of being friends with students. They thought it encouraged students to express their ideas and helped reduce the stress experienced on placement. Some of the clinical facilitators gave the following accounts:

As a nursing teacher, I think students won’t have any improvement if we please students for everything. I don’t mind students seeing me as a strict teacher. I think it is necessary. (Clinical Instructor B)
I told students I was their guidance, there is still a distance between us, something between friend and teacher, like being their sister. (Clinical Instructor C)

I think I’m a teacher but also a friend of students…I think students would like to see my values and attitude at work, like a role model. (Clinical Instructor D)

I think we are friends…I think if clinical educators see students as friends, like we are partners, students feel more comfortable in the learning process and they will be able to demonstrate their ability to us naturally. (Mentor A)

When I’m with students, I always emphasize that I hope they see me as senior schoolmates. We do not have many differences. I just experienced earlier than they do. I experienced their classes at school, the placements. I had experienced all they are experiencing now. I don’t want students to have a concept that we are teachers and they come to learn from us. It is because students would hold back and do not tell us any of their ideas. They are worried to give us negative impressions. (Mentor E)

Fitting in was a challenging experience for students. It required students’ initiative and nurses’ acceptance, and students were expected to play an active role in the process. From the students’ perspectives, the boundary between nurses and students was not easy to break. Junior students did not have many opportunities to interact with nurses. Moreover, although clinical instructors are possible mediators between the two, they cannot always help with the problem. Clinical instructors admitted that their presence on placement possibly limited the interactions between students and nurses, and so they had to help create a connection between them. In contrast to students, mentors perceived that nurses and students were not separate entities. Students should open up themselves and let others get to know them. In addition, the concept of a power difference made social engagement difficult for students, though clinical facilitators did not possess the same kind of thinking.

In summary, the five sub-categories of ‘loving to be involved’ demonstrate the reasons why students perceived involvement as the top priority on placement, and the challenges they encountered during the clinical learning process. The study findings also indicate that learning in the clinical environment is a complex issue. Students’ learning experiences were influenced by student themselves as well as all the people whom students got in touch with on placement, including clinical instructors, mentors,
nurses, nurse assistants and patients. The next section moves on to the second main theme ‘working with different people’. This theme centres on students’ experience in working with different people on placement, and how these people influenced the process of mutual engagement during clinical learning.

5.2.2 Working with different people in the workplace

Students interacted with different people on placement. As mentioned in the earlier section, all the people in the clinical environment had an influence on students’ learning experiences. In order to keep the focus on clinical learning, I will only cover the three types of people who were seen to exert the biggest impact on student learning on placement. They are: clinical instructors, mentors and nurses.

5.2.2.1 Working with clinical instructors

Clinical instructors facilitate students in groups. As students need to be closely supervised by clinical instructors in most situations, when one student is doing a procedure, other students in the group can only observe. Some students expressed the view that group learning limits practice opportunities on placement:

There are five to six students in a group, and we can only practise when a clinical instructor is with us. A clinical instructor has to supervise us one by one. It’s like we have fewer opportunities to practise. Only one of us can practice each time. We can watch our group-mate doing the procedure, but we may not have an opportunity to do hands-on practice. (Student C, Y3)

When a clinical instructor was supervising a student on a procedure, other students would then group together and had no idea what to do. (Student F, Y3)

Students needed support from clinical instructors, especially in the junior years. They appreciated clinical instructors’ role as a middleman, helping them to negotiate practice opportunities with nurses. Students felt helpless when support was not provided as they expected. The following excerpts illustrate this:

When I was in the first year, I was supervised by clinical instructors. I thought it was really good because you knew nothing in the first year, and the clinical
instructors would hold everything in one of the cubicles for us to do. At that time, I thought it was very good. (Student E, Y4)

If we were supervised by clinical instructors, they would try their best to hold some nursing procedures for us to practice. They communicated with ward nurses and let us do some of their work. (Student B, Y4)

One of my first year placements was really poor. It was because I was in the first year and didn’t know what to do on placement. I was wandering in the ward. The clinical instructor told me not to wander in the corridor [laughter]. But that clinical instructor didn’t help me. She didn’t help us to find anything to do. I looked at her helplessly, but she didn’t give me any response. (Student E, Y3)

After fourth year students had worked with mentors and nurses for a period of time, some of them identified a limitation while working with clinical instructors. Students found that they were there to finish isolated tasks instead of being engaged more fully into practice when placements were facilitated by clinical instructors. Some students expressed the following statements:

I finally know exactly what has to be done at what time on placement this year. When I was in second or third year, what I knew was clinical instructor had arranged a clinical task for me to practise. I just had to finish the task. That’s it. (Student A, Y4)

Clinical instructors had to facilitate five to six students at a time. They arranged works for us and hoped we could have equal opportunities to practise. So, it turned out to be doing isolated tasks. (Student B, Y4)

After spending the first three years of clinical learning with clinical instructors and learning in groups, the placement model changed. In the fourth year, students went on placement individually most of the time. The role of clinical instructors was passed on to mentors. From then on students spent most of their time with nurses and worked closely with them.

5.2.2.2 Working with mentors

As mentioned in the previous theme, students loved to learn from nurses and do what nurses do. Ideally, mentors worked with a student for most of the time, as clinical
instructors did. However, students in the focus group told me that they did not always work in the same shift as their mentors. In most cases, if mentors were not there, a nurse would be arranged to supervise the student. Some of the students described their experience in this way:

My mentor has a relatively busy position in the ward. S/he has no time for mentoring. S/he told me that s/he has appointed someone to facilitate my learning. (Student F, Y4)

If our mentor is too busy or on leave, they will find other nurses to supervise us. There is always a nurse arranged to supervise us on every shift. (Student A, Y4)

Sometimes a mentor was not present and no one was arranged to supervise the student. One of the students described herself as an orphan when her mentor was not with her on placement. She found herself working aimlessly in the ward:

My mentor was having her two-week annual leave while I was on placement. There was no nurse arranged to take over her role. In those two weeks, I was like an orphan. I have to find something to do by myself. I just worked and learnt aimlessly. (Student E, Y4)

Although mentors did not always work with students, they were responsible for their assessments. In spite of the lack of continuity of contact with mentors, students believed that the assessments done by mentors were more objective and appropriate than the ones done by clinical instructors.

I think the assessments done by clinical instructors are sometimes unfair. It is because they may not be able to see all the things we did on placement, perhaps we just have fewer tasks to do on the assessment day. It is unfair to have a low grade because of that. (Student C, Y4)

When mentors were assessing us, they worked with us for the whole day. Also, mentors would ask other nurses’ opinion on us before grading. I think it is more appropriate. (Student A, Y4)

It was noted that students loved having placements with mentors. Although mentors did not have much time to work with them, students still thought mentors were good
because they were working closely with other nurses in the ward. When mentors were not present, other nurses would take up their role most of the time and work with students if needed. However, there were occasions that the mentoring role was not taken over by any nurses in the ward when mentors were absent. Students were left unattended and worked on mundane routines.

5.2.2.3 Working with nurses

Students in any year of study had opportunities to interact with nurses on placement. For first to third year students, they spent time with nurses when clinical instructors were either busy supervising other students in the group or not present in the ward. Students considered being together with nurses as a chance for them to maximize learning opportunities. Also, as mentioned in the previous section, students wanted to do what nurses did, wishing to see more and practise more as soon as they could. One of the students expressed the following idea:

We’ve only got one clinical instructor but there are plenty of nurses. As there is only one clinical instructor, we don’t have much to do. We follow nurses and observe. See what they are doing, and learn from them. Sometimes nurses may give us something to do. (Student D, Y3)

Fourth year students worked with nurses on every shift. Working with nurses was not as straightforward as it appeared to be. Students had certain things to consider when deciding who to ask and which nurses they should work with. Students had to understand the norms of the workplace. They had to pay attention to the seniority of nurses as well as their role in a particular shift. They had to take account not only of the hierarchical structure at the workplace, but also of the role function of nurses on each shift, their level of skill proficiency and the need to secure patient safety in the hospital.

I’ve been to many wards for placement. Many of the nurses are graduated from our nursing college. They understand our difficulties, and most of them are willing [to teach us]. When we ask, they are willing to teach us. Of course, nurses who are on main shift are very busy. We shouldn’t disturb nurses on main shift. Other nurses are helpful too, though they are not our mentor. They
are willing to hold things for us to do, or watch us doing a procedure, or teach us if we don’t know how to do. Although they are busy, they are willing to do these. I think we are learning in a more comprehensive manner, and there are more opportunities. (Student B, Y4)

In my placement ward, we were told at the very beginning that only mentor and senior nurses can supervise us on invasive tasks, such as inserting IV catheters, naso-gastric tubes and urinary catheters. All these invasive procedures have to be supervised by senior nurses. If we are just doing electrocardiogram, and would like to ask a nurse to confirm the position of the probes, it will be fine to find any newly graduated nurses or junior nurses, like grade three nurses to watch us. (Student A, Y4)

After shifting from clinical instructor facilitation to mentor facilitation, students seemed to know more about the method of working in the ward. They were not only there to finish tasks physically, but also to work with people in the workplace and immerse themselves into the norms and culture of the working environment. Similarly, in order to engage students into practice, senior staff had shown students the way they were expected to practise in the workplace.

From the perspectives of the clinical instructors and mentors, students had to, and were better to, work with qualified nurses on placement. Clinical instructors encouraged students to work with nurses because they wanted to expand students’ practice opportunities and promote students’ interaction with nurses. Mentors noticed that students would like to spend more time working with them, but the process of working with other nurses allowed mentors to understand students from different viewpoints.

I encourage students to ask mentors [nurses who facilitate fourth year students’ placements] to provide supervision. After students finished the procedure, I would discuss students’ performance with mentors. I don’t like students just to work with me on placement, because it limits the interaction between students and the nursing team. (Clinical Instructor B)

Students’ hope is that mentors are able to spend more time with them and work together. (Mentor A)

The advantage to follow different nurses on placement is to let me know how other nurses think of the student. Also, I can observe students’ behaviour when they work with others. (Mentor D)
Mutual engagement on placement required input from students, clinical instructors, mentors and nurses. The findings of the category ‘working with different people in the workplace’ demonstrated that clinical instructors, mentors and nurses had different degrees of contribution to student learning throughout the clinical learning process. Moving from clinical instructors’ to mentors’ facilitation along with close working relationship with nurses, students’ learning shifted from finishing assigned tasks to engaging in authentic practice. There were advantages and disadvantages in both clinical instructors’ and mentors’ facilitation. Practice opportunities might not be extensive enough and were perceived as inadequate when students were facilitated in groups by clinical instructors. However, the benefits brought by close supervision and the substantial support provided by clinical instructors in the clinical learning process could not be overlooked, as they were exceptionally important for junior students. Mentors’ facilitation allowed students to work closely with nurses. Students gained insights into the norms and culture of the workplace and understood how to work effectively in the community of practice. However, due to the busy ward environment, mentors were not always available to work with students. If no one was allocated to cover the mentoring role, students would be left unattended on placement.

The next section turns to examine student participation in the clinical learning process. The types of activities that students were involved in on placement, the way students were involved in practice, the negotiation process, the expectations on students, and clinical instructors’, mentors’ and nurses’ views concerning student involvement in practice will be addressed.

5.2.3 The degree of legitimate participation on placement

Since these students were learners and had not yet completed clinical education, the types of activities that they were involved in during placement were generally based on the learning objectives stated in the placement handbook. Students were allowed to negotiate extra learning activities, but these activities had to be seen to be legitimate and allowed by clinical facilitators or ward nurses. In some situations, patients also had an impact on student involvement in clinical practice. ‘The degree of legitimate
participation on placement’ has four sub-categories, ‘expectations placed on students’, ‘doing observations’, ‘basic nursing care and qualified nurses’ work’ and ‘the power and negotiation’. These sub-categories set out the extent of legitimate participation on placement and students’ perception of the degree of their involvement in clinical activities.

5.2.3.1 Expectations placed on students

Clinical education is a collaboration between the institution and the hospital. Students are expected to fulfil both curriculum requirements and practical needs. No matter who facilitates the placement, the basic expectation of the student is to meet the learning objectives stated on the placement handbook. Also, for first to third year students, they have to hand in two to three case reports to the institution every year. Given that students spent a significant amount of time on the case reports on placement, it actually provided an opportunity for students to apply what they have learnt at school, as the following quotation illustrates:

We did patient assessment too. It is because we have to hand in at least one case report on every placement. So, at least we know how to perform a whole body assessment, how to identify nursing objectives and provide suitable interventions. I think it is fine. It is the level that the nursing college want us to attain on placement. (Student F, Y3)

However, in line with what has been illustrated in the previous sections, students wanted to see and practise as much as they could. Students wanted to learn authentically within the clinical environment, rather than just strictly follow institutional requirements. One of the fourth year students had this to say on this sub-category:

They [clinical instructors] are teachers of the nursing college… However, this hospital, this is a general hospital and the cases are mixed in the ward. Although it is a surgical ward, there are medical cases. It is part of the ward, but the clinical instructor preferred us to focus on certain objectives. Thus, it turned out limiting our learning opportunities and we had fewer chances to work. (Student E, Y4)
Apart from institutional expectations, clinical instructors, mentors and nurses also placed expectations on students. Students were expected to display initiative. Also, as mentioned in the previous section, students were expected to contribute and provide a helping hand to the placement ward. Students noticed that mentors and nurses had higher expectations of fourth year students. Fourth year students were expected to have a certain level of skills, though they were not expected to know everything. Moreover, fourth year students were expected to learn fast and demonstrate an ability to work independently. Some of the fourth year students described these expectations in this way:

We have to do everything well. We are expected to be skilled because we are in our fourth year. Also, maybe…what I want to say is…in the previous three years, they [ward nurses] prefer us to observe and know how to perform the procedures. On the contrary, once you are in the fourth year, you are expected to be familiar with everything. In fact, maybe we had never done some of them. Together with the paper work, and when we are having assessments, it is…[pause]…er… stressful. (Student D, Y4)

When they [ward nurses] ask us to do something for the first time, and we tell the nurse that we haven’t done that before. Nurses are happy to teach us, but they expect us to learn fast. I think the difference between junior years and present is that, when we were in junior years, if we couldn’t do a task after a nurse taught you, the nurse would teach us again. In contrast, when we are in the fourth year, ward nurses expected that we had experience and had seen the procedures before…’What? You haven’t seen that before? You haven’t seen it in the previous years? Never mind. I teach you once,’ the nurse said. What nurses expect on us is that…they teach us once, then we should be able to do it next time. (Student B, Y4)

The above findings demonstrate that expectations on students increase with year of study; and that the expectations changed gradually from learning to doing. In the interviews, clinical facilitators demonstrated that their expectations of students were mostly linked with institutional expectations. Basically, the clinical facilitators perceived the institutional requirements as the items that must be experienced by students on placement, but anything more than that depended on clinical facilitators’ perceptions of what was enough for students and the way students presented themselves in the clinical learning process. Moreover, if students did not show their
enthusiasm to learn on placement, mentors were not likely to offer learning opportunities which exceeded the institutional requirements for students.

My expectations of students are regarding to the learning objectives of their respective year of study…I think it is difficult for us, as teachers, to control what students are going to see on placement. We have to follow the student learning objectives. (Clinical Instructor B)

I observe students’ performance and assess their ability from a teacher’s viewpoint. If students’ performances are good, I’ll add extra missions for them…not just base on the requirements written on the placement handbook. (Clinical Instructor E)

Sometimes they (students) think it is enough for them to complete the items listed on the placement handbook. They seldom reflect on their weaknesses identified on previous placements and work on them. (Mentor A)

In the past, I would be irritated when I saw students not showing the enthusiasm about learning…but now, when there are some learning opportunities which are not included in the placement handbook, if some of the students shows me that they are not active or not eager to learn, I would rather spend my time with those who are willing to learn. (Mentor E)

Consistent with students’ experiences, both clinical instructors and mentors expressed the view that students were expected to provide helping hands to the placement ward and be competent to provide basic nursing care. The following quotations illustrated these expectations:

Wards expect students to be able to demonstrate their competencies when there are opportunities for them to practise. Also, students are expected to take up some clinical tasks…like feeding patients…students have to finish these before doing other things. (Clinical Instructor C)

I think we (mentor and ward nurses) have a common expectation. We hope that students will be able to help us, but not to increase our workload and we don't have to keep an eye on them all the time. It is because we don't want to have a fourth year student who can’t manage the tasks which can be done independently by a second year student. (Mentor D)

Mentors had expressed different degrees of disappointment in certain of their past mentoring experiences. Some mentors were disappointed because students were not
able to show their seriousness and passion towards learning on placement. Yet, it should be noted that students were having relatively short placements on these occasions and this might have influenced their motivation to learn. Moreover, these relative short placements would not be graded by mentors. The quotations below set out the mentoring experience of two of the mentors:

We had expectations on students before. We expected students to know certain things, such as some basic clinical skills, like IM (intramuscular), IV (Intravenous) and subcutaneous injections. We also expected students to have basic pharmacological knowledge. However, in the past few years, we found that students had prepared less and less before placement, and thus we started not to place any expectations on students anymore. (Mentor B)

I expect students to be self-motivated. Sometimes I won’t tell them exactly what to do and see whether they would approach me and negotiate learning opportunities…None of them came to me…I won’t say students never show their initiatives, but seldom. (Mentor C)

Leaning and doing are the basis of clinical education. The phrase ‘learning by doing’ was always used to describe the approach of learning on placement. Although students were supernumerary on placement, they were expected to be active learners in the clinical learning process, and had to fulfil institutional and workplace expectations. Students in the focus groups indicated their eagerness to participate in clinical activities. However, as observed by clinical facilitators, the nature and duration of placements had influenced students’ learning motivation. Students on short placements did not take learning as seriously as they were on long placements since assessments were not required. In the next section, the focus will move onto what students are actually doing while learning in the clinical environment in one of the hospitals in Macau.

To give a clearly structured account of the findings on student participation on placement, I have divided clinical participation into three main categories: doing observations, performing basic nursing care and qualified nurses’ work. Before moving onto the findings, it is necessary first to define these three types of participation. Qualified nurses perform both basic nursing care and qualified nurses’ work, though they spend different amounts of time on them. Qualified nurses’ work
can only be performed by qualified nurses. In contrast, basic nursing care involves non-invasive tasks which require less decision making during the working process. These activities are always physically demanding and time consuming, such as mundane routines which are mainly done by supporting staff of the ward, like nurse assistants. Basic nursing care is not peripheral but rather essential to the nursing process. Carrying out observations is different from performing basic nursing care and qualified nurses’ work as it does not involve any hands-on practice, and therefore is not restricted by students’ clinical ability. As a result, it helps enhance students’ breadth of clinical exposure by opening up learning opportunities.

5.2.3.2 Doing observations

There were different reasons for doing observations on placement, and students had mixed feelings towards observing. Sometimes, students had to observe because they were not competent to perform a task. This lack of competence could be either self-perceived or perceived by clinical instructors, mentors, nurses and patients. In addition, observation sometimes resulted from group learning. Because students needed clinical instructors’ supervision on most procedures, and only one student was able to practise each time, other students could only observe. The following excerpts illustrate students’ experience of doing observations on placement:

Actually, resuscitation happened once. We just watched the process and didn’t help anything. It was because the situation was too critical. We couldn’t do anything and we didn’t know how to do. So, we just observed. (Student C, Y3)

When there was a resuscitation case, you might spend the whole morning on it. I didn’t know what I had done that morning. I just stood aside and watched. (Student F, Y4)

When we were in first to third year, basically, we always stood aside and watched. It was because when one student was doing a procedure, the clinical instructor would ask all of us to watch that student do the procedure. (Student E, Y4)

There were also occasions where students appreciated the opportunity to be an observer. As we know, students were interested in everything in the clinical
environment, they loved to see more and valued any learning opportunities that helped prepare them for their future. The excerpts below capture the happiness and excitement when a student acted as an observer on placement:

Sometimes you might gain something unexpected. Last year, I didn’t expect I could have an opportunity to watch the process of extracorporeal shock-wave lithotripsy. I went there with a deputy nursing officer. There are always chances to get something unexpected on placements. (Student E, Y3)

Nurses have their own responsibilities while they are facilitating us. Some of their work is new to us. When we were following nurses, we observed at their side. Nurses might teach us new things. We might learn something different. (Student B, Y3)

Some nurses would let us know if they are going to perform some procedures and ask whether we would like to observe. I think that we learnt a lot from nurses. (Student D, Y3)

In fact, students perceived observation as a kind of learning activity. Students felt disappointed and discontented when their negotiation was declined. Sometimes students were not able to do observation because not all of the ward nurses felt comfortable when students observed them working. There were also occasions when the completion of clinical responsibilities was given a higher priority than the opportunities to learn by doing observations. The following quotations exemplify these aspects of participation in basic nursing care:

Sometimes when nurses are doing some procedures, we stand next to them and observe. … Once there was a nurse said to me that, “Could you please don’t look at me? I don’t know what to do.” It seemed that I was disturbing her, and so I walked away. (Student C, Y3)

A student was going to do a dressing and I wanted to observe, but suddenly the call bell rang. Then, I had toː I answered the call bell and get a bedpan for the patient. My eyes kept looking at my classmates who were going to do the dressing [laughter]. I was sad, because I really wanted to watch the dressing. However, I had to help the patient. At that time, I would like to ask why, why I couldn’t watch it. (Student D, Y3)

I think it depends on the clinical instructor or mentor and see what they expect on us. Perhaps the ‘Miss’ thinks you haven’t done or observed certain kind of
things, then you have to go and observe. For example, my clinical instructor knew that I hadn’t assisted immobilized patients bathing, she told me to observe this procedure for the whole morning. I couldn’t understand why I had to observe this for the whole morning. Maybe two or three times were enough already. Also, when I was observing, other students had done so many things. I felt that I missed out on all the learning opportunities. (Student F, Y3)

Doing observations provides opportunities to learn as well as to engage with nurses. Although observation does not involve any hands-on practice, students valued it if there was a clear purpose or when it was perceived to be beneficial to clinical learning. It provided an alternate way to maximize learning when students were not yet competent to perform certain tasks or when students were in a situation where hands-on practice was not possible. In contrast, an unreasonably long period of observation meant that learning opportunities were lost. In this case, students were prevented from engaging in practice and at risk of being marginalized. It should also be noted that there were occasions when observation was not welcomed or allowed in the clinical environment. Regarding the proportion of time spent on observation across year of study, the findings revealed that fourth year students spent much less time on observation than third year students. They spent most of their time on hands-on practice.

Clinical instructors and mentors provided their accounts of students doing observations on placement from a different viewpoint. As mentioned in previous sections, clinical instructors knew students’ capabilities well. They did not expect students to observe in situations in which students were able to manage. When students encountered something unfamiliar, they were expected to do observation together with some indirect participation. Both clinical instructors and mentors observed that since students were not competent to handle critical situations, they did not have confidence to participate and thus hold back. Some clinical facilitators gave the following accounts:

I do not only expect students to observe, they have to do observations as well as being involved. I mean we do the task together. Although I do the majority of it, students have to know how to provide assistance throughout the procedure. (Clinical Instructor C)
Students worry about impeding nurses’ work. For example, there was a patient transferred from the ICU who had many tubes over the body. Students were uncertain about what they could help and thus hesitated. They were anxious to enter the room and worried that they would hinder nurses’ work. (Clinical Instructor D)

Students were not reluctant to work, rather, they didn’t know how to manage a situation. There may be some situations which students had never come across or expected. Students didn’t know how to react instantly and worried that they were not able to help or they might do something wrong. Consequently, some students choose not to involve themselves. Some of them even choose to leave the scene. (Mentor E)

Also, due to the limitation in students’ ability and the busy ward environment, nurses preferred students to observe when students were viewed as unable to meet the efficiency and competence required for a procedure. The following quotations illustrated mentors’ observations on nurses’ attitudes towards working with students on placement:

You know, perhaps students worry about making mistakes, or being cautious, they work rather slowly, or can’t work efficiently. But in fact, some treatments can’t proceed if the previous step hasn’t finished. As a result, a method that some of my colleagues adopt is, I do and students observe. (Mentor A)

I understand that sometimes there are too many things to be done on a patient and nurses think students cannot help much with it, and so they tell students to stand back and observe…It’s like separating students and nurses with a glass wall. Students stand behind the glass wall and watch nurses work. Students are not involved. (Mentor B)

In addition to the influence of students’ ability, confidence and nurses’ attitudes, some mentors verbalized that they were let down by students because students did not show their eagerness to learn and to be involved in practice. The quotations below reflect mentors’ and nurses’ feelings about student passivity on placement:

In the past, we thought fourth year students were extraordinary. They could handle some of the work of the ward. However, fourth year students nowadays are, they can’t. If we haven’t arranged anything for them, they will just stand next to us and watch. (Mentor A)
Some students just stand aside and observe, they won’t negotiate for participation nor ask nurses whether they need any help. We (nurses and mentors) are disappointed with their degree of involvement. We can feel if students want to learn more. If nurses get a feeling that a student doesn’t want to learn, they won’t teach them anything, because nurses believe that student won’t listen to them. This interaction is really unfavourable to the learning atmosphere. (Mentor B)

In summary, clinical instructors did not think observation contributed a lot to student learning in the clinical environment. They held a clear goal to let students be involved in practice on placement, though this was sometimes hindered by group learning. By contrast, the findings from students and mentors displayed two very different perspectives. Students tended to focus on their learning and practice opportunities, while mentors paid more attention to students’ attitude and ability and nurses’ attitudes towards students. Mentors did not value observation at all. Similar to clinical instructors, mentors wanted students to be involved in practice. In the next section, the types of activities which students engaged in on placement will be addressed.

5.2.3.3 Performing basic nursing care and qualified nurses’ work

The degree of opportunity in performing basic nursing care and qualified nurses’ work was determined by clinical instructors, mentors, and nurses, as well as by the students themselves. The perceived levels of students’ competence, students’ performance, expectations of students, the type of clinical facilitator that a student was working with, the availability of a supervisor during practice and the busy ward environment, all influenced the types of activities that a student was allowed to participate in the clinical learning process.

The participation in basic nursing care and qualified nurses’ work changed with year of study. In junior years, students spent a significant amount of time in performing basic nursing care. Although basic nursing care is fundamental to the nursing process, students did not seem satisfied when they were doing basic nursing care for most of their time on placement. The students’ goal was to learn to be a nurse, thus they longed for opportunities to perform qualified nurses’ work. The following quotations illustrate
how the student nurses talked about their experiences in performing basic nursing care and qualified nurses’ work:

Clinical instructors only let us work on what we are capable of. (Student B, Y3)

We did the tasks which we have managed to do in the first year. We continue doing these tasks in our second year. They [nurses] expect us to do all of them. (Student D, Y3)

I think we did nurse assistants’ work most of the time, and occasionally get in touch with nurses’ work. We felt contented when we were allowed to do nurses’ work. (Student A, Y3)

Fourth year students also spent time on doing basic nursing care. Some nurses perceived that qualified nurses’ work, such as dealing with documentation, were relatively unimportant with respect to clinical learning. Nurses preferred students to focus on clinical skills development on placement. In addition, student participation in basic nursing care and qualified nurses’ work was also determined by the staffing on a shift. Sometimes students had to take on nurse assistants’ responsibilities and therefore could not spend much time on doing qualified nurses’ work with nurses, as in the following example:

Although I’m supposed to work with a main shift nurse, I am not involved in doctors’ rounds. I work as a runner…Usually, nurse assistants are responsible for doing the routine observations. If there are only two nurses and I work on a shift, I will be responsible for all the routines. The other nurses will work on the qualified nurses’ work, but I won’t have time to work with them. (Student D, Y4)

When students were working with clinical instructors, their participation mostly depended on clinical instructors’ arrangement or approval. Nurses seldom involved second and third students in learning actively, even though students had shown their eagerness to practise. In contrast, when students were in the fourth year, they worked closely with nurses. Nurses were clear about fourth year students’ competence and were more likely to initiate practice opportunities for them. Apart from being more experienced and equipped with better skills, simply being with nurses seemed to be
another reason why fourth year students had more opportunities to be involved in qualified nurses’ work:

Basically, we have followed every nurse in the ward. Nurses know our ability. Sometimes they find us to work with them. They came to us and said, “Student, come and administer the medications with me”. Then we work together. (Student B, Y4)

Also, it is funny that, when we were in year two and three, if we wanted to do a procedure and asked a nurse, ‘Can I do it?’ Nurses thought it would be better for us to follow our clinical instructor. ‘It doesn’t seem appropriate for us to supervise you.’ said the nurse. (Student E, Y4)

There was a variation in the perception of legitimate participation between the regulations set by the institution and the actual practice of the placement area. Students knew clearly that all invasive procedures had to be done under supervision. However, this was not always practised on placement, especially when students worked with nurses. In practice, students always followed the instructions given by clinical staff. They did whatever nurses told them to do, as the following excerpts reveal:

It is because ward nurses do not know what we can do and what we cannot do. They will just say, “Go and do it.” (Student F, Y3)

I asked a nurse, ‘I’m going to insert an IV catheter. Do you want to watch me do it?’ The nurse replied, ‘No, I won’t. It gives you pressure if I stand next to you. Go and do it yourself. Ask me for help if you fail.’ (Student E, Y4)

Generally, students and clinical facilitators shared very similar views towards the determinants of the degree of legitimate participation on placement. Clinical facilitators agreed with students that the level of competence was of paramount importance. The excerpts below show the way clinical facilitators assess students’ competence before delegating a task for them:

My decision is directly related to students’ performance. In the learning process, I ask students about the rationale behind different interventions. If a student can’t give me an answer, I’ll know s/he is not up to standard, and I’ll let that student do the basics first. Although students were taught on some of the advanced practices before going on placement, they may find it difficult to
handle new things. Thus, even I give students an opportunity to practise, they may not be able to do it. (Clinical Instructor D)

I have to assess whether students know how to do a procedure first. Before they do anything, I ask them what they have to prepare and they have to talk me through the steps they are going to perform. If students are clear about the steps, I’ll stand by their side and let them do it. I will only provide help when it is necessary. (Mentor D)

However, being technically competent was not enough. Students’ independence and their ability to make clinical decisions also determined the legitimacy of participation. The excerpt below reflects one of the mentors’ considerations before allocating work to students:

When the ward is extremely busy, students who are highly dependable can act as part of the workforce. They can help us to finish simple tasks, such as taking temperature and blood pressure, which students are able to handle. However, if I have to arrange students to help with our work, I have to take their ability to make judgements into account. (Mentor E)

Apart from the above competencies, clinical facilitators also identified the influence of patients’ attitudes on the level of legitimacy of student participation on placement. Clinical facilitators saw themselves as the mediator between patients and students. This issue will be further addressed in later categories. The following quotation indicates the impact of patients’ attitudes on student participation in general:

The wards are willing to provide practice opportunities for students if patients or patients’ relatives don’t find it problematic. (Clinical Instructor C)

Clinical instructors noticed that students loved to be involved in qualified nurses’ work. The following quotations illustrated how clinical facilitators commented on students’ practice preferences and their view towards student participation in basic nursing care and qualified nurses’ work:

Some students showed a desire to attain superior and professional development. However, in my opinion, it is most important to build a strong base. If they can’t manage the fundamentals, how can they proceed to IM and IV injections? (Clinical Instructor B)
Everybody think these (basic nursing care) are inferior to other nursing tasks. They are only foundations, why do we keep doing these things? I think the fundamentals are something that easily being looked down on, and we have underestimated the amount of knowledge needed in doing these procedures. (Clinical Instructor D)

Every student wants to see more and be involved in different things on placement, but I believe that foundation is the most important. (Clinical Instructor E)

We see fourth year students as half of a nurse. They have to do everything we do...We let students perform all the work that nurses, nurse assistants and healthcare assistants do. We want students to understand that handling patients’ excretions is not only healthcare assistants’ responsibility and nurses have to do it too...We want students to know that they have to do it and they should get used to it. (Mentor E)

However, regarding student participation in basic nursing care and more advanced tasks on placement, one of the mentors expressed a different view. This mentor thought that letting students work with patients who are seriously ill could give students a push and thus motivate them to participate and enable them to identify their weaknesses during the process of guided participation; (it should be noted that this mentor works in the ICU where nurse to patient ratio is about 1:1 to 1:2):

I tend to delegate two students to manage a serious case with a nurse. It is because a student can’t learn much on a stable case. By managing patients who are critically ill, students are able to learn how to monitor a patient closely, and I hope that students would be able to identify their weaknesses through active participation in the caring process. It forces [the] student to participate actively and thus motivates them to learn. (Mentor B)

Other clinical instructors and mentors had not indicated their preference on letting students perform basic or advanced tasks. Rather, most of them pointed out a kind of guided participation which involved a careful sequencing in clinical participation. The purpose of these steps was to allow students to get used to ward practices and ensure patients’ safety in the nursing care process. In general, it started with getting familiar with the clinical environment, and this was then followed by some non-invasive tasks. After that, students were allowed to be involved in qualified nurses’ work. The quotation below exemplified a typical pattern of student participation on placement:
When students had not settled down, they would go into a wrong room, they went into the room next to the one they were supposed to enter. At this stage, it would be very difficult for the students to do the invasive procedures. Also, it would be risky for patients. I would choose something relatively simple for students to do, like, answering call bells and changing diapers, and let them settle. After getting familiar with the ward and listening to the nursing handover for a few days...I would start guiding students to do something like three checks and five rights on medication. (Clinical Instructor D)

From the interviews, ‘hands-off but keep an eye on’ was a common saying among mentors. Mentors thought that students had to learn by doing. Students had to learn to work independently and that could prepare them to be a qualified nurse. Some of the mentors I interviewed expressed the following viewpoints:

We have a common saying which is hands off but keep an eye on. We must supervise when students are practising...If we let go totally, yes, students will have a positive feeling that we trust on them, but students may not be able to identify their problems throughout the procedure. (Mentor A)

We give time to students and they work under our guidance. We would be hands off but keep our eyes on students. Hands-on practice and observation are two different things. We have to boost students’ confidence, as well as providing support on practice. (Mentor C)

If we work together with students on every single task over a long period of time, students may become overly reliant on mentors and not be accustomed to independent work. When mentors are not with them, they are not able to think critically and make decisions. Thus, we have to let students finish work independently, provided that safety is ensured. (Mentor E)

In the focus group, students reflected that nurses were not sure about what students can do on placement, and clinical instructors were not always with them in the afternoon session. From the mentors’ perspective, the absence of clinical instructors and mentors on placements did affect the types of activities students participated in, as the following quotations reveal:

When mentors are not present on placement, students feel that they were left alone like orphans. Apart from those fixed learning objectives, students won't have many opportunities to do other things. (Mentor B)
When clinical instructors are not present, usually, I arrange second year students to measure blood pressure, take temperature, change napkins or help us to turn patients. We would like them to see our daily routines. If time is available, we may allow students to do some injections. Students can also help us check patients’ blood glucose level. Most of their work is non-invasive.
(Mentor D)

All students had the opportunity to perform basic nursing care and qualified nurses’ work on placement. The proportion of these two types of activities changed over the years of study. It was found that student participation was not solely determined by clinical facilitators, but also influenced by students’ negotiation. The findings also demonstrated that the increase in participation in qualified nurses’ work did not eliminate student involvement in basic nursing care. After getting more experienced and starting to work closely with nurses, students gained legitimacy to be involved in a wider range of activities.

Student learning in the clinical area was not only mediated by clinical facilitators. Students were expected to be active and to be able to demonstrate initiative. Although there were sets of learning objectives, students were always encouraged to verbalize their learning needs and negotiate an optimal level of legitimate participation on placement.

5.2.3.4 Power and negotiation

Although practice opportunities were provided on placement, in order to maximize learning and involvement opportunities, sometimes, students had to negotiate the degree of legitimate participation with clinical facilitators. However, a students’ negotiation was not always accepted. Its success depended on clinical facilitators’ and nurses’ perception of the appropriateness for students to perform an activity and students’ power to negotiate.

Negotiation was important because it opened up learning opportunities, particularly when students were working with nurses. Some nurses did not know what students were capable of or what it was legitimate for them to do. It was reported that if students
were able to take the initiative, they would get much more involvement on placement. The following quotations reveal how some of the students had a clear sense of their need to be proactive and seek out learning opportunities:

I think our initiatives are important. At least we have to ask whether we are allowed to do certain things. Others may not know what we can do. If we keep silent, we can’t do anything even though you know that you were allowed to perform certain tasks. (Student C, Y3)

I think being active is the most important too. If you don’t take a step forward, you will stay in the dark room forever. You won’t know what it looks like outside. Also, sometimes if we show our initiative, we will discover that there are so many things we can do on placement. (Student A, Y3)

Although it may be a bit worrying at that moment, there won’t be a second time if we don’t go for the first time. Yes, it is stressful at the first time, but there is a nurse standing next to us and watching us do the procedure. (Student E, Y4)

The power of negotiation derived from students’ own clinical competence and confidence on practice. The year of study was key to the power to negotiate. These conditions for the exercise of power are illustrated in the following extracts:

I think the most important thing is to trust ourselves. It is because we can only do our work well if we believe in ourselves. We will become more active in the learning process. (Student E, Y3)

We have to be well prepared before we voice out our request. (Student D, Y4)

To be honest, no matter how well I prepared in the first year, if I asked a nurse whether I could insert a urinary catheter, she wouldn’t allow me to do it. (Student B, Y4)

The establishment of trust also facilitated the negotiation process. Trust is what clinical facilitators displayed towards students. It was developed from continuous observation of student performance, and it was seen as an important indicator of mutual engagement in practice:

After being familiar with the environment, we develop a better understanding of the workflow. If we can manage well, ward nurses will delegate more for us.
Although we know nothing at the beginning, nurses keep observing us. If they think our performance is ok, they will let go and allow us to do the procedures. (Student F, Y3)

If we were able to do it (insert IV catheters) well, nurses would let go and allow us to do it on our own. (Student A, Y4)

Although students were always encouraged to negotiate, such negotiation could possibly meet with rejection when there were no suitable people to supervise or when nurses’ workload was heavy. For example, some of the students talked of how:

When we were in the third year, if nurses noticed that our clinical instructor was not available to supervise us, even she got something for us to do, she would say, ‘Never mind, maybe next time then.’ (Student B, Y4)

Junior nurses don’t think they are able to supervise us, they always tell us to ask our mentor for supervision. (Student C, Y4)

We had tried to negotiate for more opportunities to follow main shift nurses on placement as we wanted to get familiar with their work. However, we were told that since main shift nurses are too busy, they won’t have extra time to teach us. (Student D, Y4)

Sometimes students hesitated to negotiate. The excerpt below reflects the experience of a fourth year student when she was deciding whether to negotiate or not during a placement. She worried if she would give a negative impression to nurses:

Sometimes when I want to ask for practice opportunities, I’m afraid that nurses would say, “What? You still don’t know how to do it?” So, I usually ask other students and discuss with them instead, or I leave it later. (Student D, Y4)

From clinical facilitators’ perspectives, they preferred students to negotiate learning and practice opportunities rather than merely delegate work for them. Clinical facilitators controlled student participation on placement. In order to negotiate successfully, several preconditions had to be met. For instance, being competent, the activity being negotiated perceived as legitimate regarding students’ year of study, negotiating at the right time, and working with heart. These preconditions are exemplified in the excerpts below:
Like first year students, they learnt to give IV and IM injections at school. Of course they wanted to try it out on placement. But for me, I believe, I told students that there was no hurry. They had to manage the basics well in the first week, and I would let them do IV and IM injections in the second week. I emphasized to students that they must practise in the skill lab before giving injections on patients. I won’t let them do if I found out they didn’t know the procedure well. (Clinical Instructor B)

Firstly, I will consider on students’ ability and secondly, it depends on patients’ condition… The level of urgency of a procedure is also important. If a nurse told me that there was an urgent blood taking, I won’t let a student who worked slowly all the time do it. It is because students are more likely to make mistakes when they are in a rush. (Clinical Instructor E)

I told students that they should avoid doing invasive tasks in the first week. It would be better to start with observation and understanding our practice first. After students had watched a procedure for a number of times and they were confident to do it, they could negotiate practice opportunities with us. (Mentor A)

I seldom let second year students perform invasive tasks. However, I will give more opportunities to fourth year students. I ask them whether they would like to do a procedure, and I am eager to delegate work to them…If junior students want to do invasive procedures, I will see whether time is available. If the ward is busy, I will apologize to them and say, ‘I’m very busy at the moment, I can’t supervise you, and maybe we do it next time.’ In contrast, I will spend more time with fourth year students. (Mentor D)

If students are able to demonstrate that they do everything for the sake of patients’ benefits and really care for the patients, even if they may not learn fast or respond quickly, I’m happy to spend time on teaching these students. (Mentor E)

Although clinical facilitators made the final decision on students’ negotiations, clinical instructors raised in the interviews the opinion that students needed to have autonomy and be independent in the learning process. Students ought to have clear learning goals, and thus they had to negotiate for themselves. The quotations below illustrate clinical instructors’ perceptions on negotiation and the way they pushed student to negotiate on placement:
I won’t tell students do this and do that every day. I let students manage their work. I think students should have autonomy to manage their learning activities. (Clinical Instructor B)

I told students that if they didn’t voice out or didn’t want to do anything, they could just stand in the ward for 8 hours. Most of the time, when students saw others work, they would come and ask me, “Can I do it with others?” (Clinical Instructor A)

Although I have the control, at least I have to let students know they need to negotiate learning and practice opportunities by themselves. (Clinical Instructor E)

Since mentors were not as familiar with students’ backgrounds as the clinical instructors, instead of pushing students to negotiate, mentors asked students about their learning needs. One of the mentors found students rather passive in the clinical learning process. According to her, some students were not confident to voice out their needs:

I kept asking students on placement, “What else do you want to learn?” I want students to be more proactive. I think students are a bit passive and fear to talk to us. (Mentor D)

Both students and clinical facilitators noticed that negotiation could open up learning and practice opportunities on placement. It was also perceived as an indication of students’ ambition to learn. Focus group findings showed that students hesitated to negotiate because they worried about giving a negative impression of themselves to nurses. From the clinical facilitators’ observations, there were other factors that inhibited the students’ capabilities to negotiate. These included students’ perceptions of their ability, face concerns, nurses’ attitudes towards students, and the degree of engagement with and reliance on mentors. These factors are illustrated below:

Let’s say I tell students that there is a big wound dressing. If students haven’t revised anything before placement, they won’t urge me to let them observe the procedure. They opt to do the basics…It is because they are afraid that I would ask them to do the dressing and they don’t know how to do it. (Clinical Instructor D)
Students rarely told us about what they wanted to do on placement. In fact, I think they wanted to be involved in practice, but I found that they had worries. Students worried about being rejected by us (mentors or nurses). Also, they worried that we won’t be happy if they negotiated to do advanced skills before managing basic skills well. They were afraid that we would scold them. These lowered students’ confidence to negotiate with us… Some nurses believed that learning basic things are good enough for students. Students don’t have to learn advanced skills. I think students realized it too. They are smart. They can sense what nurses are thinking about. Thus, students won't negotiate much. (Mentor B)

Some students are comparatively shy, they seldom talk and they think they are not able to fit into the ward. These students are passive. They are not confident to ask nor negotiate. They just wait for mentors’ arrangements. If students are unfamiliar with the environment, they are anxious about making mistakes. As they don’t want to make mistakes, they would rather choose not to do anything. (Mentor E)

Students rely on us. They seldom take initiatives to negotiate opportunities. They expect me to ask them to do a procedure together. (Mentor C)

The above findings show that students were allowed and welcome to negotiate on placement, provided that they were equipped with related knowledge and skills, and the activities being negotiated were perceived to be appropriate, and there were clinical facilitators or qualified nurses to supervise. Negotiation is more likely to be successful when mutual engagement exists. Negotiation has an influence on the degree of legitimate participation on placement, but it is still limited by the boundary of safe practice and the norms of the practice area.

5.3 Supernumerary status

Quantitative findings showed that over eighty percent of the students were unclear about their supernumerary status on placement. In the focus group, students did not talk much about their feelings and opinions about supernumerary status compared with other aspects of their clinical learning experiences. The information provided by students demonstrated their perceptions of the benefits and barriers brought by supernumerary status and their misconceptions about the concept. Students tended to link supernumerary status with their capability to take over nurses’ work and the
degree of responsibility they were bearing on placement. The following excerpts illustrate these misunderstandings:

I think, it doesn’t matter if they (placement wards) see us supernumerary or not. It is because our aim is to learn on placement…Student and nurses are different. We are not able to replace a nurse of a shift. What we can do is not equivalent to what nurses can do. (Student C, Y3)

I think, if we are supernumerary, we don’t have to bear much responsibility and thus [it is] less stressful. Let say when work is not able to finish in a given time. They [nurses] won’t put all the blame on us. It is because we are supernumerary. (Student G, Y3)

It is not whether we see ourselves as students, it is whether we are able to do qualified nurses’ work. Although we do a lot of things [in the ward], are we confident to do all the qualified nurses’ work? I don’t think I can confidently say that I know everything, and am able to make my own decision without asking any questions. (Student B, Y4)

We think we are not ready, not ready to help them to finish all the work in a shift. Even though we have worked very hard and have been very busy, we still think that we are not up to standard. We are not able to finish all the nurses’ work in a shift and catch up with their pace. We haven’t met the standard. (Student D, Y4)

Also, students were not sure about what they were entitled to perform on placement under supernumerary status:

I think my role is a nursing student. Although I am a student, when I am on placement, I think I am a nurse as well. It is because I think, er, because I can do injections on patients, I can get bedpans for patients. If I am not a nurse, I am not sure whether I have the right to get patient a bedpan if I am only a student. It’s weird. (Student A, Y3)

If it is like what we are experiencing now, we are supernumerary…I think there is too much free time. Sometimes I really have no idea what can I do. It seems bothering others if I keep walking around in the ward. (Student E, Y3)

Moreover, students stated that they would have more practice opportunities and stronger motivation if they were not supernumerary on placement. One of the students expressed the follow sentiment:
We are supernumerary. It feels like we are taking work from the designated manpower. It seems that what we can do is very limited...I think more practice opportunities will be provided if it is possible for us to replace two nurses on placement. Er, five people take over the responsibility of two nurses. So, it won’t be too stressful for us. The workload is divided among five people. If we do it that way, we will have a stronger motivation, sense of responsibility, and sense of belonging. (Student E, Y3)

The findings presented in the preceding paragraphs can be read as suggesting that students thought that they were under supernumerary status on placement because they were not as capable as nurses. As students did not understand the concept and the reasons behind supernumerary status very well, they experienced confusion concerning their role on placement. By contrast, clinical facilitators held an opposite view towards this issue. Although none of the clinical facilitators that I interviewed had talked about supernumerary status with their students, they believed that all students were informed and clear about it. Clinical facilitators did not say explicitly on the term ‘supernumerary status’ while facilitating students on placement. They tended to use other ways to let students know they were supernumerary. The following quotations exemplify the way students got to know about supernumerary status and the reason for not putting an emphasis on supernumerary status on placement:

We seldom talk about it formally. Perhaps I tell students that they come to learn on placement, but never stress on supernumerary status. (Clinical Instructor C)

I haven’t talked about it with students… In fact, when there are group activities or when we chat with students, sometimes we will come across the history of the nursing college. From that, students knew that old students were being paid on placements. The biggest different is having salaries or not. Being paid is seen as equivalent to be manpower of the placement area. Otherwise, like students nowadays, they pay the school fee and come to learn. So, I think they know about it. (Clinical Instructor A)

We won’t say that [students are supernumerary]. We would rather say, “We see you as part of us, we work together.” We want students to realize that they are essential. They are coming to work with us… Although students only stay in our ward for 5 weeks, once they come to our ward, we see them as our member. We don’t want to give students a wrong impression that they are extra, they are not one of us and their presence would increase our workload. (Mentor D)
Clinical facilitators agreed that supernumerary status was beneficial to student learning. They thought that being supernumerary made clinical learning more flexible. Students could learn at their own pace, time was allowed for students to think instead of aiming to finish their responsibilities in a limited time, and students’ learning experiences were more diversified as they did not have to bear any specific responsibilities of the workplace. In addition to students’ benefits, one of the clinical instructors stated that supernumerary status allowed her to organize learning activities for students with respect to their needs and progress. These are exemplified in the following extracts:

As a clinical instructor, I can design learning activities for students according to their learning progress flexibly. If students have to follow the workflow of the workplace and keep working without specific purposes, it will be risky for patients and students won’t understand the rationale behind the work…It [supernumerary status] gives rooms for me. When a work is not urgent, it will be fine if we can finish it before the end of the shift. (Clinical Instructor D)

If students are manpower of the ward, they can only do the basics. Nursing officers or some of the mentors may arrange a lot of basic work for students, and students may have to spend the whole morning to work on those. They will have less opportunities to work on other aspects. I think this is the reason why we have to shift from the apprenticeship system to supernumerary status. (Clinical Instructor E)

Students are not responsible for any work in the workplace. Since they are junior, we can't delegate critical cases for them. So, if they really need to bear a certain amount of workload, their work would be relatively basic and easy to manage…Subsequently, students have to spend most of their time on the tasks that they are able to manage, and do not have much opportunity to work on critical or serious cases…Under supernumerary status, students can work on their learning objectives instead of only aiming at finishing the work being delegated to them. (Mentor A)

Students don’t have to get ready for subsequent procedures. They have time to think critically and think about why they have to perform it on patient. (Mentor C)

Regardless of the advantages brought by supernumerary status, clinical facilitators also identified some of its shortcomings. Clinical facilitators revealed that since students did not have to bear any workload on placement, they lost the opportunity to experience nurses’ responsibilities at the workplace, and students might not be able to
accumulate enough essential experiences which prepared them to be a nurse. Some of the clinical facilitators compared students’ learning attitudes with their own clinical learning experience. They noticed that some students were not as enthusiastic to engage in practice as they were in the ‘old system’. Clinical facilitators might need to give students a push in order to enhance the effectiveness of learning in the workplace. In addition, since patient safety was the top priority in the clinical environment and mentors were responsible for students’ practice, students’ learning needs were always placed after nurses’ practical needs. Some of the clinical facilitators gave the following accounts:

I think students lost the chance to experience stress which comes from independent work and bearing their own responsibilities. Students know that somebody will come and cover for them if things go wrong or if they can’t finish something. (Clinical Instructor A)

I think students will behave a bit differently if they don’t know they are supernumerary on placement…If students see themselves as manpower and being responsible for some of the workload, they will be more active…When students are supernumerary, they might have a perception that the amount they learn and do on placement won’t influence the ward in general. Others will do the work as usual if students decided not to practice. (Clinical Instructor C)

If students are supernumerary, wards will arrange a reasonable number of nurses in every shift. Students are extra people to help or come to learn. Actually, nurses’ life is much easier. If they [nurses] are busy and students can’t help much at that moment, they can ask students to do something else for them, such as answering call bells and giving bedpans to patients. But for students, as it is not necessary for them to bear any workload, their clinical experience is not as extensive as we had before. When I was a student, I expected myself to do at least one last office and participate in resuscitation for a few times in my four years of study. Student nowadays won’t have this expectation… We [old students] thought that it was part of our professional development, and we had to get these experiences. Now, students don’t have it anymore… Students are always expected to come across these components throughout the nursing education process, but it seems that not every student is having these experiences now. (Mentor B)

Students should know they are supernumerary. I notice that some students are just lounging in the ward. Some students are not working with their heart, while others may be needed to push a bit to work. (Mentor D)
Under supernumerary status, placements are simply aimed to provide learning opportunities for students. In terms of clinical arrangements, we have to consider about patient and student safety in the ward. Hence, if we [mentors] are not free to provide guidance or supervision for students on a practice, we won’t let students do it. For us, patient safety has to be ensured. Therefore, the reduction of learning opportunities is non-avoidable. (Mentor E)

In response to the role confusion raised by students in the focus group, clinical facilitators provided a different view. Clinical facilitators observed that even though students knew they were supernumerary on placement, they did not mind spending time doing clinical work which did not have an obvious purpose of learning. Students were concerned about their presentation of self and wanted to gain acceptance in the workplace, therefore, some students appeared to be concerned fitting in more than about learning on placement. Again, this is closely related to the sub-categories of making contributions in the workplace and students’ desire to fit in. Students wanted to present themselves as being helpful in order to gain acceptance:

Our students are very good. They follow the arrangement from teachers, nurses and the placement ward. So, when a ward doesn’t have enough staffing and ask students to help bathing patients, students would say yes without any hesitation. They are happy to provide help. Students accept to have placement in apprenticeship style occasionally. They won’t distinguish clearly whether they are practicing under supernumerary status or the apprenticeship system…However, if students have identified something they would like to learn or watch, but they are spending huge amount of time on doing mundane routines, they will remember their supernumerary status at that moment and say, “We are not manpower of the ward, these are nurse assistants’ responsibilities.” (Clinical Instructor D)

I think students know about they are supernumerary on placement, but they care about how others view them. If students only give injections but are not doing the bed making, others might perceive that students only pick particular tasks to do. (Mentor A)

During interviews when the topic came to supernumerary status, most clinical facilitators, especially those who had experienced the apprenticeship system, referred back to their own clinical learning experience in the ‘old days’. They reflected on the importance of independence and self-initiative on their placement. One of the mentors
gave an account of student relationships with nurses when they were on placement under the apprenticeship system:

We were counted as ward manpower when we were on placement. In the past, on every placement day, the nurse officer would arrange work for each nurse, subordinate staff and student after the handover. Perhaps because of this work allocation system, it felt like all of us work together to finish a task. Thus, students thought they belonged to the ward, while other ward staff thought students were there to help them finish the work. As a result, our relationship was relatively close. (Mentor E)

In summary, although a lack of clarity concerning supernumerary status was identified among students, students and clinical facilitators could still see the advantages of being supernumerary on placement. However, it seemed to be impossible for students to practise in an entirely supernumerary way in the workplace. In addition, supernumerary status could be problematic to some extent. It hindered the process of mutual engagement which was an important connection between students and the community of practice of the workplace.

5.4 A joint enterprise and shared repertoire

The findings under the category of mutual engagement showed that students, clinical instructors and mentors had, by different means, put effort into building relationships between students, nurses and the workplace. Their efforts laid a foundation to the formation of a joint enterprise and a shared repertoire of the community, in order to achieve cooperation, collaboration, and to seek agreement while reserving the uniqueness of different parties. From the information given in the section on the facts of the Macau nursing education system and the findings on supernumerary status, we can see that the differences in the approach of clinical practice adopted by the nursing college, together with supernumerary status, have created challenges for all of the people involved in the clinical learning process. The findings to be presented in this section demonstrate how students, clinical instructors, mentors and nurses live with these differences in the workplace. The roles of clinical instructors and mentors are particularly important in this regard. They are the ones who negotiate the joint enterprise and initiate the shared repertoire.
5.4.1 The negotiation of joint enterprise on placement

In the clinical learning process, students and clinical instructors were not just aligning themselves to the community of practice of the workplace. They brought along practices and expectations belonging to their own community of practice, and worked under supernumerary status in the clinical environment. Although the need to engage in practice and supernumerary status was not wholly compatible with the need to engage in practice, for student participation in the workplace to happen, clinical facilitators had to take the role of middleman and gatekeeper throughout the placement period to pull students and the members of the community together. Furthermore, mutual accountability was necessary to be established in order to ensure effective collaboration in the workplace.

5.4.1.1 Working with differences

It was especially difficult for the clinical instructors to act as a middleman when they were not full members of the community of practice of the workplace as mentors were. As has been noted earlier, some clinical facilitators reflected that they had to prepare themselves before placement. One of the clinical instructors considered both students and herself as outsiders to the workplace:

At least I have to understand the ward that I’m going to. Knowing the ward characteristics. Also, I have to know the learning needs of student at their stage, and the things which students have already learnt. I’ll do a teaching plan…I’ll go there (the placement ward) if possible, and see if there are any cases that I would like students to pay more attention to. I will also read through patients’ folders, and see whether there are areas that students would easily miss out. (Clinical Instructor A)

In all, I think we, as clinical instructors, need to build a good relationship with nurses and doctors of the placement ward…We shouldn’t do whatever we like in the ward. Because we were, we were there to disturb them (the ward staff), not helping them. I think we need to have this kind of mind-set. (Clinical Instructor B)
Moreover, some of the clinical instructors and mentors identified a few discrepancies between the two communities of practice. One of the clinical instructors found that there was variation in the notion of professionalism, while a mentor noticed that there was difference in the prime focus between the workplace and clinical learning. The following quotations exemplify these concerns:

I think the professional role of nurses has not been fully presented in our hospital, especially nurses’ autonomy and their authority. We always teach students about decision making and their autonomy in the workplace, but it is really difficult to work these out in wards…for example, I told students that it was alright to use another method to handle a task, but a ward nurse disagreed and said, “No. We do it this way.” (Clinical Instructor C)

The hospital has to strike a balance between patients’ benefit and student learning. As we all know, there are risks when we let students take care of patients. In recent years, as the hospital would like to enhance the quality of care, it shows favour towards patients. Once there is an error made by student, the hospital (managerial level) would say, “Better don’t let students do this kind of work.” (Mentor B)

Although there were variations between the two communities, they were not mutually exclusive to each other. Clinical facilitators in this study noticed that they had to function as both middlemen and gatekeepers in the clinical learning process, so that the two communities could be bridged.

5.4.1.2 Clinical facilitators serve as middlemen and gatekeepers in the clinical learning process

The middleman acts as a coordinator between nurses and students, a mediator between the nursing college and the front line nurses, a supporter, and a buffer between patients and students. Clinical facilitators helped students negotiate learning opportunities, linked learning needs with ward practise, and harmonized learning and working in the placement area. The quotations below illustrate how the middlemen function in the clinical learning process:

At the workplace, I think I am an extra person to help. I have multiple identities [laugh] and work on different things. I participate in the work of the workplace.
Also, I have to identify students’ learning needs at the same time…I think the role of clinical instructors is important, but we don’t have a fixed position. I think we are like shadows or wind which keeps moving around. It is because each clinical instructor needs to facilitate more than five students at a time, and we have to keep moving around. We have to satisfy students, patients, ward staff and the needs of the organization. (Clinical Instructor A)

Sometimes when I saw a student do something wrong, I won’t tell them immediately. I would find a nurse and ask her to tell the student. I wanted to create an opportunity for them to communicate directly…If I am always being the middleman, they [students and nurses] are always separated. (Clinical Instructor A)

When patients saw our students, they would say to us, “Oh, are you going to insert the IV catheter on me again? Teacher, s/he did it twice on me yesterday but both failed.” “Maybe I arrange another student to do it this time. If the student fails, I will do it for you. Is that ok?” I replied. We have to convince the patients. I didn’t have to do it if I worked by myself. (Clinical Instructor B)

Some nurses expressed their disappointment with students to me. I had to let them know about the difficulties faced by students and their constraints. I told nurses about students’ situations, suggested them to provide more opportunities for students to practise and hoped that they could understand students more…For students, I had to analyse the situation with them and explained that nurses were not unwilling to let them practice or rude. (Clinical Instructor C)

Nurses and we are having the same goal. We work for the good of patients. Our [clinical instructors’] work is to maintain the normal ward practice while students are practising. (Clinical Instructor E)

Patients think that students are not qualified nurses, and they don’t want students to do any medical procedures on them. This will also affect students fitting in. When it happens, we will talk to the patient and explain that students are in their 4th year of study and they are graduating soon. Most of their clinical skills have been examined. Students have to accumulate clinical experience. If you, they are willing to provide students a practice opportunity, they can do better in the future. Patients accept my explanation most of the time, and I will also reassure patients that I will supervise students while they are doing procedures on them. It won’t cause extra discomfort. Most patients will allow students to practise after my explanation. (Mentor B)

I will tell the nurse that a student can practise more on certain things. I encourage nurses to let students do more, and emphasize to nurses that students are very helpful. (Mentor B)
I have to communicate with both sides. Some students felt that some of the nurses looked unkind, and I had to reassure and told them not to be afraid, nurses wouldn’t ill-treat them. (Mentor D)

I have to coordinate both students and the nurses who help mentoring students on placement. I have to solve the problems encountered by my colleagues in the mentoring process. I need to harmonize student learning with nurses’ work. (Mentor A)

Apart from bringing students and nurses together and harmonising learning activities with the working processes in the workplace, clinical facilitators also served as gatekeepers who safeguard the quality of nursing care and patient safety, as well as the quality of clinical education over the period of clinical placement. Some of the clinical facilitators described this role as follows:

I know that there are certain areas that mistakes are expected, and I’ve already got some contingency plans. I hope that patients would feel ok, because in case students fail, somebody else will come and help them. By doing this, students are able to have chance to experience failure while both parties [patients and students] are satisfied with the situation. It is because experiencing failure is one of the important components in learning. (Clinical Instructor A)

Since I’m the mentor, I have the responsibility to protect students. I have to tell students what is right and what is wrong in our recent clinical practice, and guide them to be a better nurse. (Mentor B)

We discuss students’ condition with the colleagues who take over our mentoring role when we are not available to work with students. For example, which types of work they can delegate to students, what are the tasks that students are not yet qualified to do, and what are the things that students can only observe. We have to communicate with our colleagues. (Mentor E)

On placement, clinical facilitators acted as a person to strike a balance between clinical work and learning activities. They facilitated the formation of a joint enterprise by breaking down boundaries. Apart from establishing links, in order to attain an effective collaboration and cooperation in the workplace, students, clinical facilitators and nurses were not only expected to be responsible for themselves, but also being accountable to each other.
5.4.1.3 Mutual accountability

In order to work well with different people in the workplace, being accountable is vital. This chapter has noted repeatedly how clinical facilitators are accountable for students’ practice on placement. In the joint enterprise of placement, mutual accountability has a much deeper meaning. Other than being accountable for one’s own action, everybody has to be responsible for others as well. Nurses are accountable for patients, students and their fellow colleagues, while clinical facilitators are accountable for students, patients, the workplace, and also the nursing college. Particularly for clinical instructors, as they were not full members of the community of the workplace, they had to do more than mentors in order to sustain mutual accountability. They had to make sure student learning would not create trouble in the workplace nor make nurses’ lives difficult when students were on placement. Clinical instructors described it as a source of stress for them on placement. Some of the clinical instructors gave the following accounts:

[The working pace of] students is relatively slow. They need extra time to think, think about the interrelationships between steps. So, when a student delayed the normal workflow, I have to coordinate with the ward. I’ll tell them [nurses], “give me some time, I will finish the work perfectly in a given period of time, there will be no complaints, and patients will be safe. No worries.” I have to give them some reassurance. (Clinical Instructor A)

When I was mentoring students, on the one hand I had to take care of patients’ needs and on the other hand I had to consider the preferences of the nurses. Also, I had to keep an eye on students and see whether they did anything wrong. I needed to keep focus…I think I’m accountable for all these and it is my responsibility. It created huge stress for me. The level of stress is much higher than when I practised by myself. I had to keep reminding students, “Don’t do anything wrong. When you do something wrong, it does not only affect you, but also the nursing college, patients, the ward and the hospital.” (Clinical Instructor B)

I told students clearly that as they did not have a licence, it was risky to work on their own. It’s not simply the matter of bearing the responsibility, it’s about doing harm to patients. (Clinical Instructor E)
For mentors, their focus was a bit different from the clinical instructors, though patients’ safety was again the top concern. Unlike clinical instructors, who are not full member of the community of practice of the workplace, mentors just worked with their counterparts as usual. Mentors’ concerns in relation to mutual accountability placed a greater emphasis on the collaboration between mentors and the institution, the exchange of knowledge and ideas between the institution and the workplace, and the handling of problem students. Some mentors expressed their ideas as follows:

I do think there are conflicts between the knowledge taught at school and our current practice. I think more communication is needed between the institution and the clinical area. We have to exchange information on practice changes and update accordingly. (Mentor D)

Even how busy the clinical environment is, if we really need students to help us, we must tell them clearly that when they find something wrong with the patient during their work, they have to report to us (mentor or nurses) immediately. We have to make sure when students are helping us they won’t influence the normal operation of the ward and patient safety. (Mentor E)

We will discuss with the teachers of the nursing college if we find students having problems on placement. We have to discuss how to help the student…The nursing college will inform us before placement commences if students have some specific issues that we have to pay attention to. But we won’t be told too much about these students. Perhaps the nursing college don’t want us to have bias on anyone. I think it is reasonable. (Mentor A)

Although clinical facilitators were not the key persons who had to participate and engage in practice on placement, the findings have clearly displayed the contributions that clinical facilitators made to the negotiation of a joint enterprise on placement. They also pointed out that seemed to take a passive role in this respect and they lived with what clinical facilitators negotiated for them.

5.4.2 The shared repertoire

In a similar way to the negotiation of a joint enterprise, clinical facilitators played a major role in the building of a shared repertoire. Since clinical instructors and mentors were different in terms of their membership status in the community of the workplace,
they had very dissimilar experiences regarding the development of a shared repertoire on placement. Mentors believed that students could bring a positive impact to the workplace. They would like students to bring new perspectives to the workplace, help ward nurses to reflect on current practice and generate new meanings. In contrast, when students were facilitated by clinical instructors, new ideas were less likely to be accepted by the nursing team, even though students’ ideas were approved by clinical instructors. Both clinical instructors and students found this experience very discouraging. It was obvious that a trusting relationship would be essential when it came to negotiation of new meanings. However, in general had not been securely established between clinical instructors/students and the nursing team. Apart from that, one of the clinical instructors noticed that students did not think it was appropriate for them to express an opinion on their placement experience directly with nurses or clinical facilitators. These issues are revealed in the following excerpts:

Supernumerary status provides rooms for students to discuss problems. It is because student learning on placement is not totally confined to the hospital practice. Students can do anything if mentors agree. Their learning is more flexible. Also, students can bring new information or ideas to the clinical area and bring out discussions. (Mentor B)

It is not only about passing knowledge on students. I think students have a much broader mind than us. We have worked in the workplace for so many years and are restricted by our usual practice. We might take everything for granted…In the old apprenticeship system, we had to follow rules strictly and we were not brave enough to disagree with anything. But now, students are different. They are exposed to different things and bring new ideas to us. (Mentor C)

If we are friends with students, when they notice the way we work is different from the way they were taught in the nursing college, they will ask, “Should it be done this way?” I think it is good. Since we have been working in the ward for a long time, some bad habits were developed. Sometimes we need students to remind us. Students can remind us through their observation on our practice and let us realize that we have to break the bad habits. (Mentor D)

Sometimes students have new ideas which make perfect sense to a situation and is feasible. I accept students’ ideas all the time if they are able to give me the rationale. However, wards always reject them, even though the expected outcome is good. Wards think that new ideas are different from their usual practice. If the ward allowed students to use an alternative method once, it
would make it difficult for them to manage the others in the future. (Clinical Instructor A)

I think nurses’ autonomy has not been widely employed in our hospital. Nurses are not ready to make clinical judgements in some occasions. They are not able to catch up with the professional standard that we teach students in the college. For instance, we teach students that they have autonomy to decide what work best for patients, and they are allowed to use different methods to address patients’ needs. However, wards would say no to us because we act differently with the practice norm. “Doctor prescribed this (a solution for dressing) for the patient…you have to follow their prescription”. (Clinical Instructor C)

I encourage students to express their opinion. I noticed that students rarely, they rarely give any advice for nurses or clinical facilitators, no matter how I ask them, they won’t say anything…they worry if nurses or clinical instructors would be unhappy with them. (Clinical Instructor E)

The findings indicated that under mentors’ facilitation, students were seen as one of the resources for the generation of new meanings in the workplace. In contrast, some clinical instructors reflected that students’ and their ideas were seldom accepted in the workplace because their ideas were deviated from the practice norm or were not compatible with the tradition of the medical dominance workplace. It seemed that mentors, as insiders of the workplace, were in a better position to negotiate new meanings than the clinical instructors because they knew the boundaries of what was negotiable in the community of practice. Nonetheless, due to the short duration of placements, the development of a shared repertoire seemed unlikely to be accomplished on placements.

5.5 The formation of identity

Identity is established through participation, interaction and negotiation. It is a link between individuals and the community (Wenger, 1998). The students in this study tended to link identity with the type of activities they were involved in on placement. The findings show a gradual change in identity over the period of clinical education, from ‘I’m a student’ to ‘I’m a nurse to be’.
Students possessed an expectation of an ideal form of identity that they would like to establish on placement. One of the students in the focus group expressed her desired identity in this way:

Ideally, when going on placement and participating in clinical activities, I want to be more than a student. I hope I can have a position in the placement ward. (Student B, Y4)

Identity was thus seemed to be established through participation. Participation in basic nursing care and qualified nurses’ work and the resulting contributions to the workplace influenced students’ self-perception with respect to that community. However, the formation of professional identity was not always happening. Some of the students described their experience as follows:

I’m a student and I would like to learn everything. Even patients would say to us, “That’s right. You have to observe, observe more and learn more.” I don’t think I am essential to the ward. I don’t think so. I think my function is to answer the call bells. I always have this kind of thinking. I’m serious [laughter]. (Student C, Y3)

I think I’m an assistant of the nurse assistants… It is because they [patients] usually ask nurse assistants for help, but when nurse assistants are too busy to help them, they find us [laughter]. Asking us to get them bedpans and assist them to go to the toilet. They always ask us for help. We are students and we won’t refuse them. It is what we did on placement. (Student D, Y3)

Identity was established through interactions. After prolonged involvement in ward activities and interaction with patients, a sense of belonging was established. The sense of belonging was not only limited to the workplace, but also extended to the profession. For example, some of the students talked of how:

We voluntarily stayed longer in the placement ward, even till eight in the evening. We stayed there to help and support the patient. It’s all from our heart, and it took time to establish. (Student D, Y3)

Sometimes it is tiring after placement, but when we thought of the contentment or the touching moments we’ve experienced on placement, we are motivated to work even harder [to be a nurse]. (Student D, Y4)
These findings show that although the identity created from participation may not match with the ideal identity as perceived by students, it overall helps students to generate a relationship between self and the workplace, by establishing a sense of belonging. From the clinical facilitators’ perspective, the formation of identity was linked with students’ participation in the workplace and the acquisition of professional experience. Clinical facilitators thought that students’ involvement in clinical practice determined the formation of identity, and this formation of identity would then further motivate students to learn and helped with the process of personal and professional development in the clinical learning process. Clinical facilitators verbalized their viewpoints as follows:

I always tell the student that I won’t take their year of study into consideration when they are on placement. “After you put on the uniform, I will see you as a nurse. You have to bear the responsibility of a nurse”… they have to adapt to the change in their role. They can’t just rely on clinical instructors. (Clinical Instructor A)

Students have to experience their growth in the nursing profession through placements. (Clinical Instructor C)

Even we urge them [students], they won’t do any practice on a normal school day…But after students had contacted with patients, they needed to provide care for real people, their learning motivation was much stronger. (Clinical Instructor D)

In recent years, I have a new insight. I think the key of placement is not about how much students have learnt, nor the number of clinical skills that students are proficient at. I think it is more important to let students develop a positive attitude towards nursing from their clinical learning experience, such as building up their confidence to work in the profession. (Mentor E)

As opposed to the students’ findings, clinical facilitators did not link the formation of identity with the types of activities students participated in on placement. Again in contrast to students’ view, clinical facilitators’ tended not to draw a distinct line between doing basic clinical activities and qualified nurses’ work. Aside from this distinction, the other findings were quite comparable between students and clinical facilitators.
5.6 Conclusion

The study findings in this chapter indicate the importance of student participation in the clinical learning process. Participation on placement does not only prepare students to become technically competent for their future professional role, it also opens opportunity for students to interact with the members of the community of the workplace, who are possibly their future working partners. Active participation allows students to engage in the clinical environment and make contributions to the workplace while learning. It also facilitates the ‘fitting-in’ process by introducing students to the members of the community of practice of the workplace and letting ward nurses know about the students and involve them in practice.

Clinical instructors and mentors serve as middlemen and gatekeepers in the clinical learning process. They are accountable for both their own and students’ actions on placement. They facilitate the establishment of a joint enterprise where participants are able to work with differences. They have to harmonize learning and working, safeguard the quality of care and clinical education, help students cross the boundary between the higher education sector and the practice area and facilitate engagement in the community of practice of the workplace. However, since only mentors are full member of the community of practice of the workplace, students experience the social environment differently when working with clinical instructors and mentors. Second and third year students are strongly attached to clinical instructors and practice within the institutional objectives most of the time. They only have limited interactions with ward staff and rarely work with nurses when clinical instructors are present. In contrast, mentors would like students to be involved in daily nursing activities and work along the nursing team. Mentors want students to see themselves as part of the nursing team.

Although students are expected to be active learners on placement, their degree of participation on placement is determined by a number of factors. In general, there are three main types of participation happening on placement: observation, participation in basic nursing care and participation in qualified nurses’ work. Whether students are allowed to be involved in these three types of participation depends on students’ ability,
the availability of learning or practice opportunities, the availability of clinical facilitators to provide supervision, clinical facilitators’ and nurses’ perceptions of student roles on placement, ward and patients’ conditions, and lastly students’ and clinical facilitators’ negotiation of involvement.

In addition, supernumerary status has created challenges for student participation in the clinical environment. Both clinical instructors and mentors noted the change in the nature of student participation on placement after the implementation of supernumerary status. Supernumerary status on the one hand enhances the flexibility of clinical learning, on the other hand it distance the relationship between students and ward nurses. The perception of being an outsider impacts negatively on the establishment of mutual engagement in the community of practice of the workplace. Findings also reveals that there is a lack of clarity concerning supernumerary status and the level of legitimacy of student participation on placement among students and ward nurses.

The nature of student participation and students’ interactions with ward staff and patients are found to be closely linked with the formation of identity on placement. Students identify themselves with what they have experienced in the clinical learning process, and form a connection between self and the community of practice of the workplace. Findings reveals that although the identity formed through clinical participation may not match with the professional identity as perceived by students, there is a gradual change in students’ self-perception across the period of clinical education. The identity of ‘I am a nurse to be’ become more visible as students gain more clinical experience and were involved more in qualified nurses’ roles on placement.
In chapter five, I used the three major components of community of practice (i.e. mutual engagement, joint enterprise and shared repertoire) to serve as the backbone to present the data collected from focus groups and individual interviews. Students’ clinical learning experience and clinical facilitators’ mentoring experience were delineated. The major themes and subthemes displayed: the nature of student participation on placement, students’ perceptions of clinical learning, clinical instructors and mentors’ perspectives, the influence of supernumerary status on clinical learning, and the formation of identity in the clinical learning process. These findings indicated that despite students’ development being central to the clinical learning process, they had little control over their learning in the clinical environment. In addition, it was found that clinical instructors, mentors and ward nurses exerted a large influence on students’ learning experience. The findings clearly showed a distinct division between the community of practice of the nursing college and the placement ward. Furthermore, students’ supernumerary status on placement had created considerable challenges for all the participants involved in the clinical learning process. Viewed against the quantitative results presented in chapter four, it seems that students were not always participating in a way that they expected to happen on placement.

The focus of this discussion chapter centres on students’ participation on placement; building on the themes and subthemes identified in the last chapter, and using the social cultural learning theory of communities of practice (Wenger, 1998) and the idea of legitimate peripheral participation (Lave and Wenger, 1991, Wenger, 1998) to give an insight into workplace learning and its impact on students’ identity formation. It centres on four areas: supernumerary status as reification, participation, identity and the community of practice in the context of the Macau clinical learning environment. I start my discussion on the apprenticeship tradition of nursing education and supernumerary status as reification. Then, I move on to the relationship between reification and student participation on placement. After that, I provide a close discussion of the different types of participation on placement revealed by this study. Following the section on participation, I discuss its influence on identity formation,
considering how immediate and extended identity contribute to participation and students' future development, and giving an account of the communities of practice situated in the Macau clinical context. The key concepts to be discussed and the relationships between concepts are summarized in Figure 6.1. To end the chapter, I provide a summary of findings and the key arguments raised in the preceding discussion. Limitations of the study, this study's contribution to knowledge and its implications for clinical education will also be discussed.

Figure 6.1
The key concepts of the discussion
6.1 Supernumerary status as a reification of full student status on placement

As indicated in the literature review and the findings chapters, supernumerary status appears to be quite problematic in relation to clinical learning. It influences students’ self-perception, the nature of student participation on placement, the availability of practice and learning opportunities and their relationship with nurses. Giving student nurses full student status on placement has been practised in North America for a long time, but the term ‘supernumerary status’ has only been widely used after the launch of project 2000 in the UK. In other words, the lack of any explicit use of the term ‘supernumerary status’ does not imply students are not given a full student status on placement. Accordingly, I would argue that ‘supernumerary status’ is a reification of full student status on placement. It is generated outside the community of practice of the workplace to reinforce the learner role of student nurses on placement, and it has to be localized in order to achieve its full meaning (Wenger, 1998).

While the impact of supernumerary status on clinical learning recurs throughout this chapter, in this section, I will specifically look at the influence of the traditional notion of ‘learning by doing’, the use of ‘supernumerary status’ as a reification of full student status on placement, the influence of different interpretations of supernumerary status on student participation and the challenges of crossing the boundary between the communities of practice of the nursing college and the workplace.

6.1.1 The notion of ‘learning by doing’ in clinical education

Before nursing was moved into the higher education sector, students under traditional apprenticeship training were one of the major workforces in the clinical environment (Spouse, 1998a, Hyde and Brady, 2002). Since clinical learning in the ‘old days’ was an on-the-job training, students were socialized into the nursing role once they started working in the ward. As indicated by Yung (1996), students who experienced traditional apprenticeship training demonstrated a more realistic professional role concept than students under supernumerary status as they were being socialized into the workplace. Moreover, the effectiveness of apprenticeship training was valued by
nurses and some nurse educators because the training was practice-focused and matched with the expectation of skill competences for nurses (White, 2010).

The complete removal of students from the workforce, due to the implementation of supernumerary status, has accelerated the introduction of healthcare assistants into the clinical area in order to replace the resulting loss in manpower (Allan and Smith, 2009). However, the long tradition of apprentice student role in the workplace has not been removed from the workplace. Various studies have reported that students were used as ‘a pair of hands’ in placement area though they were no longer in workforce of the ward (Chow and Suen, 2001, Shen and Spouse, 2007, Bradbury-Jones et al., 2007, Bradbury-Jones et al., 2011). So, the approach of apprenticeship learning had never been detached from nursing despite the shift of nurse education from the traditional apprenticeship training to the higher education sector (Andrews et al., 2006).

‘Learning by doing’ is highly valued in the nursing discipline. Whether students are apprentices or supernumerary on placement, they learn from experienced qualified nurses, mentors, and clinical instructors through participating in patient care and ward routines. As evidenced by this study and in line with the findings of Bradbury-Jones et al. (2011), it was clear that the meaning of ‘doing’ did not just imply finishing certain tasks. By ‘doing’, students advanced their psychomotor skills as well as their relationship with ward staff in the clinical area. It helped students establish trust with the team, allowed them to make contributions and provided opportunities for students to gain acceptance, recognition, and a sense of belonging to the workplace. In addition, supernumerary students recognized that they had to get involved in order to have practice opportunities. This was not only because students wanted to meet their educational needs, but also to fulfil the responsibilities expected of them in the workplace (Castledine, 2001). It appears that although the clinical learning model has changed, the general concept of clinical learning remains the same.

“The process of change reflects not only adaption to the external forces, but an investment of energy in what people do and in their mutual relations” (Wenger, 1998, pp94). The movement from apprenticeship training to the new model of
supernumerary status was full of challenges. As evidenced by this study and the preceding literature (Hyde and Brady, 2002, McGowan, 2006), the implementation of supernumerary status was especially frustrating in an environment with a low level of staffing. The busier the nurses, the fewer learning opportunities students were going to have. Supernumerary students might end up helping with the mundane routines or taking an observer role. Moreover, as suggested by Wenger (1998), highly valued ideas would continue to influence practice, even after new ideas were introduced to make modifications. In the same vein, despite the implementation of supernumerary status on placement, the apprenticeship tradition had not faded in the clinical learning process because it was trusted and believed to be effective. However, it was noteworthy that students under the traditional apprenticeship model were treated as auxiliary in the workplace (Gray and Smith, 1999). If this tradition was allowed to remain in the new clinical learning model, it would contradict the underlying concepts of supernumerary status.

Reflecting on the data provided by students and clinical facilitators, it seems that what has actually changed after the introduction of supernumerary status is the nature of student contribution to the workplace and the approach to learning. In the old apprenticeship system, students had a close relationship with ward nurses as they were part of the workforce. They were active contributors in the clinical setting. (Spouse, 2001b, Royal College of Nursing, 2012). In contrast, supernumerary students come to the clinical setting to learn rather than to provide service. Although students were expected to help out with ward routines in some of the placement wards, in most situations, the work allocated to student nurses was tied to educational purposes.

Supernumerary students are often linked with negative comments such as ‘fall in standard’ (Castledine, 2001), ‘not fit for practice’ (Clark and Holmes, 2007, Ousey, 2009) and ‘too posh to wash’ (Scott, 2004). However, students in this study viewed ‘doing’ as a way to help them survive in the clinical environment and reduce the stigma of being ‘supernumerary’ in the workplace. ‘Doing’ increased the chance of inclusion in the nursing team. Students perceived that being accepted implied more learning opportunities. They would have a difficult time on placement if they were not accepted
and supported by ward nurses (Levett-Jones et al., 2007). It seems that there is a discrepancy between how students value ‘doing’ and how others value what supernumerary students ‘do’, possibly leading to some detrimental effects on the degree of student participation on placement.

Allan, Smith and O’Driscoll (2011) argued that if students were able to negotiate their student status on placement, a positive learning outcome would result. However, according to the findings of this study, it seems that it is both impossible and unwise for students to stress their supernumerary status on placement. As shown in the diagram, supernumerary status basically carries two meanings: students are not considered as part of the workforce and students are learners in the workplace. Although the concept of supernumerary status has been borrowed from the UK and adopted in the clinical education curriculum in Macau, the term ‘supernumerary status’ is only used within academic settings. In the practice area, the terminology used to refer to the notion of ‘supernumerary status’ is ‘not counted as manpower’ in a direct translation from Chinese. This representation can be viewed as distorting the original notion of supernumerary status (McGowan, 2006). It probably accentuates the negative influence brought by supernumerary status and thus narrows students’ learning and practise opportunities on placement.

6.1.2 Supernumerary status as a reification

Reification can make abstract concepts more visible so that everyone can understand and follow. When reification is used in an open way, it provides room for interpretations. On the downside, reification can either be too restrictive or its ambiguity may possibly lead to incompatible views and misunderstandings towards the concept being reified (Wenger, 1998). ‘Supernumerary status’ is a reification of student status on placement that was introduced after nursing education was placed in the higher education sector in the UK. This reification has been widely adopted in practice across the UK (Royal College of Nursing, 2006, Nursing and Midwifery Council, 2010) and utilized to a certain extent in some countries following the British nursing curriculum (Joyce, 1999, Hyde and Brady, 2002, Chan and Ip, 2007).
Otherwise, the use of ‘supernumerary status’ has not been identified in any documents or literature of other countries. Yet, having formal statements and illustrations on ‘supernumerary status’ in the UK and the Republic of Ireland, the confusion resulting from different interpretations of the term has not been eliminated (O’Callaghan and Slevin, 2003, Elcock et al., 2007).

In Macau, there is no standard guideline for, and no definition of, supernumerary status. In both the quantitative and qualitative findings, students did not show a clear concept of their student status on placement. In particular, two thirds of the fourth year students in this study did not identify themselves as supernumerary on placement. In addition, students did not hold a positive attitude towards supernumerary status and could not see the benefit of being a learner in the clinical environment. They valued the traditional apprenticeship model as they believed more practice opportunities would be provided and they would be able to become an active participant in the workplace. Among clinical instructors and mentors, supernumerary status was believed to be implicitly understood by everyone involved in clinical learning. It was perceived that it was best for the concept to remain tacit and it was seldom included in formal or informal discussion within the academic and practice settings. Due to the differences in the interpretation of supernumerary status, there were discrepancies in the perception of the degree of student involvement on placement, consequently causing confusion among students and ward nurses. Hyde and Brady (2002) warned that the misinterpretation of supernumerary status is problematic in the preparation of qualified nurses. Particularly given that student nurses nowadays only spend a limited time in the practice area, the misinterpretation did not only affect the quality of nursing education directly, but also the quality of nursing practice in the future (Joyce, 1999, Hyde and Brady, 2002)

The emphasis on ‘supernumerary status’ in the UK and the implicit use of ‘supernumerary status’ in Macau have presented two distinctly contrasting examples of reifying student status on placement, but in terms of the outcome of students’ clinical learning experiences, no big differences have been shown. Students are expected to fulfil service needs on placement (Allan et al., 2011). Inconsistent with the
findings from the literature, student nurses were not completely satisfied with their learning experience in the workplace. They experienced isolation and reported being used as an extra pair of hands. Students also perceived that they had insufficient opportunities to practise and wanted to see more and do more qualified nurses’ work. The influence of supernumerary status on the degree of student participation in the workplace cannot be fully appreciated without considering the relationship between participation and reification.

6.1.3 Participation and reification

“To be effective, the politics of reification required participation because reification does not itself ensure any effect. Reification has to be adopted by a community before it can shape practice in significant ways” (Wenger, 1998, pp92). This statement seems to shed light on the difficulties faced by nurse educators when implementing students’ supernumerary status on placement. The value and practice held by the higher education sector and the clinical area have long been seen as inconsistent. This study has shown a difference in the clinical learning experience between students facilitated by clinical instructors and mentors. When students were on placement with clinical instructors, they seldom participated directly in the community of practice of the workplace. Students and clinical instructors worked according to the learning model being utilized within the community of practice of the nursing college. On placement, the focus of practice was to provide quality care, meet learning objectives and finish case reports so as to meet the curriculum requirements. When fourth year students were on placement, they worked either with mentors or ward nurses. As mentioned in the previous sections, the apprenticeship tradition had a deep root in clinical education. Given the interpretation of the reification of supernumerary status in the practice area and students’ need to seek acceptance, students’ participation on placement did not simply follow the approach framed by the nursing college. Students in the fourth year participated in the ward community according to service needs, ward expectations, mentors’ expectations and the learning objectives set by the nursing college. It appears that the idea of supernumerary status is not well adopted by the community of practice of the workplace.
It is also evidenced in the literature that the idea of ‘supernumerary status’ has not been localized and adopted in the practice area. Since nursing education was removed from hospital settings, it has been criticized for putting too much emphasis on the academic component while moving away from the practical aspect (Meerabeau, 2001). Conversely, the practice area has been challenged for its inability to catch up with the change in nursing education (Hyde and Brady, 2002). Supernumerary status is a reification of student status proposed and supported by academics and policy makers. However, the practice area has not shown much enthusiasm towards students’ supernumerary status in the workplace (Royal College of Nursing, 2012) because it worsens the problem of manpower shortage as students are removed from the workforce (Ormerod and Murphy, 1994). Both findings of this study and the preceding literature have demonstrated the influence of the interdependency of participation and reification on student learning in the clinical environment. The relationship between reification and participation determines the nature of participation and the degree of involvement in practice in the community of practice of workplace.

It is also important to note that the aim of clinical learning is not only to let students apply classroom knowledge into practice, but also to provide an opportunity for students to work within the clinical environment as a preparation for their future career (Fenton-O’Creevy et al., 2014). Thus, students are expected to cross the boundary between the community of the higher education sector and the practice area. The boundary crossing can be either achieved by students’ own initiatives or with the help of clinical facilitators.

6.1.4 Crossing the boundary between higher education and the practice area

Boundary crossing is a challenging process. Each community of practice has its own values, norms and agreed practices. The challenge of moving from one community of practice to another is not limited to the need to make sense of new practices. Learners have to work with the conflicts and tensions resulting from the practice differences between different communities of practice (Wenger, 1998). In terms of clinical
education, the boundary between higher education and their practice area is evidenced in the findings of this study and in the literature. Students thought that they were outsiders of the workplace and were different to ward nurses. Some students chose to remain passive in the clinical learning process. Some students preferred to wait for clinical facilitators’ arrangements instead of actively seeking learning opportunities. These findings have also been discussed in previous studies. Brennan and Timmins (2012) found that students thought that they did not belong to the clinical environment because nurse education was not hospital-based anymore. Added to short placements and frequent rotations, students tended to see themselves as outsiders in the placement area (Yung, 1996, Chow and Suen, 2001, Roberts, 2009). It is also indicated in the findings that in order to seek acceptance in the community of practice of the workplace, students preferred to learn with respect to the ways of working of the ward instead of strictly following the institutional requirements. Students were more likely to follow the practice norms instead of holding the norms and values of the college. These findings are consistent with previous studies on student learning on placement (Yung, 1996, Neary, 2000, Houghton et al., 2013).

The qualitative findings have demonstrated two types of boundaries in the clinical learning environment. One of them is the boundary between the two communities of practice that has been considered in the preceding paragraphs, and the other occurred at an interpersonal level. The latter boundary exists between students and clinical facilitators or ward nurses, resulting from the perceived hierarchical differences in the nursing college or in the workplace (Pearcey and Elliott, 2004, Sharif and Masoumi, 2005, Lin et al., 2013). Both of the boundaries exert an influence on the establishment of mutual engagement, the formation of a joint enterprise and development of a shared repertoire in the community of practice, and hence affect students’ learning experience in the clinical environment (Fenton-O’Creery et al., 2014). On placement, boundary crossing is a bilateral process affected by three main sets of actors: students, clinical facilitators as middlemen and gatekeepers, and ward nurses. Students need help to cross the boundary. Without support, students felt helpless and described themselves as an ‘orphan’ in the clinical area.
Being able to ‘fit in’ is an indicator of successful boundary crossing. Fitting in is part of the process of attaining mutual engagement. It enhances students’ psychomotor skills development and communication with ward staff. It also builds up students’ confidence and creates learning and practice opportunities (Webb et al., 2009). On placement, whether students are able to develop a sense of belonging or remain alienated in the community of practice not only relates to individual students, but also other members of the workplace (Hyde and Brady, 2002, Levett-Jones et al., 2007) and the input of clinical facilitators.

On placements facilitated by clinical instructors, students were strongly attached to their clinical instructors. Clinical instructors were always the first person students would approach when there was something to report. Unless clinical instructors gave students a push and encouraged them to communicate with ward nurses, students had very limited interactions with nurses or other ward staff. These findings are consistent with the background quantitative findings that second and third year students spent the majority of their clinical learning hours on doing bedside care, while fourth year students had significantly more opportunities to do qualified nurses’ work. Moreover, second and third year students indicated that they rarely worked with ward nurses and nurse assistants on placement. Students seemed to be working in their own ‘community of practice’. There were two occasions when students would step out of their community of practice: the first one was when students wanted to, or were being requested to, show their contribution to the workplace, and the second one was when students wanted to expand their learning opportunities beyond their own community of practice. Students loved working with qualified nurses. Regardless of whether students were facilitated by clinical instructors or mentors, students in this study found that the more time they spent with nurses, the more likely it was that nurses would initiate practice opportunities for them. Students believed that working with nurses let them know more about the ward culture, and learn the appropriate way to function in the workplace. Stepping out of the original community of practice of the nursing college not only diversified students’ learning experience, it also provided opportunities for nurses to get to know the students on placement in their workplace.
Clinical instructors took multiple roles in the clinical environment. They had to communicate with ward nurses so as to harmonize student learning and ward operations. They had to safeguard the quality of care while negotiating practice opportunities for students. However, not being members of the workplace, clinical instructors faced difficulties and constraints while facilitating students and helping themselves to cross the boundary. Some clinical instructors perceived themselves as one of the hindrances preventing students from crossing the boundary. Also, although clinical instructors understood their role as upholding the values belong to the community of practice of the nursing college, they had to work within the norms and values of the workplace. In contrast, mentors’ considerations regarding helping students to cross the boundary were comparatively straightforward. When working with mentors, students were required to work in the community of practice of the workplace. Unlike clinical instructors, mentors are full members of the community of practice of the workplace. They act as the middleman between students and ward staff, and the gatekeeper of patients’, staff’s and wards’ interests.

As discussed in the literature review, students’ perceived self-efficacy is influenced by cognitive, physical, emotional, and environmental factors. Although this study does not purposively look at students’ perceived self-efficacy, the findings on students’ understanding of supernumerary status, the need for boundary crossing in order to fit in within the workplace, students’ perceptions on their readiness to practise, the perceived virtual wall between students and ward nurses, ward nurses’ attitude towards students, and the nature of student participation on placement have revealed how students’ self-perceptions are influenced by the social environment and their performance in the workplace. It has been demonstrated clearly in the findings that students in this study do not have a strong sense of perceived self-efficacy, though they are theoretically prepared and passionate about learning to be a qualified nurse.

Perceived self-efficacy influences learners’ performances, at the same time, learners evaluate their performances and adjust their self-efficacy beliefs (Bandura, 1977, Bandura, 1999). It is apparent that practice experiences play a significant role in the cycle of self-efficacy building throughout the learning process. They help learners
understand their own capabilities (Bandura, 1977). However, in a very pressured clinical environment, students may not be able to participate sufficiently to reflect on the capabilities of being a qualified nurse.

According to Bandura (1977), people act to ensure the attainment of desired outcomes and prevent negative consequences. These behavioural characteristics not only help us to understand student learning, but also give a possible explanation for the limitations that exist on the legitimacy of student participation on placements. The clinical setting is featured by a busy short-staffed environment and with an emphasis on effectiveness, efficiency and safe practice. However, student nurses are not yet fully competent to work independently to attain the desired outcomes expected by the workplace. Also, in order to avoid any negative consequences which might be caused by student participation in clinical activities, unless students work alongside clinical facilitators or experienced nurses, they are not likely to have opportunities to engage in qualified nurses’ work which exceed their level of skill proficiency.

The preceding discussion on the apprentice tradition, different interpretations of supernumerary status and student status on placement, boundaries on placement, and the factors facilitating and inhibiting the process of boundary crossing has demonstrated the influence of different communities of practice on student learning in the clinical environment. In the following sections, I will continue the discussion of students’ clinical learning experience in terms of the communities of practice of the nursing college and the workplace, but focusing on the component of the lower circle of Figure 6.1. This will involve considering student participation on placement and linking student participation and identity formation.

6.2 Student participation on placement

Participation on placement allows students to connect with the community of practice of the workplace. As evidenced by the findings of this study and earlier studies (Spouse, 1998a, Hyde and Brady, 2002, Löfmark and Wikblad, 2001, Secrest et al., 2003, Idczak, 2007, Levett-Jones et al., 2007, Ralph et al., 2009, Thrysoe et al., 2010,
Johnson et al., 2012, Lin et al., 2013, Walker et al., 2013, Yang et al., 2013), students and clinical facilitators placed great value on clinical learning. They agreed that clinical learning is irreplaceable. Participation in practice did not only provide opportunities for students to recognize the relevance between knowledge and practice, it also enhanced students’ confidence, motivated students to learn, helped students to identify limitations, helped students to develop a sense of belonging and satisfaction, and prepared students for their future professional role.

Before proceeding to the nature of student participation in the clinical context of Macau, it is essential to address the meaning of peripherality in nursing practice and in the theory of communities of practice respectively. In nursing practice, there is nothing known as ‘peripheral care’. Every aspect of care is important to nursing practice. However, because of the removal of the student workforce from the workplace with the introduction of supernumerary status, some of the basic care, (which is normally known as bedside care), like taking routine vital signs, feeding, bathing and some other low risk nursing procedures, has been handed over to trained healthcare assistants (Allan and Smith, 2009, Hasson et al., 2013). As a result, student nurses tend to divide nursing care into the work being performed by nurse assistants and the work being performed by qualified nurses. Student nurses view nurse assistants’ work as inferior and peripheral to qualified nurses’ work. However, clinical facilitators do not agree with the way students differentiate nurses’ work, though it does reflects the actual division of labour in the workplace. From the clinical facilitators’ perspective, although students are learning to be a qualified nurse on placement, they are not supposed only to learn qualified nurses’ work. Echoing the findings of Allan and Smith (2009), bedside care was seen as the foundation of nursing practice by clinical facilitators in this study, but its importance has always been underestimated and devalued by students. It appears that ‘peripherality’ carries a negative interpretation in the nursing context. However, in terms of the theory of the communities of practice, ‘peripherality’ is not merely negative. It carries both positive and negative connotations. ‘Peripherality’ does not represent any specific activities in the workplace. Instead, it reflects the nature of a person’s participation in the community of practice. ‘Peripherality’ can be a position where access to a practice is
possible, but it can also be a position where outsiders are kept from moving further inward’ (Wenger, 1998, pp120).

The traditional apprenticeship model was criticized for its reliance on a student workforce. Students were expected to provide subordinate service in the workplace (Castledine, 2001). As indicated by this study and by other researchers (Cope et al., 2000, McGowan, 2006, Allan and Smith, 2009), although students were supernumerary on placement, they still spent quite a lot of time in performing bedside care and other manual tasks, instead of moving progressively from peripheral to qualified nurses’ role. Students’ supernumerary status was more likely to be compromised in a short staffed environment (McGowan, 2006). Students also felt that it was difficult to perform any learning activities when the ward was busy (Allan et al., 2011, Walker et al., 2013). Given the complexity of the clinical setting and its limitations in providing an ideal environment for learning, whether student nurses are able to deliver effective care upon graduation depends on the presence of clinical facilitators or qualified nurses who are willing to work with students and help students to develop necessary skills for practice during placement (O’Connor, 2007).

6.2.1 Peripheral participation on placement

Learning occurs at different level of peripheral participation in the workplace (Wenger, 1998). Unlike qualified nurses, student nurses can never reach the status of full participant while on placement, though they aim to become qualified nurses (Fenton-O’Creery et al., 2014). Students were not always performing qualified nurses’ responsibilities. They were seldom involved in interdisciplinary communications and shared ward information. Added to the short duration of placements and continuous rotation, I would argue that students can only be regarded as temporary peripheral participants of the community of practice of the workplace. Participation boosts students’ confidence (Idczak, 2007, Morrell and Ridgway, 2014). Also, it provides a pathway which prepares students theoretically, technically and socially, and leads students towards their future professional role as a competent nurse (MacIntosh, 2003).
The expansive and restrictive approach to apprenticeship suggested by Fuller and Unwin (2003) can be used to help illustrate the factors affecting the effectiveness of clinical education on placement. The ‘expansive and restrictive’ approaches indicated the extent to which apprentices were provided extensive learning and working opportunities and whether the apprenticeship training could lead to a professional role and the formation of professional identities. If apprentices were trained in a restrictive approach, learning would be restricted by the boundary of the workplace and the apprentices would not be able to apply knowledge in other communities of practice. Similar to the apprentice experiences presented in Fuller and Unwin’s (2003) study, nursing students had to rotate to different practice areas throughout the process of clinical education. Students worked with different mentors and nurses, and their clinical learning experiences were influenced by mentors’ and nurses’ attitudes towards clinical learning. Fuller and Unwin (2003) had noted that well-planned learning activities, the availability of diverse learning and practice opportunities, the amount of support provided, the facilitation of identity formation and the restriction of participation in the workplace exerted an influence on an individual’s personal and professional development in the workplace. Likewise, student nurses’ experience can either be fostered or constrained by clinical facilitators, by students themselves or by patients.

As indicated in the findings chapters, students loved to be kept busy and involved in everything in the clinical environment. Learning experiences on placement varied hugely among students. Apart from meeting institutional requirements, students could expand their learning opportunities by negotiation. Students had to negotiate the right task, with the right person, and at the right time. If the ward was too busy, and nobody was available to provide supervision or the negotiated task was perceived to be inappropriate for students, the negotiation would probably be declined. Doing observation was another way to expand learning opportunities on placement. Observation, as one of the forms of peripheral participation (Wenger, 1998, Spouse, 1998a), did not receive much appreciation from students and nurses (McGowan, 2006), clinical facilitators and ward staff (Hyde and Brady, 2002, Allan and Smith, 2009) according to earlier studies. However, the present study has provided some contrasting
findings. Since hands-on practice was not always guaranteed to be provided and some special nursing procedures were not always available when students were on placement, students viewed observation as an alternative way to maximize learning and an opportunity to open up opportunities to participate peripherally in activities which they were not yet competent to perform. When observation was done with educational purposes, it brought excitement, happiness and contentment to students.

In terms of constraints on clinical learning, students in this study reflected that they were sometimes restricted to perform bedside care or other tasks which they were capable of, findings which have also been reported in preceding studies (Spouse, 1996, Chow and Suen, 2001, Hsu, 2006, Shen and Spouse, 2007). However, the clinical facilitators observed that there were also occasions where students restricted themselves to their comfort zone and kept working on something they were already proficient in, instead of negotiating learning opportunities that could possibly expand their degree of involvement in the clinical environment. When inexperienced students practise in the clinical environment where there are full of unexpected challenges, they may feel insecure and uncertain (Levett-Jones and Lathlean, 2009). In line with the findings of Neary’s (2000) study, students did not have much control over the environment and found working in the clinical area stressful without clinical facilitators’ support. In addition, it was demonstrated in the findings that students held back when they thought they were not competent to perform a task. Students were afraid of making mistakes and doing harm to patients.

Patients refusing student nurses’ care is not commonly documented in the literature, but in this study, both students and clinical facilitators verbalized their experience of being refused by patients or patients’ relatives. Patients were not always confident with the care provided by student nurses. It was reported in a study carried out in China that clinical instructors of a university in China were surprised to know that student nurses in western countries were allowed to practise on patients in their junior years, as clinical placement would only be organized for final year students in China (Clarke, 2010). Although this finding did not directly indicate the tension between student nurses and patients in the Chinese clinical environment, it pointed out the Chinese
perception of student practice on patients. Patients in the hospital were there to receive quality care, not to let students practise on them. It seems that students’ position in this kind of situation is quite passive. They have to respect patients’ decisions and are not able to negotiate anything. On this matter, clinical facilitators, who have established a trust relationship with patients (Bridges et al., 2013), need to function as a middleman between patients and students to ease restriction, and hence expand students’ learning opportunities.

From all the above, it is apparent that learning does not only occur with hands-on practice, and involvement in hands-on practice does not necessarily lead to an expansion of learning opportunities in the workplace. To ensure effective learning on placement, clinical facilitators have to organize well-planned learning activities for students (Spouse, 1996, Ip and Chan, 2005, Gidman et al., 2011). The findings have also demonstrated that clinical facilitators are hugely important to student learning on placement. They provide support, encouragement, and give students a push when they are reluctant to move forward (Cope et al., 2000, Morrell and Ridgway, 2014). The absence of clinical facilitators in the learning process would disempower students and prevent learning taking place (Bradbury-Jones et al., 2007). Spouse (1998a) reported that, under supernumerary status, student nurses rely heavily on clinical facilitators to engage them in clinical activities on placement. She suggested the application of the framework of ‘legitimate peripheral participation’ in clinical education, and believed that it would be an effective way to prepare future nurses which could enhance not only the professional development of student nurses, but also that of clinical facilitators themselves.

6.2.2 Legitimate peripheral participation – a learning process in the workplace

Legitimate peripheral participation emphasizes the participation in authentic activities of a community of practice. It is a planned process which allows students to work alongside an active participant in the workplace according to their level of competence (Lave and Wenger, 1991). Ideally, on placement, student nurses work closely with clinical facilitators and are involved in clinical activities performed by qualified nurses.
Students are not left alone to perform repetitive mundane routines or do observations, but work closely with nurses and are responsible for some of the components of the nursing care performed on patients. Through observation, cooperation and collaboration, students learn and contribute to the workplace simultaneously (Spouse, 1998a). Students benefit from participating in meaningful learning activities at different levels of peripherality and develop a relationship between themselves and the workplace (Wenger, 1998). Basically, the concept of legitimate peripheral participation has very much in common with the clinical participation sequence provided by the clinical facilitators in the interviews.

Students have different learning needs at different stages of clinical education. Other studies have found that junior students require more support from clinical facilitators (Lin et al., 2013) while final year students would like to have more independent working opportunities (Bisholt et al., 2014). These are in line with the current study’s findings that students’ expectations of clinical learning changed from learning to doing over the years of study, and with clinical facilitators’ perceptions of the need for students to gain independence as they progress through the clinical learning process. Although students would not end up being a full member in the community of practice of the workplace, through engaging with ward staff, aligning with ward practices and reflecting on practice experiences, students are able to develop a sense of belonging through participation (Wenger, 1998).

However, the findings indicated that students’ participation on placement did not always move from peripheral to qualified nurses’ work, as it has long been a tradition in the clinical practice that the one who has the lowest position in the hierarchy, most of the time this is a student, is responsible for all the bedside care and ward routines. Some of the students, clinical instructors and mentors in this study agreed that these are part of students’ responsibilities in the placement area and it is anticipated that learning opportunities may have to be given up when students are required to take responsibility for sharing part of the workload. It appears that the nature of ‘doing’ on placement does not purely reflect students’ learning needs though students are expected to be learners under supernumerary status. In addition, these findings
demonstrated a potential hindrance to student learning in the process of legitimate peripheral participation, which is marginalization.

Marginalization happens when newcomers are limited to peripheral participation and not given opportunities to move forward to full participation in the community of practice (Wenger, 1998). Thrysoe (2010) added that marginalization could either come from students’ own choices or be brought about by the restrictions set by the community. Students thought that they were marginalized when they felt they were an outsider of the ward (Allan and Smith, 2009, Roberts, 2009) and limited to an observer role or doing mundane routines (Elcock et al., 2007). As evidenced from the findings, students’ initiatives and their level of proactivity on placement affected the extent of participation on placement. Similarly, the expectations from placement wards, clinical facilitators and ward nurses affected the legitimacy of student participation in the workplace. Students’ feelings of being an assistant to nurse assistants, their hesitation to negotiate after being rejected, nurses’ preference for students to help with bedside care instead of participating in qualified nurses’ work when the ward was busy, ward nurses’ uncertainty of the clinical practices that students were allowed to do, and the misinterpretation of supernumerary status were some of the indicators and leading causes of marginalization on placement identified in the study.

It has been noted that students love to be involved on placement. Legitimate peripheral participation provides opportunities for students to learn to be a nurse progressively, starting from participating in basic care and then moving forward to qualified nurses’ work. This learning process provides a wide range of activities for students to participate in on placement. It allows students to contribute to the workplace while learning and let them prepare for their future professional role. Students are able to engage in the community of practice instead of just being in a clinical environment. Working alongside a qualified nurse helps the process of boundary crossing. It not only facilitates mutual engagement between students and ward staff, but also helps introduce the agreed values and practices of the workplace to students. It is therefore important not to marginalize students in the learning process and stop them from moving forward in the trajectory of becoming a qualified nurse.
6.2.3 The idea of ‘staged participation’

Legitimate peripheral participation empowers students (Cope et al., 2000). Students gain confidence (Löfmark and Wikblad, 2001, Idczak, 2007, Ralph et al., 2009) and independence (Löfmark and Wikblad, 2001, Secrest et al., 2003) and gradually require less assistance from clinical facilitators in the clinical learning process (Cope et al., 2000). Through meaningful participation in the workplace students are able to utilize knowledge and skills, and experience nursing practice in the clinical environment (Berry, 2011). Although the concept of legitimate peripheral participation seems to match with students’ learning needs and is compatible with clinical facilitators’ perceptions of an effective and productive clinical learning process, criticism of the application of legitimate peripheral participation in nursing education has been identified in the literature.

Allan and Smith (2009) criticized Spouse (1998a) on her idea of introducing the concept of legitimate peripheral participation in clinical learning. Allan and Smith (2009) argued that student nurses were long believed to learn best by working. Thus, legitimate peripheral participation would not be accepted as an appropriate learning method by ward staff. The researchers further elaborated that ‘this (legitimate peripheral participation) is the process by which student nurses are “allowed” to observe clinical care performed by others, either registered nurses or HCAs (healthcare assistants)” (Allan and Smith, 2009, pp10). In a similar vein, the work published by Benner et al. (2010) indicated the authors’ disagreement with using legitimate peripheral participation in clinical learning. ‘It is almost impossible to limit learning nursing and medical practice to peripheral performance…Nurse educators deliberately engage students directly in practice as soon as possible, rather than have students just observe or shadow other nurses’ (Benner et al., 2010, pp26). The authors asserted that students had to engage in clinical situations where they were allowed to integrate knowledge and practical skills while responding to patients’ needs (Benner et al., 2010). However, I would argue that the criticisms raised by the two studies have narrowed the meaning of peripherality in the concept of legitimate peripheral participation in the community of practice. Legitimate peripheral participation is a
learning process that involves different levels of active participation, not just doing observation and shadowing. Wenger (1998) explained that the component of observation in peripheral participation is only an introductory step to mutual engagement in the community of practice. It is necessary to provide access for newcomers to establish a mutual relationship with members of the community, allow newcomers to experience the joint enterprise and shared repertoire, and give enough legitimacy for newcomers to participate in the community.

The previous sections have demonstrated clearly the challenges brought by supernumerary status, the nature of student participation on placement, and the benefits and potential hindrance of legitimate peripheral participation. It seems that there is no single approach or method that can ensure the effectiveness of clinical learning, make sure students can be engaged into the community of practice of the placement ward, and at the same time be able to protect student status on placement. I am not going to suggest any new clinical learning approaches in the thesis; instead, I would like to suggest the use of ‘staged participation’ as a new terminology to provide a more explicit description of the concept of legitimate peripheral participation in clinical learning.

Similar to ‘supernumerary status’, the word ‘peripheral’ in legitimate peripheral participation also gives a negative sense to the types of clinical activities students are going to be involved in on placement, though it does not intend to give this meaning. The criticisms made by Allan and Smith (2009) and Benner et al. (2010) in the preceding paragraph are very good examples of the rejection of the use of legitimate peripheral participation in clinical learning due to the unfavourable view of the term ‘peripherality’ in the concept of legitimate peripheral participation. It is believed to be problematic to clinical learning as it contradicts the traditional view of learning by doing on placement (Hyde and Brady, 2002) and the general aim of clinical education to produce independent future nurses who are fit for practice upon graduation (Apesoa-Varano, 2007, Clark and Holmes, 2007, Allan et al., 2011). Therefore, I suggest the use of ‘staged participation’ to make the underlying idea of ‘legitimate peripheral participation’ explicit and remove the potential misinterpretation brought by the term.
‘Staged participation’ follows the concept of legitimate peripheral participation, but provides a structural sense to the process of student participation and development on placement. It also emphasises on active participation in the learning process. Students work alongside clinical facilitators or qualified nurses through observation, cooperation and collaboration (Spouse, 1998a). Students’ participation has to move from basic to advanced clinical activities as they gain competence, confidence and independence.

The clinical environment is not primarily designed for educational purposes. ‘Staged participation’ allows students to work and contribute in the community of practice. However, if the students’ learner role has not been reinforced, the nature of student participation on placement may probably revert to the time of the traditional apprenticeship model. It is important to note that seeing students as part of the workforce can result in overlooking students’ learning needs (Tynjälä, 2008); therefore, ‘staged participation’ has to work concurrently with supernumerary status. Since reification and participation are in a dynamic relationship and shape practices in the workplace, it is essential to keep the concept of supernumerary status which helps protect a student’s learner role on placement. The concepts of staged participation and supernumerary status compensate for each other’s limitations and thus potentially are able to enhance the effectiveness of clinical education. However, it is important to note that a clear understanding of supernumerary status has to be established in order to achieve an optimal outcome for ‘staged participation’. Any misinterpretations would affect the balance between participation and reification, which may give rise to negative implications and may not help tackle the existing problem.

In section 2.5, the rationale of choosing the theory of the communities of practice to provide a framework for this study has been clearly explained. Following the line of thought that it is best for clinical learning to take place in an environment that facilitates cognitive development, social engagement and professional development, the adoption of the concept of legitimate peripheral participation and the proposition of ‘staged participation’ has illustrate how the framework could possibly put into practice on placements. Consonant with the traditional notion of ‘learning by doing’
and scaffolding, ‘staged participation’ describes the process of active engagement in practice through guided participation. Student nurses progress from getting involved in basic tasks to qualified nurses’ work, and from practising under close supervision to carrying out nursing care independently and achieving the expected competencies of a nurse to be.

However, what makes ‘staged participation’ different is its aim to nurture student nurses to become fuller members of the community of practice of the workplace. As shown in the findings and preceding literature, the implementation of supernumerary status has altered the social environment of clinical learning. Student nurses are no longer part of the workforce, and ward nurses are seldom involved in the learning process unless clinical facilitators are absent. It appears that students do not have much opportunity to develop a trusting relationship with ward nurses, which in turn hinders the establishment of mutual engagement between students and the nursing team. Moreover, although the notion of ‘learning by doing’ provides plenty of practice opportunities for students, in the busy and short-staffed ward environment, students may only be able to participate in fragmented clinical tasks or some of the nursing care that students are proficient at. Students are possibly marginalized and find it difficult to move forward in the trajectory of becoming a qualified nurse.

The use of ‘staged participation’ can help students minimize the possibility of being marginalized on placement. It makes the concept of legitimate peripheral participation easy to understand and follow. By adopting this learning approach in the clinical learning process, student nurses would benefit from learning through active participation in the communities of practice of the placement area and form the identities required for personal and professional growth. In the next section, I am going to examine the impact of students’ participation on identity formation and vice versa.

6.3 Participation and identity formation

‘Staged participation’ emphasizes student engagement in practice and the importance of providing opportunities for students to move toward full participation in the
community of practice in the clinical learning process. Although adopting ‘staged participation’ alone cannot eliminate the negative influences brought by the busy and short-staffed environment, at least it expands the range of student participation on placement, which in turns enriches students’ practice experience. Students are given the opportunities to compare their capabilities with qualified nurses, receive feedback and reflect on their potential to become a fuller member in the community of practice.

According to Wenger (1998), identity is the relationship between oneself and the corresponding community of practice. It changes with respect to our experience of different kinds of participation, our expectation of who we are going to be, the way we see ourselves and others see us, our sense of belonging to a community, as well as the position where we currently locate ourselves. On placement, identity formation is closely linked to students’ experience of clinical participation (Ng and Sun, 2013). However, the formation of identity through participation does not necessarily happen with performing qualified nurses’ work. As long as a clinical activity is meaningful and significant to a student, no matter if it is a positive or negative experience, a peripheral task like observation or any kind of hands-on practice, identity can be formed from reflections on the participation experience (Wenger, 1998, Brammer, 2008, Ng and Sun, 2013).

The trajectory of becoming a qualified nurse begins when students start receiving nurse education at the nursing college and continues until they are registered as a qualified nurse. Identity formation is an ongoing process. Students’ identity keeps refining and reconstructing as they gain experience and engage in the community of practice (Wenger, 1998). Information provided by students in this study reflected a gradual change of identity over the period of clinical education. Their self-perception changed from being a student to a nurse to be. The identity formed in the learning trajectory will be carried on, and contribute to students’ future participation in any communities of practice and their personal and professional development throughout their working lives (Wenger, 1998).
In this section, I discuss the identity formed through participation in terms of two perspectives: immediate and extended identity. These two forms of identity are possibly constructed simultaneously in the same activity. Immediate identity is students’ immediate experience of identity of a particular setting at a specific point of time and the extended identity results from students’ reflections on their clinical participation experiences. By gaining a sense of belonging, satisfaction and self-worth, students relate themselves to the nursing profession and project forwards to what they want and do not want to be in the future.

6.3.1 The formation and influence of immediate identity

The clinical area is a complex social environment (Cope et al., 2000). It has been noted earlier that students’ participation in the clinical environment does not only involve students and clinical facilitators. Ward nurses, patients, wards and institutional policies also exert an influence on students’ participation on placement. As I have discussed, supernumerary status, ward nurses’ perceptions and expectations of students have a very large influence on student participation. Added to the differences between the practices of the communities of practice of the nursing college and the workplace, some of the students in this study expressed a struggle between professional ideals and practice norms. Students identify and define what they are and what they are not in the engagement process (Wenger, 1998). The way students identify themselves from practice is not exactly what they expect themselves to be. For example, students were discontented with behaving like waitresses and being an assistant of nurse assistants. This struggle was also described in Brennan and Timmins’s study (2012). It was found that student nurses faced a tension between being compliant and being a critical thinker in the workplace. This situation was believed to be difficult for students because they might not be able to adhere to professional ideals as they had to function as a team member in a highly controlled setting (Brennan and Timmins, 2012).

The negotiation of self for newcomers is challenging, particularly when it involves multiple communities of practice. It requires the work of boundary crossing and newcomers also tend to avoid conflicts in new environments (Handley et al., 2006).
Some people choose to marginalize themselves, and others may try to adapt and align (Wenger, 1998, Handley et al., 2006). Through alignment, newcomers are able to adopt some of the identities held by members in the community of practice (Wenger, 1998). Students in this study demonstrated that they cared about their presentation of self on placement. Students wanted to show their best instead of their weaknesses in front of ward nurses. Students thought that being able to fit in signified acceptance. It enabled students to prepare for the future and allowed them to contribute to the workplace. Students’ participation in a community increased when they were able to contribute and their contribution was being appreciated. It gave students a sense of being valued and recognized as a member of the community of practice (Thrysoe et al, 2010). Being recognized as a member and the establishment of a relationship of trust opened up further practice opportunities for students to participate (Spouse, 2001b, Sayer, 2014). In addition, students saw success in fitting in as an indicator of personal and professional growth. To connect fitting in with be able to participate in the clinical activities which were practised by qualified nurses, and saw it as an indicator of moving a step closer to becoming a full participant of the community of practice.

Nursing is a practice-based discipline. Being a learner and not being considered as part of the workforce affects how students identify themselves and how others identify them in the clinical environment (Hyde and Brady, 2002, McGowan, 2006, Ousey, 2009, Allan et al., 2011). These perceptions influence students’ immediate identity formed from participation. As I have discussed, supernumerary status both enhances and restricts participation on placement. Whether students are allow to participate depends on the perceived level of appropriateness and the availability of time and people to supervise (McGowan, 2006, Allan and Smith, 2009). Apart from describing students as learners, students and clinical facilitators in this study had another common description for students’ role in the workplace, which was being a ‘helper’. This role has also been identified in the preceding literature, and sometimes it has been described negatively as ‘an extra pair of hands’ (O’Callaghan and Slevin, 2003, McGowan, 2006, Bradbury-Jones et al., 2007, O’Connor, 2007). Being a helper was a bittersweet experience for students. On the one hand, students hoped that they could be helpful to the workplace and able to contribute. Students felt frustrated when they failed to offer
help and saw themselves as a burden on the workplace. On the other hand, they did not want their participation to be limited to the clinical activities that they were already proficient at.

It appears that immediate identity changes with the type of activities students are participating in on placement. Some of them are short lasting, such as being an assistant of nurse assistant, while others last through the clinical education process, such as students being learners as well as helpers on placement. The formation of extended identity is at another level. It does not only relate to the activities students are involved in, but is also associated with students’ constant reflection on what nursing means to them. Extended identity can result from participation in clinical activities and interacting with different people in the workplace.

6.3.2 The formation and influence of extended identity

Extended identity and immediate identity can be formed from the same source. For instance, students view themselves as a helper in the clinical environment, and this is an immediate identity formed at the practical level. During students’ experiences of being a helper, they interacted with nurses and patients. Students saw patients’ recovery and realized that they were able to provide care and soothe patients’ discomfort. Students found these participation experiences worth the effort and identified themselves as a nurse to be. Extended identity is more intrinsic and contributes to the development of professional identity.

Wenger (1998) argued that learning is a process of becoming. It involves knowledge acquisition and identity formation. To support learning on placement, it is important to make sure these two components are facilitated. Professional nursing identity starts developing before clinical education begins (Johnson et al., 2012). The public image of nursing (Bradshaw, 2001, Apesoa-Varano, 2007, Brennan and Timmins, 2012) and the professional nurse identity emphasized by the nursing college influence students’ image of their future selves (Fenton-O’Creery et al., 2014). Through engaging in the clinical environment and receiving support and guidance from clinical facilitators and
nurses, students refine their self-concept according to learning and participation experience (Grealish and Ranse, 2009, Johnson et al., 2012).

Learning involves the acquisition of desirable knowledge and skills, and the identification of the negative aspects of the workplace (Tynjälä, 2008). Through different levels of participation, students experience the real world and witness how qualified nurses work in the community of practice. The working pace, the required level of competence, nurses’ interactions with patients, interdisciplinary communications, the use of tacit knowledge in practice and the identification of practice limitations are some of the experiences that students would like to gain through clinical participation. Although students may not be directly or actively involved in these activities, and these activities may come along with positive or negative experiences, students reflect on what they have seen and done and the meaning of nursing constantly throughout the clinical learning process (Papp et al., 2003, Mackintosh, 2006, Idczak, 2007). From different parts of the findings, we can see that students quite often compared themselves with qualified nurses. Students thought that they were not as good as nurses and so they admired nurses’ abilities. They wanted to learn from nurses and act like them. They wanted to practise more in order to shorten the distance between qualified nurses and themselves.

Being a professional nurse is the ultimate goal of all student nurses. It has been shown in the findings chapters that students were not content with just being a helper or a learner on placement. Similar to Secrest et al.’s (2003) findings, students in this study wanted to be recognized and have an affirmation of who they were in the clinical environment. Students wanted to build a connection with the community of practice. They would be happy if nurses remembered them and asked them for help when they were busy. They tried to align with nurses’ practice and do what nurses do in the workplace. They wanted to identify themselves or be identified by others as nurses as part of the nursing team. Caring is the most commonly identified element of nursing identity among students (Cook et al., 2003, Apesoa-Varano, 2007). By providing care, students received compliments and appreciation from clinical facilitators, nurses, and patients. Consonant with Yang’s (2013) findings, these good experiences gave
students a sense of satisfaction and self-worth, and further motivated them to participate in clinical activities. In addition, through prolonged engagement in practice, students developed a sense of belonging with the community and internalized the nurses’ attributes acquired in the clinical learning process. As indicated in this study and Yakhlef’s (2010) study, students would take with them all the skills and identity acquired to apply in later learning situations. These made identity development a continuous process which takes place within and beyond the course of nurse education.

In summary, a strong relationship between participation and the formation of identity has been demonstrated throughout the discussion. Identity develops continuously in students’ trajectory of becoming a qualified nurse. Through engagement in different levels of participation, students acquire skills and attributes that are valued by the workplace. I have further divided the identity described in the findings into two categories, immediate and extended identity. These two identities are of equal importance to clinical learning. Immediate identity is students’ instant reflection on the activities they have involved in. It is mainly influenced by external factors such as supernumerary status and the perceived level of legitimate participation in the workplace. Immediate identity reflects the nature of student participation on placement and their level of engagement in the community of practice. Extended identity contributes to the development of professional attributes which facilitates the transformation of a student into a nurse to be. It is also essential to students’ professional development, exerting a long-term impact on their career.

The next section, presents an overall picture of the communities of practice in the Macau clinical learning environment in terms of mutual engagement, joint enterprise and shared repertoire. In addition, I will make use of the preceding discussion on the apprenticeship tradition, the reification of student status on placement, the nature of student participation and its corresponding identity formation to elucidate the challenges faced by student nurses, clinical instructors and mentors in the clinical learning process.
6.4 An overview of the communities of practice in the Macau clinical learning environment

The characteristics of the communities of practice in the Macau clinical learning environment have already been touched on in this chapter. These characteristics have been discussed in relation to: reification and participation, participation in multiple communities of practice, boundary crossing, the role of the middleman and gatekeeper, and legitimate peripheral participation. In this section, I summarize all these elements to provide a full picture of the communities of practice in which students are participating on placement. I will also draw upon the arguments of students being temporary peripheral participants in the clinical learning process and their inadequate contact with the community of practice of the workplace whilst on placement. The discussion will demonstrate the influence of the nature of student participation on the establishment of mutual engagement, joint enterprise and shared repertoire in the community of practice of the workplace.

6.4.1 The communities of practice on placement

Figure 6.2 and Figure 6.3 indicate the differences in the communities of practice on placement when students were facilitated by clinical instructors and mentors. From the figures, we can see that the power of influence, indicated by solid lines (higher influence) and dotted lines (lower influence), on clinical learning of the community of practice of the workplace remains strong in both clinical facilitation models. In contrast, the power and influence of the nursing college diminished when placement facilitation was handed over to the workplace. When students are facilitated by clinical instructors, unless they are required to help with the ward routines, they follow the practices valued by the nursing college most of the time. In other words, although students’ learning takes place in the clinical environment, students are not always participating in the community of practice of the workplace. In contrast, when students are facilitated by mentors, students have to align with the practices valued by the workplace. Students participate in the community of practice in the workplace while learning.
In addition, the boundary between students and the workplace becomes looser (indicated by different densities of dotted line inside the community of practice of the workplace) due to the change of clinical facilitator. Mentors are full participants in the work placement. They are mutually engaged with other members and the practices of the community; therefore, they have a more favourable position to help students to cross the boundary and engage in the community than the clinical facilitators, while for the placements facilitated by clinical instructors, this really depends on their level of familiarity and relationships with the workplace. Further discussion on mutual engagement, joint enterprise and shared repertoire on placement will be given in sections 6.4.2 and 6.4.3.

Furthermore, when students are facilitated by mentors, the community of practice of the workplace is more likely to open to new ideas (indicated by the solid and dash line inside the community of practice of the nursing college). Mentors are happy to negotiate new meanings with students and these new meanings may possibly be accepted by the workplace. However, in the case of clinical instructors, since there is a lack of trust and mutual understanding between students, clinical instructors and members of the community of practice of the workplace, new ideas are not likely to be accepted. Thus the chance to negotiate new meanings and develop shared skills and knowledge in the clinical learning process is minimized.

The preceding discussion has set out the general characteristics of, and interactions between, the communities of practice of the Macau clinical learning environment. In the following two sub-sections, I will elucidate how supernumerary status and the unique features of the clinical learning environment, clinical learning arrangements and the clinical facilitation model in Macau influence the establishment of mutual engagement, joint enterprise and shared repertoire on placement.
Figure 6.2. The communities of practice on placement when students are facilitated by clinical instructors

Figure 6.3. The communities of practice on placement when students are facilitated by mentors
6.4.2 Mutual engagement

To make mutual engagement possible, newcomers have to be included in the community. They have to build relationships with members of the community, and be able to demonstrate their competence by working complementarily with others (Wenger, 1998). Being included in the community enhances students’ engagement in the environment, boosts students’ confidence and encourages students to demonstrate their clinical competence on placement (Cope et al., 2000, Sayer, 2014). It was also found that trust and respect among members in a community could enhance the effectiveness of social learning (Sayer, 2014). However, the findings of this study revealed that although there were plenty of opportunities for fourth year students to work with different people in the workplace, students did not have much expectation of being included in the community of practice of the workplace. Instead, it was demonstrated in the findings that students and clinical instructors tried to align with ward practices and hoped to seek acceptance from ward nurses. Moreover, students believed that nurses and students are separated as they were at different levels of the hierarchy. This perception created a virtual wall between students and nurses and impeded social engagement in the workplace. Although students wanted to create connections with the community, be involved in meaningful learning activities and work with nurses, they found it difficult to engage with nurses.

Supernumerary status has given the community of practice of the nursing college a space to exercise their practice and value in the community of practice of the workplace, provided that students are facilitated by clinical instructors on placement. However, at the same time, it limits students’ opportunities to engage with the community of the workplace. Second and third year students were dissatisfied with the fact that they spent more time on practising individual tasks rather than being adapted in the actual practice of the workplace. Also, the lack of congruence between the nursing care model used in the nursing college and the workplace added difficulties for engagement. When students were not working with clinical instructors, in order to seek acceptance and engage in practice, they opted to follow the practice of the workplace. This is in agreement with the results of Grealish and Trevitt’s (2005) study.
which reported that as students wanted to fit into the workplace, when there was dissonance between educational values and practice norms, students tended to give up the educational values and adopt the practice norms. In addition, Levett-Jones and Lathlean (2009) revealed that being compliant helped students to be included in the workplace.

Participation allows students to take a close look at nurses’ work in the workplace. It stimulates students to reflect on their level of competence, contributes to identity formation and triggers learning (Grealish and Ranse, 2009). Students also expect themselves to be able to provide help to the workplace and hope that their contribution will be valued and appreciated (Grealish and Trevitt, 2005). Learning and providing help were expected to happen concurrently on placements in Macau. Being a helper assisted students to engage in practice, built a relationship of trust with nurses and opened up further learning and practice opportunities. However, it also created problems. Students reflected in the study that they were not always participating in qualified nurses’ work, and were being used as an extra pair of hands.

In order to engage in practice successfully, students needed clinical facilitators to act as middlemen to help them cross the boundary between the two communities of practice. Clinical facilitators made use of their own engagement with nurses and patients to negotiate practice and learning opportunities for students. However, as clinical instructors did not have the same level of engagement with the community as mentors did, they faced more difficulties in the negotiation process. These difficulties became more visible when clinical instructors and students attempted to put new ideas into practice.

6.4.3 Joint enterprise and shared repertoire

The higher education sector and the practice area have a shared responsibility to support student learning on placement. They have to communicate, negotiate and collaborate continuously in order to achieve a common understanding of students’ learning needs and the best way to support student learning in the practice area
Joint enterprise and shared repertoire are built on mutual engagement, and have to be negotiated by members of the community (Wenger, 1998). In the clinical learning process, students are just temporary peripheral participants of the community. While there is a formal agreement between the hospital and the nursing college to allow students to learn in the workplace, clinical facilitators still have to negotiate a joint enterprise for students and nurses to work together. Clinical facilitators are not only accountable for their own actions in the workplace, they are also accountable for students’ practice on placement (Atack et al., 2000, Ohrling and Hallberg, 2000). They act as middlemen and gatekeepers to ensure the quality of clinical education, to safeguard the quality of patient care and patient safety, and to harmonize student learning with ward practices. This is in agreement with Brammer’s (2008) findings that students viewed qualified nurses as gatekeepers who determined their access to practice and learning opportunities, and monitored their practices on placements.

The difference between clinical instructor and mentor facilitation is their relationship with the practice area. Being a full participant of the community, mentors have established a relationship of trust with the practice area. This relationship of trust enables learning and the development of knowledge within the community. In contrast, the trust established between clinical instructors and the practice area was not at the level of the mentors’. Clinical instructors were trusted to ensure the quality of care and patient safety on student practice, but when it came to attempting to try out new ideas, clinical instructors’ or students’ requests were always declined. Since students and clinical instructors were only temporary peripheral participants of the workplace, their mutual engagement with the community was not as strong as that of full participants. Although it was evidenced by the findings of this study and MacIntosh (2003) that nurses learn by acknowledging discrepancies between others’ and their own practices, and this was the way new practices were to be developed, students and clinical instructors were not powerful enough to introduce any change in practice. It was tough for them to negotiate new meanings and develop new shared knowledge with other members in the community of practice of the workplace.
Apart from the input from the clinical facilitators, it seems that students could hardly get any direct involvement in the process of the negotiation of joint enterprise and shared repertoire in the community of practice. From the students’ perspectives, they thought that their position in the workplace was, in the word of Grealish and Trevitt (2005, pp143), ‘the lowest of the low’. These words capture a finding of the present study where students believed that they were in a separate group from nurses, and that there was a hierarchical difference between clinical facilitators, nurses and students. Students thought that they were not in a position to challenge and they were uncomfortable to speak out publicly. This made students choose to align with practice instead of creating conflicts or being involved in the negotiation of a joint enterprise and shared repertoire. In addition, short placements were also found to be an inhibiting factor for students to develop a sense of membership in the workplace. Time was insufficient to let students become familiar with the context of the clinical environment and be incorporated into the nursing team.

In sum, it appears that apart from establishing mutual engagement, students were not yet in a position to negotiate joint enterprise or to develop shared repertoire on their own. Students had to rely on clinical facilitators to negotiate a joint enterprise which provided a favourable condition for clinical learning, enabling students to work complementarily with other members in the community, and to contribute to the community of practice. In terms of the development of shared repertoire, being a full member of the community of practice, mentors are obviously in a better position to negotiate new meanings in the workplace than students and clinical instructors. These variations reflect students’, clinical instructors’ and mentors’ differing levels of engagement with the community of practice of the workplace, and their corresponding influence on the clinical learning process.

In the following sections, I will summarize the research findings and the key arguments I have made earlier in this chapter. After that, a discussion on the limitations of this study and the implications of the research findings will be presented.
6.5 Conclusion

Nursing is a practice-based discipline (Scott and Spouse, 2013). Although nurse education has been moved from an apprenticeship training to the higher education sector, ‘doing’ has always been recognized as an effective way to equip student nurses for future practice. By comparing and contrasting student nurses’, clinical instructors’ and mentors’ perceptions of their clinical learning and mentoring experiences, this study offered insight into the impact of supernumerary status, the clinical learning environment and different types of clinical facilitators on student engagement in the community of practice of the workplace. It also demonstrated the influence of different degrees of participation on placement on students’ identity formation throughout the clinical learning process.

Academics, the practice area and students have placed great value on clinical learning. Traditionally, ‘learning by doing’ has been perceived as the most effective way to learn in the clinical environment. By ‘doing’, students not only learn psychomotor skills, they also acquire the norms and values belonging to the workplace by actively engaging in this social environment. However, the movement of nurse education to the higher education sector and the implementation of supernumerary status have altered the nature of student participation in the clinical learning process. Students were transformed from active contributors to learners on placement. In addition, some students and ward nurses saw supernumerary students as outsiders to the workplace. Consequently, the relationship between students and ward nurses were not as close as they were in the apprenticeship system.

Being a reification of full student status on placement, supernumerary status should be able to make the concept clear to everybody involved in the clinical learning process, but since the notion of supernumerary status is not negotiated within the community of practice of the workplace, this concept has not been localized and therefore is not being valued by all members of the community. Similar to other countries, the interpretation of supernumerary status in Macau is focused on what students were not supposed to be on placement. This added difficulties to the establishment of mutual
engagement between students and the nursing team. It was found that there is a lack of clarity concerning supernumerary status among students in Macau. Students did not see being supernumerary as beneficial to clinical learning and advantageous to the negotiation of practice opportunities. Rather, they considered supernumerary status as restricting.

In addition to the implementation of supernumerary status, clinical education in Macau is characterized by its use of different clinical facilitators (i.e. clinical instructors and mentors) in the clinical education process, and the adoption of different nursing care models in the workplace and the nursing college (i.e. functional nursing is exercised in the workplace, while total patient care is adopted by the nursing college). Having to work in different communities of practice is already challenging. In the Macau situation, supernumerary status and the education practice disparity accentuate the differences between students and the members of the community of practice of the workplace. This makes mutual engagement even more difficult to establish. As ward nurses were not directly involved in the clinical facilitation process most of the time, the distance between students and the nursing team is perceived as one of the reasons why students’ practice opportunities become limited under supernumerary status. Students need help from clinical facilitators to connect them with the clinical environment and the authentic ward practice. Clinical facilitators’ roles of middleman and gatekeeper are essential in the clinical learning process. Not only do they harmonize learning and working in the workplace, but they also safeguard the quality of patient care and ensure learning objectives are met. However, due to the variation in employment backgrounds, clinical instructors and mentors experience the clinical facilitation process differently. Similarly, students also have different experiences when working with these two types of clinical facilitators.

Clinical instructors and mentors have their own strengths and weaknesses in the clinical facilitation process. Being a full member of the workplace, mentors are in a better position to help students cross the boundary between the nursing college and the workplace. They understand the norms and values held by members of the community and are fully engaged in practice. They are trusted in the workplace and have a close
relationship with members of the community. Students who are facilitated by mentors participate in clinical activities in accordance with authentic ward practices and have more opportunities to interact with ward nurses. However, mentors have to bear their normal responsibilities in the workplace while mentoring students. When the ward is busy, students may be left unattended and working on mundane routines. Unlike mentors, clinical instructors are full members of the community of the nursing college. On placement, they have to uphold the values of the nursing college, as well as respect the norms and values of the practice area when mentoring students. Since clinical instructors are supernumerary on placement, they are not responsible for any patient load. They are able to supervise and work with students most of the time. On the negative side, students working with clinical instructors are strongly attached to them and therefore seldom interact with ward nurses. Moreover, under clinical instructors’ facilitation, student participation is mainly mediated by the learning approach set by the nursing college. In other words, students might not be able to participate directly in the community of practice of the workplace on placement.

It is important to note that student nurses love to be involved in any kind of clinical activities and be kept busy on placement. They are enthusiastic to learn, hope to fit in and are willing to make contributions to the workplace. Like clinical facilitators, students regard the notion of learning by doing highly. They are eager to participate in qualified nurses’ work and learn to be a nurse. However, because of short placement duration and frequent rotations, students can only be regarded as temporary peripheral participants in the workplace. Moreover, the variation in the conception of qualified nurses’ work between students and clinical facilitators has caused a mismatch in the expectation of the degree of student involvement on placement and consequently influences how students identify themselves in the workplace.

As reflected in the study, the engagement in authentic ward practices and the protection of students’ supernumerary status is difficult to achieve concurrently in the clinical learning environment in Macau. Considering the duality of reification and participation suggested by Wenger (1998), and the lack of clarity of supernumerary status among students and nurses in Macau and resulting uncertainty towards the
degree of legitimacy of student participation on placement, the concept of peripheral legitimate participation may help remedy the problem if it is used in conjunction with a comprehensive interpretation of supernumerary status on placement.

The concept of legitimate peripheral participation has not been highly valued in the nursing discipline. It has been noted in both the findings of this study and in the preceding literature that the term ‘peripheral’ is not perceived positively in the nursing context. In view of that, ‘staged participation’, which follows the underlying idea of legitimate peripheral participation, is suggested as a new terminology representing the idea of ‘legitimate peripheral participation’ in clinical learning. Apart from the removal of the potential negative interpretation of peripherality, staged participation provides an explicit description of the process of student participation and the expected trajectory of student development on placement. Staged participation and supernumerary status compensate each other’s limitations. Staged participation facilitates student engagement in ward practice and prevents marginalization, while supernumerary status protects the learners’ role, albeit students are expected to participate actively in practice.

Participation connects students with the community of practice of the workplace. Students acquire skills, values and norms belonging to the workplace. In the trajectory of becoming a qualified nurse, although students are not expected to reach full membership on placement, they identify themselves according to their expectations of qualified nurses’ role, their experiences of different kinds of participation on placement, and their relationships with the members of the community. Across the clinical learning process, immediate identity and extended identity are formed. Immediate identity directly reflects the types of activities students are participating in on placement, while extended identity is more intrinsic and contributes to the establishment of professional identity. It is also worth noting that students do not only identify what they are, but also what they are not on placement. With the common goal of learning to be a qualified nurse, students are not satisfied with being simply recognized as a learner or a helper on placement, they would like to be accepted and viewed as members of the community of practice of the workplace.
Being able to engage fully in the community of practice of the workplace is particularly difficult for student nurses and clinical instructors when compared with mentors. Although students and clinical instructors have done a lot of work to establish mutual engagement and develop a joint enterprise in the clinical learning process, they do not have the same power as mentors to negotiate new meanings in the workplace. When students encounter struggles between professional ideals and practice norms, they choose to align with the workplace and avoid conflict. Similarly, students are expected to align with the norms and not to interrupt the agreed practice of the workplace when facilitated by clinical instructors. However, if students are facilitated by mentors, there is always wider room for negotiation. This indicates that people who are full members of the community of practice of the workplace are in a better position to facilitate student learning and at the same time initiate the process of negotiation of new meanings in the workplace.

6.6 Limitations

In this section, I will present the key limitations identified from my reflections on the study design, sampling process, data collection process, and the generalisability of the study. These limitations include both personal and practical issues. Some of the limitations had been recognized before this study started, while others were unexpected and identified in the research process.

My lack of clinical learning and working experience in Macau is one of the limitations that I had recognized before the study was carried out. In order to enrich my understanding of the culture and structure of both the nursing college and the teaching hospital, the mode of nursing practice in Macau, the curriculum of the nurse education programme, and the approach of clinical learning used by the nursing college, I spent quite a lot of time on reading related documents and talking to some teaching staff of the nursing college. Moreover, the nursing college was very supportive in this respect. I was given opportunities to visit some of the placement wards, to sit in on regular placement sharing sessions organized for fourth year students, and to participate in different kinds of college activities during my stay in the nursing college. In addition,
I was permitted to access some of the internal documents which helped me further understand the operation of the nursing college and the training provided for clinical facilitators. I was engaged in the community of the nursing college.

The official languages of Macau are Chinese/Cantonese and Portuguese. In the nursing college and the teaching hospital, Chinese is the key language for daily communication. Although I am a Cantonese speaker and able to read and write Chinese, my clinical learning and working experience in Hong Kong were English-based. I am not familiar with the Chinese medical abbreviations, terminologies and slang words commonly used in the clinical area. Since this limitation might affect my understanding of the terms used by my interviewees and the accuracy of the expressions I used in the questionnaires, focus groups and interviews, I invited one of the teachers in the nursing college to read through my Chinese version questionnaires and interview guide to identify any misused terms and make sure they match with the local context. Also, through formal and informal communication with students and college staff, I gained a general understanding of the terms being used in clinical related conversations. During focus groups and interviews, if I found my comprehension was affected, I asked for clarification immediately to avoid any misinterpretations (Oliver et al. 2005).

Apart from my personal limitations, the design of this study is limited by the omission of participant observation, the lack of control in part of the participant selection, the unexpected importance of Macau nurses’ role in the clinical learning process, the restriction of time, and the utilization of CLEI in the quantitative strand. Participant observation is an alternative way to research students’ learning experience in the workplace. By immersing themselves in the actual environment, researchers can establish close relationships with the participants. The data collected will not only rely on what the participants tell the researcher, but also what the researcher sees in the clinical setting (Bryman, 2008). However, as argued by Bryman (2006), as participants know that they are being observed, they may behave differently and thus the observation may not reflect participants’ normal behaviour. Although this negative effect can be overcome by prolonged observation, I would argue that due to the short
duration of placements and frequent ward rotation, participant observation does not appear to be a suitable data collection method in this context.

In the sampling process, the recruitment of mentors was mainly in the teaching hospital’s control. I was not allowed to approach potential participants directly. In order to minimize the influence of this restriction, I negotiated with the hospital that along with the inclusion and exclusion criteria, I preferred to recruit participants from different practice areas. As the mentors recruited were chosen by the hospital, these participants were very likely to be good mentors who were enthusiastic about mentoring. As a result, the data collected may only reflect the perceptions of clinical learning and mentoring held by a group of good mentors. It may not be able to represent the mentoring experiences of all mentors in the teaching hospital. However, in view of the lack of empirical studies in clinical learning and mentoring in Macau, this study offers a rich baseline for further research.

It has been indicated in this study and the literature review that ward nurses do influence the student learning experience on placement. However, based on my understanding of the clinical facilitation model before the study began, I did not expect Macau ward nurses to contribute that much in the mentoring process. As some of the appointed clinical facilitators, particularly mentors, are not always available to work on the same shift with students, ward nurses have to take over the mentor’s role. When I recognized the actual situation, there was not enough time to recruit ward nurses to take part in this study. Although ward nurses are not included, their contributions in the clinical learning process are reflected in the focus group and interview findings from both the students’ and clinical facilitators’ perspectives. Ward nurses’ perspectives can be further explored in future research to enrich the breadth and depth of the recent study.

The restriction of time is also one of the key limitations of this study. Data collection of the phase two survey did not only have to meet the inclusion and exclusion criteria stated in chapter three, but also the timing of students’ placement schedules. There was only a short time lag between the phase one focus group and the commencement of
phase two data collection. As a result, I only had very limited time to develop, pilot and validate the self-designed questions which were informed by the findings of the focus group. Although it is known that it is desirable to evaluate the reliability and validity of a newly designed questionnaire by carrying out a pilot study (De Vaus, 2014), in this study, time was only available to invite three students and three nurse lecturers to pilot and validate the self-designed questions respectively.

As mentioned in chapter two, the CLEI and the CLES+T scale are the only two established inventories to measure student nurses’ perceptions about the clinical learning environment. Despite the CLES+T scale having been shown to have a higher reliability than the CLEI (Edmond, 2001, Saarikoski and Leino-Kilpi, 2002, Ip and Chan, 2005, Henderson et al., 2006, Saarikoski et al., 2008, Johansson et al., 2010, De Witte et al., 2011, Papathanasiou et al., 2014), a number of the items of the CLES+T scale were not applicable to the context of the Macau clinical learning environment. Therefore, the CLEI was chosen for the current study. Although the reliability of the CLEI has raised concerns, its findings have provided valuable insights into students’ perception of the clinical learning environment in Macau and formed part of the background of this study. Future studies with a larger sample would be essential to evaluate and confirm the reliability and validity of the inventory.

In terms of generalisability, the quantitative strand of this study is restricted by its small sample size and the recruitment of participants from only one of the institutions offering an undergraduate nurse education programme in Macau. Although the sample size of a survey should be large enough to reach statistical generalisation (De Vaus, 2014), I would argue that the purpose of the quantitative strand of this study is not to establish generalisability across all student nurses’ in Macau, but to obtain a general understanding of student nurses’ perceptions of the clinical learning environment within a particular nursing college, a complement the provision of a comprehensive view of students’ clinical learning experience on placement. For the qualitative strand of the study, qualitative findings are commonly critiqued as being unable to generalise into different settings (Bryman, 2008). However, Lincoln and Guba (1985) argued that the restriction on generalizing qualitative findings does not limit studies’
transferability. It is important for researchers to provide sufficient information on the study context to allow readers to make their judgement on the transfer of concepts generated in the study.

6.7 Implications and recommendations for clinical education

‘Placement is a complex social and cognitive experience’ (Cope et al., 2000, pp850). This thesis has contributed to the existing body of knowledge by extending the understanding of student learning in the clinical environment from a social learning perspective. Viewing the clinical learning process from the perspective of the communities of practice offers an insight into how student learning and identity formation are influenced by the social context. The findings of this thesis suggest that the ambiguity of the term ‘supernumerary’ has created a tension between learning and doing whilst students are on placement. This tension is found to be unfavourable to student engagement in practice since it affects students’, clinical facilitators’, and ward nurses’ perceptions of the level of legitimacy of student participation on placement. Students are at risk of being marginalized in the workplace and may find it difficult to move towards fuller participation in the clinical learning process. By refining the concept of ‘legitimate peripheral participation’, the term ‘staged participation’ is proposed to provide a structural concept that can frame student participation on placement. Highlighting the significance of student participation in the clinical learning trajectory provides possible directions for nurse educators to design a better clinical learning approach that meets educational needs, as well as being able to prepare students to become full members of the community of practice of the workplace.

This thesis has also added to the understanding of how student engagement in practice is influenced by the background of different types of clinical facilitators, and is consonant with preceding literature that has shown that clinical facilitators and ward nurses exert a very large influence on student learning on placement. It has indicated that the partnership between the academic and the service sectors has to be strengthened in order to enhance mutual understanding and to facilitate the
development of shared values, practices, and resources to enhance the quality of clinical education. In addition, the study has demonstrated that the responsibility for student facilitation and supervision does not only fall on clinical facilitators. Ward nurses are always directly involved in the clinical learning process; therefore, it is important for both the nursing college and the service sector to prepare both clinical facilitators and nurses for their mentoring role. Particularly for clinical instructors, not being a full member of the community of practice has limited their potential to negotiate shared practice and new meanings in the workplace. Opportunities for the exchange of ideas, new knowledge generation and developing shared values are missed. Accordingly, it appears to be essential to find possible ways to enhance mutual engagement and communication between clinical instructors and the workplace.

In the following sub-sections, I will further elaborate the recommendations I have made and their implications for the development of clinical education in Macau and other similar nursing contexts. The recommendations include the adoption of the concept of ‘staged participation’ along with supernumerary status on placement, supporting clinical instructors, mentors and nurses for their mentoring role, and lastly, the utilization of the framework of communities of practice in the nursing context.

6.7.1 The adoption of the concept of ‘staged participation’ along with the implementation of supernumerary status on placement

Supernumerary status is an ambiguous concept in nursing. As I have argued previously, supernumerary status is a reification of full student status on placement. Being a reification, supernumerary status is open to different interpretations but at the same time is limited by the possibility of generating misleading concepts. It was perceived that supernumerary status withdrew students from the social structure of the workplace, and limited the interaction between novices and experienced nurses. It is difficult to immerse students into the workplace as they are not part of the workforce; as a result, the formation of professional identity is inhibited (Hyde and Brady, 2002, Van, 2012). Despite the negative views presented in chapter two, supernumerary status has value in clinical learning. Nurse educators need to make the idea of supernumerary status
clear to everyone, not just stressing what students are not supposed to be, but also emphasizing the importance of student participation in practice on placement. The rationale of implementing supernumerary status in the clinical learning process and students’ and clinical facilitators’ role under supernumerary learning have to set out explicitly; to clinical facilitators in the mentor training programme, and to students in placement introductory sessions. In addition, supernumerary learning may not be possible without the support from the managerial level of the workplace. The nursing college has the responsibility to communicate with the workplace and make sure student status on placements is protected.

Regarding Wenger’s (1998) concept of the duality of reification and participation, the understanding of supernumerary status among students, clinical facilitators and ward nurses, and the nature of student participation on placement presented in chapter four and five, have indicated an imbalance between the reification of full student status on placement and student participation in the clinical learning environment in Macau. As suggested by Wenger, in order to regain the balance, the situation has to be considered as a whole. Adding new elements to either reification or participation will not be able to tackle the problem (Wenger, 1998). Accordingly, I propose the adoption of the concept of ‘staged participation’ along with a clarification of the meaning of supernumerary status on placement. The introduction of ‘staged participation’ will be able to compensate for the constraints brought by supernumerary status by minimizing the chance of marginalization and maximizing student engagement in practice.

Build on the basis of the concept of ‘legitimate peripheral participation’, ‘staged participation’ provides a structure for framing student participation on placement. ‘Staged participation’ emphasizes the importance of student engagement in authentic practice, having an experienced member of the community to work along with students, and allowing students to move from taking peripheral roles to being a fuller participant in the community of the workplace. By achieving these, students are able to make continuous progress in their trajectory towards becoming a qualified nurse and constructing corresponding identities. Upon completion of placements, students would not only meet the learning objectives set by nursing institutions, but also be able to
make sense of the practical knowledge, shared values, attitudes and culture encountered in the workplace. Accordingly, the adoption of ‘staged participation’ might also ease the transition to becoming professional nurses upon graduation. If these benefits are to be realized, it is necessary to have an effective academic-service partnership.

To achieve the best result from ‘staged participation’, individual or small group facilitation is preferred. The essence of ‘staged participation’ is the emphasis on learning from insiders and engaging in authentic practice in order to become a member of the community. Students have to be involved in every aspect of qualified nurses’ work, starting from observation to different degree of hands-on practices which correspond to students’ capabilities and potentials. Students are expected to interact with the nursing team, as well as the interdisciplinary team of the workplace. Similar to supernumerary status, clinical facilitators and students have to be briefed before the commencement of placements on the underlying philosophy of the concept of ‘staged participation’ and their expected roles in the learning process. Although students still need to meet the clinical learning objectives set by the nursing college corresponding to their year of study, in order to respect individual differences, the stages of participation do not necessarily match with year of study. Students who catch on faster can proceed further in their trajectory of becoming a fuller member of the community of practice of the workplace.

For the unique situation of the Macau clinical learning environment, where clinical learning involves mixed types of clinical facilitators, more work is required to achieve the idea of learning from insiders and engaging in authentic practice especially when junior students are facilitated by clinical instructors. I would suggest to build on the experience of the existing college-hospital exchange programme, and then either expand its scale to involve more clinical facilitators, or transform the idea to joint appointments. Further discussion of this possible way ahead will be given in the next sub-section.
Although the data informing this thesis were only collected in one of the nursing institutions in Macau, previous chapters have established that the difficulties faced by students, clinical facilitators and nurse educators regarding the implementation of supernumerary status are quite similar among different countries. Thus, the suggestions I have made in this section should be able to transfer to different contexts, thereby aiding reflection on the design of clinical learning approaches in different nursing institutions, and helping develop a better clinical learning environment for nursing students. Furthermore, the term ‘staged participation’ is proposed to refine the concept of ‘legitimate peripheral participation’ in the theory of communities of practice. This enhances the applicability of the theory in clinical education in general. Further research could explore and discuss the effectiveness and students’ experience of ‘staged participation’ in different nursing contexts.

6.7.2 Supporting and preparing clinical instructors, mentors and ward nurses for their mentoring role

According to the code of practice of nurses, providing educational support to student nurses and fellow nurses is part of qualified nurses’ responsibilities (The Nursing Council of Hong Kong, 2001, Nursing and Midwifery Council, 2015). In other words, it is not only clinical facilitators’ responsibility to facilitate student learning on placement, ward nurses also have an obligation to assist student learning in the workplace. Mentor training in Macau is targeted at mentors and clinical instructors who are directly involved in the clinical learning process. As indicated by the details of the mentor training programme presented in chapter one, it is apparent that the programme did not address the weaknesses of clinical instructors identified in this study, and not all clinical instructors of the nursing college had clinical working experience in the teaching hospital. From those who had worked in the hospital, some were not always mentoring students in their previous workplaces. Although some of the interviewees told me that they would do pre-visits before mentoring students. It was still challenging for them to engage in the community of practice.
To overcome this weakness, it would be beneficial if clinical instructors were given opportunities to work in the clinical area for a certain period of time every year without students by their side if time is allowed. By doing this, when students go on placement, they will benefit from having an insider to facilitate learning in the workplace. This idea has already been partly achieved by the college-hospital exchange programme organized by the Macau nursing college and the teaching hospital (Kiang Wu Nursing College of Macau, 2012b). Each year, two ward nurses, who are mentors in their wards, and two clinical instructors exchange their role for a semester. Ward nurses are engaged in the community of the nursing college and responsible for placement facilitation, mostly in their original workplace. However, for the clinical instructors, the aim of going back to work in the clinical area is more individual-focused, such as enriching knowledge and skills in a particular workplace. There is no clinical facilitation component during their stay in the workplace, and the wards chosen by clinical instructors will not necessarily be any of the placement wards in the hospital. In order to maximize the effectiveness of the exchange programme, it might be worth suggesting that future participants work in one of the placement wards and that there is a clinical facilitation component in the final weeks of the exchange programme. This would allow ward nurses, clinical instructors and students to benefit from the programme.

Apart from expanding the scale of the college-hospital exchange programme, another possible way to bring the concept of the communities of practice to the workplace is to promote better partnership between the service and the academic sector. Countries like North America, U.K., and Australia have introduced different level of joint appointments between the academic and service sector to enhance the quality of clinical teaching, evidence-based practice development, and promote research collaboration (Ogilvie et al., 2004, Leigh et al., 2005, Evans et al., 2014, Rao et al., 2014). Learning from these experiences, the Macau nursing college can push its college-hospital exchange programme further to develop joint appointments with the hospital which aim to improve the effectiveness of clinical learning as well as to provide extra manpower to the workplace if there is no student on placement.
As I have mentioned earlier in this chapter, the busy and short-staffed environment is one of the biggest challenges to providing a favourable setting for students to learn in the clinical setting. It can lead to negative impacts on student engagement in practice, the nature of student participation, the availability of clinical guidance, and the interaction between students and ward staff. However, the problem of manpower shortage cannot be resolved overnight. In order to improve students’ learning experience on placement so as to nurture future nurses who are fit for practice, the academic sector has to work closely with the service sector to make the best use of the resources of the two communities of practice.

Mentors interviewed in this study have demonstrated their commitment to mentoring. The most direct way to support mentors is to reduce their patient load so that they can spend more time with students. However, this seems to be impossible in the busy clinical environment in Macau. For mentors, being valued and recognized by colleagues makes them feel that taking the mentoring role is worthwhile, but it has been found to be rare to receive colleagues’ appreciation on mentoring in Macau since mentoring may increase the share of workload of the rest of the nursing team (Liu et al., 2010). In view of the lack of peer support, it would be useful for the nursing college or the hospital to organize some sessions for mentors to share their experiences and the difficulties which they encounter in the mentoring process in a supportive environment. This would help to form a community of practice of mentors which enables them to engage in continuous reflection on their mentoring role, to develop shared meanings and negotiate new practices to promote student learning in the workplace.

For ward nurses, it seems to be unrealistic to expect every nurse to love working with students. However, it appears essential if nurse officers, ward managers or mentors are to help ward nurses to understand that their acceptance and their willingness to involve students in practice will make a difference to students’ clinical learning experience. Students appreciate ward nurses’ input on placement and feel satisfied if they are seen as part of the nursing team.
6.7.3 Utilizing the framework of communities of practice in the nursing context

The achievement of clinical competence is one of the most important goals of clinical education. Student nurses have to meet all the assessment criteria and standards set by nursing institutions and nursing councils before graduation. The research concerning clinical learning, apart from studies describing student learning experiences and mentoring experiences, tends to look at different ways to enhance clinical learning outcomes by cognitive means, such as simulation, reflective practice and problem-based learning. It appears that the focus of research mainly falls on learning at individual level, but not much attention has been paid on the social level. Focusing on workplace learning extends learning from the individual to the social level (Tynjälä, 2008). In nurse education, student learning starts with the acquisition of theories in classrooms and skills in skill laboratories and moves to repetitive practice of core skills on real patients on placement, and then further extends to collaborative participation in clinical activities with ward nurses. To optimize workplace learning, interactions between novices and experts have to be encouraged (Lave and Wenger, 1991, Spouse, 1998b, Wenger, 1998, Tynjälä, 2008). Students have to be connected with the community of practice of the workplace (Spouse, 1998a, Wenger, 1998).

It has been discussed in chapters two and six that the framework of the communities of practice and its concepts such as the duality of participation and reification and legitimate peripheral participation have provided an alternative perspective for understanding and exploring student learning, participation and identity formation in the clinical environment. However, the workplace is not a uniform environment. Organizational culture, hierarchical structure, people’s backgrounds and their attitudes towards working and learning are different from place to place (Tynjala, 2008). Wenger (1998) used the workplace learning experience of claim processors to illustrate the components and concepts of the framework. Unlike the clinical learning environment, the tasks faced in insurance companies are fairly standardized and predictable; and there will not be any life-threatening events if things go wrong. In addition, although the employment status of the newly-recruited claim processors was not mentioned, they did not appear to be temporary employees of the company. In
contrast, students on placement are neither employees of the hospital nor long-term participants of the workplace. While the theory of the communities of practice can be seen to have distinct value in understanding workplace learning in the clinical environments, there is a need in deploying this framework to take account of the unique characteristics of clinical settings.

Overall, the framework of the communities of practice does help nurse educators understand and examine the situation of student learning on placement. It also allows clinical facilitators and ward nurses to acknowledge their importance to student learning in the clinical learning process. In addition, employing the framework could bring a continuity of personal and professional growth for both students and nurses in the workplace. Furthermore, the framework might be useful to redirect the focus of clinical education from an outcome-mediated approach to a relatively all-rounded social learning approach, which emphasizes engagement in practice and the trajectory of becoming a fuller participant in the community of practice.
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Appendices

A Information sheets

A.1 Information sheet – Focus group

INFORMATION SHEET

Study Title: Student nurse and mentors perceptions of clinical learning experience in Macau

I am a PhD student at the University of Edinburgh, supervised by Prof Graeme Smith and Dr Charles Anderson. I would like to invite you to take part in this research study. Before deciding whether to participate, please take a few minutes to read the information carefully. You are welcome to ask any questions regarding the study.

Purpose of the study

This study is looking at students’, clinical instructors’ and mentors’ clinical learning experiences. The aims of the study are to explore student’s clinical learning experience, the nature of student participation in placement, and the determinants of the permitted degree of participation in placement.

Study procedure

If you agree to participate, you will be asked to sign a consent form and take part in a focus group with 6-8 students. The main purpose of the focus group is to ask you about your clinical learning experience, types of activities involved, and the factors influencing your participation in placement. The focus group is likely to last 45-60 minutes and will be audio recorded. You have the right not to answer any particular questions. Please feel free to reflect on your clinical learning experience.
Your participation is voluntary. You are free to withdraw from the study at any time, without giving any reason. All the information collected will be kept strictly confidential. Only the researcher and her supervisors will have access to the information. You will be given a pseudonym in the transcriptions and your name will not be written on any documents of the study. The results of the study will be used in my PhD thesis and its related publications, reports and conferences.

**Benefits/Risks**

There will be no direct benefit to you. However, your participation will contribute to the development of quality nurse education, and enhancing the effectiveness of the clinical learning process in the future. There is no known risk in participating in this study.

**Contact information**

If you have any further questions concerning the study, please contact Wai Sha Poon (Sara) at W.Poon@sms.ed.ac.uk

Thank you for taking the time to consider participating in this study.
A.2 Information sheet – Survey

INFORMATION SHEET

Study Title: Student nurse and mentors perceptions of clinical learning experience in Macau

I am a PhD student at the University of Edinburgh, supervised by Prof Graeme Smith and Dr Charles Anderson. I would like to invite you to take part in this research study. Before deciding whether to participate, please take a few minutes to read the information carefully. You are welcome to ask any questions regarding the study.

Purpose of the study

This study is looking at students’, clinical instructors’ and mentors’ clinical learning experiences. The aims of the study are to explore student’s clinical learning experience, the nature of student participation in placement, and the determinants of the permitted degree of participation in placement.

Study procedure

If you agree to participate, you will be asked to sign a consent form and complete a pre- and post-placement questionnaire. The questionnaires will be about your clinical learning experience of one particular placement in the academic year 2012-2013. The pre-placement questionnaire will be given to you before placement commences, and the post-placement questionnaire will be provided on the day of placement completion. You will need approximately 20-30 minutes to complete the questionnaires. You have the right not to answer any particular questions. Please feel free to reflect on your clinical learning experience.

Your participation is voluntary. You are free to withdraw from the study at any time, without giving any reason. All the information collected will be kept strictly confidential. Only the researcher and her supervisors will have access to the
information. The results of the study will be used in my PhD thesis and its related publications, reports and conferences.

**Benefits/Risks**

There will be no direct benefit to you. However, your participation will contribute to the development of quality nurse education, and enhancing the effectiveness of the clinical learning process in the future. There is no known risk in participating in this study.

**Contact information**

If you have any further questions concerning the study, please contact Wai Sha Poon (Sara) at W.Poon@sms.ed.ac.uk

Thank you for taking the time to consider participating in this study
A.3 Information sheet – Semi-structured interview

INFORMATION SHEET

Study Title: Student nurse and mentors perceptions of clinical learning experience in Macau

I am a PhD student at the University of Edinburgh, supervised by Prof Graeme Smith and Dr Charles Anderson. I would like to invite you to take part in this research study. Before deciding whether to participate, please take a few minutes to read the information carefully. You are welcome to ask any questions regarding the study.

Purpose of the study

This study is looking at students’, clinical instructors’ and mentors’ clinical learning experiences. The aims of the study are explore mentors’ and clinical instructors’ lived experience of clinical learning facilitation, responsibility delegation, perception towards supernumerary status and student participation in placement.

Study procedure

If you agree to participate, you will be asked to sign a consent form and take part in an individual interview. The main purpose of the interview is to ask you about your lived experience in clinical learning facilitation, responsibility delegation, perception towards supernumerary status and student participation in placement. The interview is likely to last 30-45 minutes and will be audio recorded. You have the right not to answer any particular questions. Please feel free to reflect on your placement facilitation experience. In addition, you will be invited to fill in a short demographic questionnaire. The information will allow the researcher to have a better understanding of your background.
Your participation is voluntary. You are free to withdraw from the study at any time, without giving any reason. All the information collected will be kept strictly confidential. Only the researcher and her supervisors will have access to the information. You will be given a pseudonym in the transcriptions and your name will not be written on any documents of the study. The results of the study will be used in my PhD thesis and its related publications, reports and conferences.

**Benefits/Risks**

There will be no direct benefit to you. However, your participation will contribute to the development of quality nurse education, and enhancing the effectiveness of the clinical learning process in the future. There is no known risk in participating in this study.

**Contact information**

If you have any further questions concerning the study, please contact Wai Sha Poon (Sara) at W.Poon@sms.ed.ac.uk

Thank you for taking the time to consider participating in this study
CONSENT FORM

Title of study: Student nurse and mentors perceptions of clinical learning experience in Macau

1. I confirm that I have read through and understand the information sheet for the above study and had been given an opportunity to ask questions.
2. I understand that my participation is voluntary and I can withdraw at any time, without giving any reason.
3. I understand that the focus group/interview will be audio recorded.
4. I understand that the data collected will be stored securely and only be used anonymously. I will not be identified in any publications and reports.
5. I agree to participate in the above study.

Name of participant: _____________________________________________

Signature: _____________________________________________________

Date: __________________________________________________________________
CONSENT FORM

Title of study: Student nurse and mentors perceptions of clinical learning experience in Macau

1. I confirm that I have read through and understand the information sheet for the above study and had been given an opportunity to ask questions.
2. I understand that my participation is voluntary and I can withdraw at any time, without giving any reason.
3. I agree to participate in the above study.

Name of participant: _______________________________

Signature: _______________________________________

Date: ___________________________________________
C Interviews

C.1 Interview guide – Focus Group

Thanks for taking time to take part in the focus group today. I am Sara Poon, PhD student at The University of Edinburgh, and I am the researcher of this study. The aim of the focus group is to ask you about your clinical learning experience, types of activities involved, and the factors influencing your participation in placement. The focus group will take about 45-60 minutes, and is going to be audio recorded. You have the right not to answer any particular questions.

I know you may come from different placement groups and have been to different wards for placements. In this focus group, I am interested in both similarities and differences in your clinical learning experiences. You can agree or disagree with each other and there is no need to make any consensus. Please feel free to reflect on your clinical learning experience.

All the information collected will be kept strictly confidential. Only my supervisors and I will have access to the information. You will be given a pseudonym in the transcriptions and you will not be identified in any reports and publications of the study. Do you have any questions regarding the focus group or the study?

Questions:

1. General background
   1.1. Can you tell me about the placement areas that you have been to?
   1.2. How well are you prepared for placements?
   1.3. What would you like to learn and participate in placements?
   1.4. What kind of activities have you been involved in your previous placements? Are there any differences between different placement areas?
   1.5. What were the ward activities that you spent most of the time doing in placements? Are there any differences between different placement areas?

2. Student role
2.1. How do you perceive your role in placements?
2.2. Do you find any differences in the expectation of your role between the nursing college and wards?
2.3. What do you think about supernumerary status?
2.4. How do you find fitting in the nursing team?

3. Mentors and clinical instructors
   3.1. How would you describe your mentors and clinical instructors? What are their differences?
   3.2. How is your relationship with mentors and clinical instructors?
   3.3. What determines the type of activities you participate in placements?
   3.4. Are you satisfied with the work being delegated to you? Why?

4. Learning experience
   4.1. What would you consider to be a meaningful clinical learning experience?
   4.2. Can you tell me something about the challenging and enjoyable experiences in your previous placements?

5. Do you have any other key concerns on clinical learning apart from what we have discussed?
C.2 Interview guide – Semi-structured interview

Thanks for taking time to take part in the interview today. I am Sara Poon, PhD student at The University of Edinburgh, and I am the researcher of this study. The aim of the interview is to ask you about your lived experience of clinical learning facilitation, responsibility delegation, perception towards supernumerary status and student participation in placement. The interview is likely to last 30-45 minutes and will be audio recorded. You have the right not to answer any particular questions.

I know that there are ranges of nurses, and all of you are having very different mentoring experiences. I am interested in your individual experiences, and do not have any self-expected answers in mentoring. Please feel free to reflect on your placement facilitation experience.

All the information collected will be kept strictly confidential. Only my supervisors and I will have access to the information. You will be given a pseudonym in the transcriptions and you will not be identified in any reports and publications of the study. Do you have any questions regarding the focus group or the study?

Questions:

1. General background
   1.1. Why do you become a mentor?
   1.2. How are you prepared to be a mentor?
   1.3. What is your role in placement?

2. General perceptions towards nursing students
   2.1. What is your overall comment on nursing students nowadays?
   2.2. What are the major roles of student in placement?
   2.3. How do you think about the preparation of student before placement?
   2.4. How do you find students’ attitude and motivation in placement?

3. Perception of supernumerary status
3.1. What are the differences between your own clinical learning experience and what the students are experiencing nowadays? (with respect to clinical activities involvement and students themselves)
3.2. How do you perceive supernumerary status?

4. Student participation and responsibility delegation
   4.1. What would you expect student to participate in ward?
   4.2. How would you engage student in the ward activities?
   4.3. Is there any prioritization of activities? Any examples?
   4.4. What determines your decision on work delegation? Are there any difficulties?

5. Student-mentor relationship
   5.1. How would you describe the student-mentor relationship in placement?
   5.2. What kind of student do you like to work with?
   5.3. How would you solve the conflicts between student and you? (e.g. type of work being delegated, pace or others)

6. Perception of mentoring
   6.1. Can you tell me something about the challenging and enjoyable experiences in mentoring?
   6.2. How important do you think mentors in the clinical learning process?
   6.3. Are there any supports for mentors? (nursing college, hospital and ward)

7. Do you have any other key concerns on mentoring apart from what we have discussed?
C.3 Phase 3 Demographic questionnaire

1. Age: __________

2. Gender
   - Male
   - Female

3. Number of years of nursing qualification: __________

4. Practice area
   - Medical
   - Surgical
   - Obstetrics
   - Paediatrics
   - Accident and Emergency Department

5. Number of years working in the current practice area: __________

6. Number of years of mentoring experience: __________

7. Educational Level
   - Diploma
   - Undergraduate Degree
   - Postgraduate Degree

8. The approach of clinical learning during the training of your first qualification in nursing
   - Apprenticeship
   - Supernumerary status
D Survey

D.1 Survey – Demographic questions

1 Age: __________

2 Gender
   □ Male
   □ Female

3 Year of study
   □ Year 2
   □ Year 3
   □ Year 4

4 Placement area
   □ Medical
   □ Surgical
   □ Neurology
   □ Orthopedics
   □ Respiratory
   □ Cardiac
   □ Accident and Emergency Department
   □ Others: __________

5 Duration of placement: ___________ weeks

6 Number of student in the placement group: __________

7 Type of clinical facilitator
   □ Clinical Instructor
   □ Preceptor
D.2 Survey – Self-designed questions

Please answer the following questions according to your recent placement experience.

1. What did you spend most time doing on placement? (Please arrange the followings from 1 to 5. 1 – spend most time; 5 – spend least time)
   _____ Bedside care
   _____ Treatments
   _____ Paper works
   _____ Case report
   _____ Don’t know what I am doing

2. Which of the following type of people do you work mostly with?
   □ Clinical instructors / mentors
   □ Ward nurses
   □ Nurse assistants
   □ Other students
   □ On your own

3. Whilst on placement, who do you learn most from? (Please select 1 option only)
   □ Clinical instructors/mentors
   □ Ward nurses
   □ Nurse assistants
   □ Other students
   □ Others, please specify________

4. Which of the followings affect your clinical participation most on placement? (Please select no more than 2 options)
   □ Number of student members on placement
   □ Self-initiative
☐ Learning motivation of other students
☐ How busy is the ward
☐ The assistance of clinical instructors or mentors
☐ Ward nurses’ attitude towards students

5. Are you satisfied with the clinical activities that have been delegated to you on placement?

☐ Very satisfied
☐ Satisfied
☐ Dissatisfied
☐ Very dissatisfied
☐ Don’t know

6. Are you under supernumerary status on placement?

☐ Yes
☐ No
☐ Don’t know

7. Whilst on placement, are you involved in the clinical activities that qualified nurses do?

☐ Always
☐ Usually
☐ Sometimes
☐ Seldom
☐ Never

8. Whilst on placement, do you think it is important to ‘fit in’ the nursing team?

☐ Very important
☐ Important
☐ Unimportant
☐ Very unimportant
9. Whilst on placement, can you ‘fit in’ the nursing team?

- Don’t know
- Always
- Usually
- Sometimes
- Seldom
- Never
### Clinical Learning Environment Inventory

The purpose of this questionnaire is to collect your opinions about clinical practice on two conditions: 1) your ACTUAL clinical experience in your latest clinical placement, and 2) your expectation towards the FUTURE clinical placement. Please circle the appropriate answer as instructed below under each of the 2 conditions (circle both conditions for each statement):

- **SA**: if you STRONGLY AGREE
- **A**: if you AGREE
- **D**: if you DISAGREE
- **SD**: if you STRONGLY DISAGREE

<table>
<thead>
<tr>
<th>Statement</th>
<th>1. Your actual experience in your latest clinical placement</th>
<th>2. Your expectation in future clinical placement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
</tr>
<tr>
<td>1. The mentors usually consider my feelings.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>2. The mentors talk rather than listen to me.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>3. I look forward to attending clinical placement.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>4. I know exactly what has to be done in this clinical setting.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>5. New ideas are seldom tried out.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>6. I am expected to do the work in the same way as others.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>7. The mentors talk with me personally.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>8. I put effort into what I do.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>9. I am dissatisfied with what is done.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>10. Getting work done is important in this setting.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>11. Different ways of teaching are seldom used.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>12. I am generally allowed to work at my own pace.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>13. The mentors try his/her very best to help me.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>14. I can’t wait to the end of every shift.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>15. I have a sense of satisfaction with this clinical placement.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>16. The mentors’ instructions often get sidetracked.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>17. Innovative activities are always arranged for me.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>18. I usually have a say in how the shift is spent.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>19. The mentors help me whenever I have trouble.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>20. I pay attention to the communication among staff.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td>21. This clinical placement is a waste of time.</td>
<td>SA</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Question</td>
<td>SA</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>22.</td>
<td>This is a disorganized clinical placement.</td>
<td>SA</td>
</tr>
<tr>
<td>23.</td>
<td>The mentors used different teaching methods to guide me.</td>
<td>SA</td>
</tr>
<tr>
<td>24.</td>
<td>I am allowed to negotiate my workload.</td>
<td>SA</td>
</tr>
<tr>
<td>25.</td>
<td>The mentors seldom go around talking to me.</td>
<td>SA</td>
</tr>
<tr>
<td>26.</td>
<td>I have little opportunity of handing over to the next shift.</td>
<td>SA</td>
</tr>
<tr>
<td>27.</td>
<td>This clinical placement is boring.</td>
<td>SA</td>
</tr>
<tr>
<td>28.</td>
<td>Clinical tasks assigned to me are always clear.</td>
<td>SA</td>
</tr>
<tr>
<td>29.</td>
<td>My assigned clinical activities are always the same.</td>
<td>SA</td>
</tr>
<tr>
<td>30.</td>
<td>I am allowed to proceed at my own pace.</td>
<td>SA</td>
</tr>
<tr>
<td>31.</td>
<td>The mentors do not bother my feelings.</td>
<td>SA</td>
</tr>
<tr>
<td>32.</td>
<td>I have opportunities to express opinions.</td>
<td>SA</td>
</tr>
<tr>
<td>33.</td>
<td>I enjoy coming to this clinical setting.</td>
<td>SA</td>
</tr>
<tr>
<td>34.</td>
<td>Routine activities are clearly explained.</td>
<td>SA</td>
</tr>
<tr>
<td>35.</td>
<td>The mentors often plan interesting activities.</td>
<td>SA</td>
</tr>
<tr>
<td>36.</td>
<td>I have little opportunity to pursue my interests.</td>
<td>SA</td>
</tr>
<tr>
<td>37.</td>
<td>The mentors are inconsiderate towards me.</td>
<td>SA</td>
</tr>
<tr>
<td>38.</td>
<td>I seldom involve actively during debriefing sessions.</td>
<td>SA</td>
</tr>
<tr>
<td>39.</td>
<td>This clinical placement is interesting.</td>
<td>SA</td>
</tr>
<tr>
<td>40.</td>
<td>My assigned activities are carefully planned.</td>
<td>SA</td>
</tr>
<tr>
<td>41.</td>
<td>I do the same type of tasks in every shift.</td>
<td>SA</td>
</tr>
<tr>
<td>42.</td>
<td>The mentors do not negotiate when assigning my activities.</td>
<td>SA</td>
</tr>
</tbody>
</table>
D.4 Clinical Learning Environment Inventory – Scale description and scoring

*Descriptive Information for each Scale of the CLEI:*

<table>
<thead>
<tr>
<th>Scale Name</th>
<th>Scale Description</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualisation</td>
<td>Extent to which students are allowed to make decisions and are treated differentially according to ability or interest.</td>
<td>12. I am generally allowed to work at my own pace (+)</td>
</tr>
<tr>
<td>Innovation</td>
<td>Extent to which clinical teacher / clinician plans new, interesting and productive ward experiences, teaching techniques, learning activities and patient allocations.</td>
<td>5. New ideas are seldom tried out (-)</td>
</tr>
<tr>
<td>Involvement</td>
<td>Extent to which students participate actively and attentively in hospital ward activities.</td>
<td>32. I have opportunities to express opinion (+)</td>
</tr>
<tr>
<td>Personalisation</td>
<td>Emphasis on opportunities for individual student to interact with clinical teacher/clinician and on concern for student’s personal welfare.</td>
<td>1. The mentor usually considers my feelings (+)</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>Extent to which ward activities are clear and well organised.</td>
<td>28. Clinical tasks assigned to me are always clear (+)</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Extent of enjoyment of clinical field placement</td>
<td>3. I look forward to attending clinical placement (+)</td>
</tr>
</tbody>
</table>

Items designated (+) are scored 5, 4, 2 and 1 respectively, for the responses Strongly Agree, Agree, Disagree and Strongly Disagree. Items (-) are scored in the reverse manner. Omitted or invalid responses are scored 3.
Itemised layout in each scale of the CLEI.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Questionnaire number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalisation</td>
<td>1, 7, 13, 19, <strong>25</strong>, <strong>31</strong>, 37</td>
</tr>
<tr>
<td>Student Involvement</td>
<td>2, 8, <strong>14</strong>, 20, <strong>26</strong>, 32, <strong>38</strong></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>3, 9, 15, <strong>21</strong>, <strong>27</strong>, 33, 39</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>4, 10, <strong>16</strong>, <strong>22</strong>, 28, 34, 40</td>
</tr>
<tr>
<td>Innovation</td>
<td><strong>5</strong>, <strong>11</strong>, 17, 23, <strong>29</strong>, 35, <strong>41</strong></td>
</tr>
<tr>
<td>Individualization</td>
<td><strong>6</strong>, 12, 18, 24, 30, <strong>36</strong>, <strong>42</strong></td>
</tr>
</tbody>
</table>

Scoring:
Items are scored 5, 4, 2, and 1, respectively for the responses SA, A, D, and SD. Items marked with **R** are scored in the reverse manner. Omitted or invalidly answered items are scored 3.
E Ethical approval

E.1 Approval letter – School of Health in Social Science

The University of Edinburgh  
College of Humanities and Social Science  
SCHOOL OF HEALTH IN SOCIAL SCIENCE  
APPROVAL BY SUBJECT AREA RESEARCH ETHICS TEAM/  
CO-ORDINATOR  
(LEVEL 2)

<table>
<thead>
<tr>
<th>Name/s of Researcher/s:</th>
<th>Wai Sha Poon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Title of Research:</td>
<td>Student nurse and mentors perceptions of clinical learning experience in Macau</td>
</tr>
<tr>
<td>Funding Body (if appropriate):</td>
<td>Self-funding</td>
</tr>
<tr>
<td>General Comments:</td>
<td></td>
</tr>
<tr>
<td>Outcome:</td>
<td>APPROVED</td>
</tr>
<tr>
<td>If approved with conditions, name of person to oversee these:</td>
<td></td>
</tr>
</tbody>
</table>

The above research proposal has been approved by the subject area research ethics team/co-ordinator.

Signed: ........................................ (Lorna Sheal on behalf of Professor Kath Melia)

Date: ............................................
E.2 Approval letter – Kiang Wu Nursing College of Macau

潘偉莎小姐台鑒：

閣下的研究計劃書 (研究題目：Student nurse and mentors perceptions of clinical learning experience in Macau)，經由本校科研委員會審閱後，認爲研究具意義，研究結果將能促進本學院的臨床教學，因此科研委員會同意閣下在滿足以下建議的原則下在本學院進行此研究。建議如下：

1. 研究背景中應加強對澳門護理教育及專業發展的資料，以更突顯研究的依據及重要性，為此閣下可邀請本學院的資深教授作爲諮詢者，以協助閣下了解澳門護理教育的情況；

2. 研究過程中要確保研究對象的知情同意，並向研究對象保證不參與或中途退出研究均不會受到不公正的待遇，此外需對事後調查的資料作去標識處理；

3. 研究完成時，需在校內進行結果分享及遞交一份研究報告，並根據結果對本學院的臨床教學作出可行性的建議，以提升臨床教學效果。

祝研究順利！

科研委員會副負責人

梁淑敏

2012年9月26日
E.3 Approval letter – Kiang Wu Hospital
Appendix: Transcription Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>Brackets: onset and offset of overlapping talk</td>
</tr>
<tr>
<td>=</td>
<td>Equals: no gap between two utterances</td>
</tr>
<tr>
<td>(0.0)</td>
<td>Timed pause: silence measured in seconds and tenths of seconds</td>
</tr>
<tr>
<td>(.)</td>
<td>A pause of less than 0.2 seconds</td>
</tr>
<tr>
<td>. . .</td>
<td>Period (stop): falling or terminal intonation</td>
</tr>
<tr>
<td>,</td>
<td>Comma: level intonation</td>
</tr>
<tr>
<td>?</td>
<td>Question mark: rising intonation</td>
</tr>
<tr>
<td>↑ ↓</td>
<td>Rise in pitch</td>
</tr>
<tr>
<td></td>
<td>Fall in pitch</td>
</tr>
<tr>
<td>- -</td>
<td>A dash at the end of a word: an abrupt cutoff</td>
</tr>
<tr>
<td>&gt; &lt;</td>
<td>Immediately following talk is ‘jump started’, i.e. starts with a rush</td>
</tr>
<tr>
<td>&gt; &gt;</td>
<td>Faster-paced talk than the surrounding talk</td>
</tr>
<tr>
<td>&lt; &lt;</td>
<td>Slower-paced talk than the surrounding talk</td>
</tr>
<tr>
<td>— — —</td>
<td>Underlining: some form of stress, audible in pitch or amplitude</td>
</tr>
<tr>
<td>. . .</td>
<td>Colon(s): prolongation of the immediately preceding sound</td>
</tr>
<tr>
<td>. . .</td>
<td>Degree signs surrounding a passage of talk: talk with lower volume than the surrounding talk</td>
</tr>
<tr>
<td>.hh</td>
<td>A row of h’s prefixed by a dot: an inbreath</td>
</tr>
<tr>
<td>hh</td>
<td>A row of h’s without a dot: an outbreath</td>
</tr>
<tr>
<td>WORD</td>
<td>Capital letters: utterance, or part thereof, that is spoken much louder than the surrounding talk</td>
</tr>
<tr>
<td>(word)</td>
<td>Utterance or part of it in parentheses: uncertainty on the transcriber’s part, but a likely possibility</td>
</tr>
<tr>
<td>( )</td>
<td>Empty parentheses: something is being said, but no hearing can be achieved.</td>
</tr>
<tr>
<td>(())</td>
<td>Double parentheses: transcriber’s descriptions of events, rather than representations of them.</td>
</tr>
</tbody>
</table>

A sample of interview transcript (Mentor – M4)

Demographic data:

<table>
<thead>
<tr>
<th>Age:</th>
<th>29 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td>Female</td>
</tr>
<tr>
<td>Number of years of nursing qualification:</td>
<td>5 years</td>
</tr>
<tr>
<td>Practice area:</td>
<td>Respiratory ward</td>
</tr>
<tr>
<td>Number of years working in the current practice area:</td>
<td>5 years</td>
</tr>
<tr>
<td>Year of mentoring experience:</td>
<td>2 years</td>
</tr>
<tr>
<td>Educational Level:</td>
<td>University or above</td>
</tr>
<tr>
<td>Clinical learning model:</td>
<td>Apprenticeship + Supernumerary status</td>
</tr>
</tbody>
</table>

INT
Firstly, I would like to ask some background questions

M4
Ok

INT
Can you tell me why do you become a mentor?

M4
I’ve been a mentor for three years. Initially, I was not an official mentor. In the first year, since the ward was very busy and some of the colleagues couldn’t spare their time to facilitate students on placement, I was asked to help facilitate students on placement. After a year, I attended the mentor training programme and became a mentor officially. Before attending the mentor training programme, perhaps the nursing officer was satisfied with my working performance and thought that I worked carefully, so she delegated some students to me. I found mentoring interesting and then attended the mentor training programme.
So, you love working with students.

Actually, at the beginning, I helped mentors to type and organize students’ daily activities and workflow. After working for a period of time, I became a mentor too.

It seems that the whole process is divided into two stages. You helped your colleagues at the beginning, and at the second stage, you finished the mentor training programme and became an official mentor.

Yes

Before attending the mentor training programme, how were you prepared to be a mentor? Was there any training for you?

There was no written guideline for mentors. We (new mentors) asked questions while working. “Is it good if I do it this way?” I would let them (senior mentors) comment on my plans. If they think it is ok, I’ll go ahead. No written guidelines were given. It was like apprenticeship. We asked and learnt while we were working.

Which year of student do you usually work with?

Mainly 4th year students, but sometimes I help look after 2nd year students too. It is because clinical instructors only stay in the ward for half day. So we (nurses) have to help supervise them in the afternoon. If student want to practice on some clinical skills and their clinical instructor is not present, we have to supervise them. Also, as a Miss (clinical instructor) has to supervise a number of students at a time, and we (nurses) are afraid that they (students) cannot finish their tasks on time, we help them (clinical instructors) supervise students sometimes. 4th year students usually follow the shifts of their mentor. If we are on leave, they will follow other nurses to work.

You’ve been an official mentor for 2 years and you have worked with lots of students. Before student coming for placement, Have you got any information on their background?

If they are the first group of students coming for placement, we know nothing about them. But after having the meeting with the nursing college, we would know more about the general background of the latter placement groups. Sometimes, we ask newly graduated nurses if they know about the student coming on placement. “How is that
student?” If no one knows about the student, we will wait till the student comes and then observe. Usually, we focus on observation mainly in the first week of placement. Student has to be familiar with the ward environment, and at the same time, we (mentors) observe his/her working performance. We will then know more and more about their personality gradually.

INT
How do you think about your role and responsibility while mentoring?

M4
If I’m mentoring, I will give all the work that I have to be finished in a shift to the student. I will offer some help if they are in their first two rotations, but if it is their third or fourth rotation, I will stand next to them and let them do on their own. Also, I have to know whether a student know how to perform a task before letting them do it. Before doing anything, I always ask student, “What do you need to prepare for that procedure? Tell me about the workflow of that procedure.” If student can tell me the workflow clearly, I’ll let them do it by themselves and I will stand beside them and watch, or offer help if it is needed.

INT
What is your general comment on student?

M4
We need to have very high EQ (emotional quotient) when working with students. It is because every student is different and we have 3 or 4 students at a time. Students have different personalities and we shouldn’t get agitated easily. We need to have very high EQ. Mentors need to have much higher EQ than students. Since there are good students as well as weak students, sometimes, my perception towards a student might be influenced by my colleagues if they have some discussion on a particular student. So, I think we must have very high EQ [laugh].

INT
Do you have any other comments on student?

M4
We (mentors) have to approach student actively. It is because some students do not want to tell us anything and just hide their problems. We have to show our care to students from time to time. “Do you get used to the environment?” Something like that.

INT
As I know, students write learning objectives before placement. Would you read their learning objectives?

M4
Yes.
INT
What do students usually write?

M4
Usually, students’ objectives are very typical, such as familiar with the ward environment, get to know a number of drugs, be empathetic, and care about patients. They usually write these kinds of things.

INT
Do you have any expectation on student?

M4
Actually, I hope student can meet the objectives that they’ve written on the placement handbook. Also, I would like student to tell me what they want to learn verbally. For example, something which student found it difficult to express in written format or something that hasn’t been stated in the learning objectives. It is because not every objective can be met in our ward. If student want to know something which does not exist in our ward, I will try to find another method to satisfy their learning needs. I want student to tell me, “I want to do this.”

INT
Are students able to tell?

M4
Most of the student won’t tell me about their expectations. I kept asking students on placement, “What else do you want to learn?” I want student to be more proactive. I think students are a bit passive and fear to talk to us.

INT
Apart from meeting students’ learning objectives and knowing what they want to learn, do you have other expectations on students while they are on placement?

M4
In the clinical learning process, I want students to be active and this is my biggest expectation on them. Actually, students tend to hide themselves. For us (nurses), we see students as one of us. We don’t want students to have a concept that they are student and we are nurses, and we can’t engage with each other. It is because we believe that we are future partners. We would like to establish a good relationship with students when they are in their 4th year, no matter where they are going to work after graduation. We are going to meet quite frequently in the future (It means nurses and students will work in the same hospital in the future and they will always meet each other), right?

INT
Now I know that student have their expectations and you also have some expectations on them. Do you think the ward has expectations on student too?
M4
I think we have a common expectation. We hope that students will be able to help us, but not to increase our workload and we don't have to put an eye on them all the time. It is because we don't want to have a fourth year student who can’t manage the tasks which can be done independently by a second year student.

INT
Are students able to do it?

M4
Around 90% of the students can do it.

INT
What will you do if there is a mismatch between students’ expectation and your expectation or ward expectation?

M4
If there’s a mismatch, firstly, we will find out the origin of the problem. We used to discuss with students directly in the past, but now, since there are clinical instructors, we will discuss the problem with clinical instructors first and see whether the problem happened before. After that, we will talk to the student. Also, we will withhold some work and won’t let student do them.

INT
What do students do in the clinical learning process? What are their roles and responsibilities on placement?

M4
We see fourth year students as half of a nurse. They have to do anything we do, such as bathing a patient, handling patients’ excretions, doing injections, inserting NG tubes and urinary catheters. We let students do all the work that nurses, nurse assistants and healthcare assistants do. We want students to understand that handling patients’ excretions is not only healthcare assistants’ responsibility and nurses have to do it too. We (nurses) have to pay attention to every single poo or pee of our patients. We want student to know that they have to do it and they should get used to it.

INT
Do students’ work nature change with respect to their year of study?

M4
I seldom let second year students to perform invasive tasks. However, I will give more opportunities for fourth year students. I will ask them whether they would like to do a procedure, and eager to delegate work to them. Some of my colleagues said to me that, “Why do you delegate work to student when you are nearly off duty? You will have to work overtime”, “Never mind, I’ll let the student do it.” I replied. I believe that we have to let student practice, they won’t know anything if they haven’t done before. I think it is acceptable if I have to work overtime occasionally. In contrast, if junior students would like to do invasive procedures, I will see whether time is available. If the ward is busy, I will apologize to them and say, ‘I’m very busy at the moment, I
can’t supervise you, and maybe we do it next time.’ In contrast, I will spend more time with fourth year students.

INT
As you’ve mentioned earlier, you would ask students to tell you about the workflow of a procedure before you let them do it. It seems to me that students have to be well-prepared so that they can tell you the steps. How do you think about students’ preparation in general?

M4
I think it’s ok. If I tell students that they have to do a procedure on the next day and ask them to prepare, they will do the preparation. In contrast, if students are asked to do something unplanned, they don’t know what they should do. Also, students may tell us that they haven’t learnt certain things at the nursing college, and we will then teach them. Sometimes, we have to assist doctors to do some procedures. We will explain to students while we are assisting the procedure. If time is available and there is an extra nurse to help, that nurse will assist the doctor and I will stand next to the nurse and try to explain what the nurse is doing and its rationale to students. Moreover, after we (nurses) have prepared the equipment needed for a procedure, we will briefly explain the process to students and tell them how they can assist a doctor. I will also ask students whether they have any questions during the procedure.

INT
How about students’ attitude and learning motivation? You’ve told me that students are not active enough, any others?

M4
Some students are quite active actually. They ask us plenty of questions. If students are willing to ask, we (nurses) are willing to answer them. However, for some of the questions, we want students to find out the answer by themselves. “Go and find the answer for me, I'll tell you whether your answer is right tomorrow.” I don't want to spoon feed students, and I don’t want them to follow my instructions only. I want students to find out the answer by themselves and think more about it.

INT
I remembered you’ve said that clinical instructors are not staying with students in the afternoon, and you have to pick up some supervision for students. What kind of work do you usually delegate to them?

M4
Usually, I arrange second year students to measure blood pressure, take temperature, change napkins or help us to turn patients. We would like them to see our daily routines. If time is available, we may allow students to do some injections. Students can also help us check patients’ blood glucose level. Most of their works are non-invasive.

INT
Would you let go or you have to closely supervise these students?
If I think there is no problem, I will let students do it on their own. I will check the readings afterwards. If it is deviated too much, I will ask students to do it again. If the deviation persists, I will do it again with them and see what’s wrong with the operation.

INT
How about 4th year students? Do you always stick with them?

M4
We are not always working together. We may work on different shifts. If I’m not working with my student, another mentor will take over my role. The advantage to follow different nurses on placement is to let me know how other nurses think of the student. Also, I can observe students’ behaviour when they work with others.

INT
You stated that you would delegate different works to students according to their year of study. Apart from that, are there any factors that would influence your decision on work delegation?

M4
Yes. We observe students’ performance. If we find that the ability of a student is not up to standard, we may not allow them to perform some clinical skills. If we decide to let weaker students do a task, we will supervise them closely and always put an eye on them. We will also remind students repeatedly, “Where are you going? Remember to ask patient’s name.” Sometimes, although we (mentors) are not following them to the bedside, we will ask another nurse to take a peek and make sure nothing goes wrong.

INT
Any others?

M4
Patients’ responses do affect my decision. Some patients tell us, “I don’t want the blue sleeves (Blue sleeves refer to student here. Student uniform has blue sleeves) to do the injections for me.” I will see whether he/she is our long term patient. It is because we (nurses) know long term patients very well and know about their personalities. If they refuse students, we will let students practice on other patients. However, if patients are new to the ward, we will try to persuade them [laugh] “Please let student do it.”

INT
Are your decisions supported by the ward?

M4
The ward supports me most of the time. We won’t let students do complicated procedures. We want them to observe and jot down key points of the procedure. I notice that 4th year students nowadays have less placement hours and they are not as experienced as past students. Also, perhaps they don’t like to use their hands very much.
INT
What do you mean by use their hands?

M4
I mean students don't like to write. In the past, maybe we were half apprenticeship. When nurses taught us something, we took out a pen and a piece of paper and wrote it down immediately, and then tidied the notes at home. However, I seldom see students do it now. Maybe they have good memory [laugh]. I always ask student, “Can you remember all of them?” “Yes, I can”, student replied. Students are able to repeat the information right after my explanation, but if I ask them again a few days later, they won’t be able to recall all the things.

INT
How do you deal with it?

M4
If it happens, I will suggest students to write it down, “It’s better to write it down. Do you think it is a good idea?”

INT
And they are willing to do so.

M4
Some of them. Although they write down the information in front of me, I don't know whether they will tidy them up at home. I always talk to students that, “It will become your own bible. You have to acuminate information bit by bit and write them down by yourself. I wrote my own bible too, it was not passed on from anybody.” It is because some students ask me why every nurse has a notebook in their pocket. I told them each of us has our own bible, we rely on it when we have any problem at work.

INT
You told me that you would like to see students as members. From your experience, how can student become a member? Are there any criteria?

M4
My only expectation is, I don’t want students to have a concept that they are students and we are nurses, and we can’t mix together. When you (nurses) are sitting, I (student) have to stand, and students must follow nurses’ instructions. I don’t want students behave this way. I want students let me know their thoughts, like friends. So that I am able to know about their needs. I would love to show my concern to students, but at the same time, students have to let me care about them. I hope that there are interactions between student and nurses and this is the way to become a member of us. We (nurses) won’t ignore students or not talking to them intentionally.

INT
Are students able to become members successfully?
M4
I think around 60-70% of the students, about half of them are able to do it. I think the other half is nervous. They are afraid of nurses. Usually, I ask students about their feelings halfway on their placement. It's around the first or second week of their placement. “Are you adapted to the ward environment? What else do you want to learn?” I asked. However, the most common reply is, “No, that’s enough” or “I think it’s fine”

INT
As a mentor, you are not only familiar with the ward environment, but also you are relatively more familiar with the group of student than your colleagues. Would you do anything to help students fit in?

M4
I have to communicate with both sides. Some students felt that some of the nurses looked unkind, and I had to reassure and told them not to afraid, nurses wouldn’t ill-treat them. Students won’t interact with all nurses. They only choose some of the nurses to communicate.

INT
I see. From the information that you’ve given me, your own clinical education was a mixed model. You experienced both apprenticeship and supernumerary status. Can you tell the difference between your own clinical learning experience and what students are experiencing now?

M4
I think the biggest difference is, in the past, we learnt from nurses and gained our experiences from nurses. We didn’t have any chance to learn clinical skills step by step on placement. A is A, and B is B. A can never be equal to B. However, it’s disappointing that this concept still exists. Also, some of the clinical skills that students were taught in the nursing college are different from us. It creates conflicts, “Am I right if I do it this way?”

INT
Student asked you?

M4
Yes. “Am I right if I do it this way? It's different from what we’ve learnt in the college.” “No, it’s different from our school. We are taught to do this first and then follow by that, we shouldn’t jump steps.” Actually, our emphasis is that, flexibility is allowed, given that you don’t violate principles.

INT
You didn’t have that problem before.

M4
It is because we learnt from nurses. Our problem was their opposite. It happened when we were back to the college. “Nurses didn’t teach us this way. What should I do?” The nursing college have different assessment standard with the hospital. Even though I didn’t violate the principle, if I did something different, it would be considered as inappropriate. From being a student in the past to becoming a mentor now, I do think there are conflicts between the knowledge taught at school and current practices. I think more communication is needed between the institution and the clinical area. We have to exchange information on practice changes and update accordingly, hence, minimizing conflicts. Take the standing position when doing a procedure as an example, should I stand on the right or left for this procedure? The college taught me to stand on the left hand side, but it is impossible to stand on the left in the real situation. Can I stand on the right? I don’t know to carry out the procedure if I have to stand on the right.

INT
I see. Are there any differences in other aspects?

M4
Nurses are not as courageous as before when they delegate works to students. I’ve worked in my ward since I was a 4th year nursing student. I can tell from my observation. In the old days, nurses delegate works to student confidently. Yes. Nurses put all the works which are to be finished on a table and let student do them all. “Work on it, if you can’t manage them all, I’ll do it with you.”

INT
Have you ever thought about the reason of this change?

M4
Yes. I’ve thought about that. I don’t know whether we worked faster in the past or student work slower now. I can hardly think of the reason why nurses are not able to finish their work when an extra student is present, but they can manage it without a student. In the past, nurses told us about the workflow and explained what were to be done by us a day before, and then we did the works by ourselves on the next day. After we the works were done, nurses double checked and see if we had missed anything. Students nowadays are different. We have to tell them what to do step by step. They stand aside after finishing a step. You have to tell them what to do next. After finishing the second step, they stand aside again. You have to keep telling them what to do.

INT
I see.

M4
Yes.

INT
How do you tackle the problem?
I really want to ask student whether they know what they should do at work. Sometimes, we ask students, “Do you know what you have to do on this shift?” I’ve prepared a timetable for students, listing what has to be done at specific time. As I know, students will hand over among themselves before placements, and I would ask them if the previous placement group has given them the timetable. I believe that if students had read the timetable, they should know what to do on placement. I always ask students, “Do you know what are needed to be done at different timeframes?” I want student to tell me explicitly. If they are able to tell me, they should have read the timetable, and they should be able to work according to the timeframe. Student should be able to work according to our routine, and do it by themselves. At day time, since it is much busier, I will remind students step by step if they forget to do something. In contrast, I let student do all the work on night shift. If a student can’t finish all the work on the first night, I’ll explain the whole working process to the student again, and let him/her do all things again on the second night.

You delegate all the work of a nurse to a student and let go totally.

Yes. My aim is to let student know that they are nurses. They will be a nurse and no longer being a student. I supervise all their clinical skills. For documentations, I will let student draft on a paper first, I will then make some corrections if needed and students will rewrite it on the document. Students have to set their working priorities. I want to train them to be a nurse.

As we can see the change of student across generations, do these changes alter nurses’ expectation on student?

Yes.

Can you tell me more about that?

For students whose ability cannot meet our standard, we will give them a push and see whether they can meet our standard quicker. If it doesn't work, we will tell the Miss (clinical instructors) that there are some problem with that student, and ask them what we should do in order to help them. For students who are able to meet our standard, we will ask what else they want to learn. Students can raise anything which hasn’t been written in the learning objectives. We will try to meet their learning needs. It is because some learning opportunities are not easy to come by.

You’ve mentioned earlier that there are differences between your clinical learning experience and students’ clinical learning experience, and you acknowledge that
Students are supernumerary on placement. Do you think students know that they are supernumerary on placement?

M4
Student should know they are supernumerary. I notice that some student just lounging in the ward. Some students are not working with heart, while others may be needed to push them a bit to work.

INT
Will you tell student that they are supernumerary on placement?

M4
We won’t say that. We would rather say, “We see you as part of us, we work together.” We want student to realize that they are essential. They are coming to work with us.

INT
Are there any reasons behind?

M4
Although students only stay in our ward for 5 weeks, once they come to our ward, we see them as our member. We don’t want to give students a wrong impression that they are extra, they are not one of us and their presence would increase our workload.

INT
I see. From your point of view, can you tell me what supernumerary status is?

M4
Base on my understanding, supernumerary status means, for example, if the work is manageable by 4 people, then these 4 people have to finish the work. Students are extra. They are just to help us.

INT
Apart from your understanding, how do you think about supernumerary status? You are welcome to say anything about it.

M4
I think it is good for the students who are able to help us. However, some students are inactive. They may become a burden to the ward. It is because the number of nurses working on a shift is constant. If there is a lazy student, one of the nurses has to stick with that student, and then the workload has to be shared among the remaining nurses. Actually, I think having a supernumerary mentor is good. It is because I have my own workload. I have to supervise a student on top of my work. It’s quite harsh. If the ward is busy, it will be really hard for me. I think supernumerary status is ok, but sometimes administrative staff asks us, “Why there are so many people standing around?” It is because sometimes we have different placement groups in the ward. These students may come from different years of study or even from different nursing colleges. Thus, there are occasions that you can find many students standing around the ward at the same time. However, administrative staff says, “You have more nurses than patients.”
That’s what they saw. They won’t think about whether these students are on placement or having a ward visit or coming to help us.

INT
Do you think there would be any influence on clinical learning if student don’t know they are supernumerary on placement?

M4
I don’t think there will be any differences. We won’t treat student differently.

INT
I see. Let’s move to another topic. How do you think about your relationship with student?

M4
I think our relationship is ok. We have so many things to tell each other. I prefer to be friends with students.

INT
Why?

M4
It is because there is a distinction between teacher and student, they have different status. It gives student a feeling that, what teachers say is always right, they won’t do anything wrong. If we are friends with students, when they notice the way we work is different from the way they were taught in the nursing college, they will ask, “Should it be done this way?” I think it is good. Since we have been working in the ward for a long time, some bad habits were developed. Sometimes we need student to remind us. Students can remind us through their observation on our practice and let us realize that we have to break the bad habits.

INT
Apart from the relationship with students, do you have any preference on the type of students that you love to work with?

M4
I don't have any preference on that. I welcome all students from the nursing college. If I meet some weak students who learn relatively slow, I will give time for them to adapt, care about them and brush up on their skills.

INT
Have you encountered any conflicts on mentoring?

M4
It sometimes happens. Most of the conflicts are related to the perceptions and impression of student.

INT
Do you mean you have different perceptions with students?

M4
Among nurses and me. Sometimes we have different perception on a student and in turn creating conflicts. Some students behave differently with different people. They are really good when working with me, but they change to another person while working with the others. I’ve met this kind of student before. In contrast, some students are nervous when they work with me, but feel relaxed working with my colleagues. I think it is because I am the one who assess them. I grade their performances. So, students are afraid of me and they work very carefully in front of me. I think it would be better of student don’t know who is responsible for their assessment. Usually, before grading students, I ask all nurses in the ward about their perception on different students.

INT
Do you mean students don't know who their assessor is?

M4
They know. It is because we tell the first placement group who is their assessor, and this information share among the class. Also, as I have to collect their placement handbook once they come to the ward, students will know I’m their assessor. So, some students are afraid of me. They are fear that they couldn’t perform good enough when working with me and then I would write down some bad comments on their placement handbook.

INT
Are there any other conflicts? Like work delegation?

M4
Basically, students will do all the works that we delegated to them, although they express unwillingness sometimes. “It’s me again? Why do the other students don’t have to do it and I have to do it all the time?” “Others have to do it too, perhaps you didn’t notice. We delegate works to student evenly,” I explained. Some learning opportunities are not easy to come by, I can only tell students that they are unlucky. If a student missed a learning opportunity, I would encourage other students to share what they’ve seen and learnt with that student. We do not have debriefing sessions always or maybe even omitted sometimes. So, we encourage students to share their experience with others, such as any special things that they’ve learnt in the shift. We don't know when the second opportunity would come. Also, we will give student feedback on their learning progress and let them know the area that they have to put more effort on. For the pace of work, sometimes we urge students to work faster. If they cannot finish their work, we will help them to do some of their works. We understand that sometimes students are unable to speed up their work, we have to accept. Students are not able to work fast. We can’t force them.

INT
Will you discuss the problem with students?
M4
There were more opportunities for us to discuss with students in groups in the past. In these years, we have less manpower and we are much busier than before. Also, students are no longer coming in groups, they have placement separately. I only have chance to talk with individual students. Sometimes, I just meet students once or twice a week only.

INT
Apart from conflicts, do you have any enjoyable or challenging experience from your mentoring experience?

M4
Once there was a student whose ability was persistently below standard in spite of our facilitation. None of our nurses was able to help this student. At last, we could only invite some clinical instructors from the nursing college to talk with the student. Asking the student what had happened and why. We (nurses) couldn't think of any reasons for the poor performance.

INT
What did the student do?

M4
That student, we told him/her to go to bed A, but he/she went to bed B as if he/she was disorientated. At first, we thought that he/she might not be familiar with the ward environment, but on the second day and even the third day, he/she went to a wrong bed again. This problem had persisted for 2 weeks. This student seemed like to be a first year novice. He/she couldn’t answer any of our questions. It was extremely hard for us (nurses) to facilitate this student. Also, we were afraid that this student would be talking nonsense to patients and generated complaints from patients’ families. It is because people always complain nowadays, and we couldn't follow that student all the time. We were afraid that he/she couldn’t answer patients’ questions and said something wrong. That student brought so many troubles to us, and we could only seek help from clinical instructors and let them deal with the problem.

INT
How was it at last?

M4
At last? We failed that student. We don't like failing students, because it creates huge pressure on students when they come back for supplementary placement. The stress is enormous. Actually, we try to teach students as much as we can on their 5-week placement. If we found that we couldn’t help a student to improve in 5 weeks despite our effort, we could only fail him/her. We really don't like failing students.

INT
I see. How about enjoyable experience?

M4
Sometimes, students and I become very good friends after placement. Some of the students shared their happy experiences with me during the 5-week placement. I miss them sometimes.

INT
As you’ve worked with so many students, how do you think about the importance of mentors to student in the clinical learning process?

M4
I view it from different dimensions. For the grading perspective, I don’t think mentors are important. It is because I’m not the only one to give a grade to students. Students are assessed by all nurses in the ward. It won’t make any difference if students have or haven’t got a mentor. However, for the development of knowledge and clinical skills, I think having a fixed mentor is good for students. It is because a fixed mentor can be more focused and they can pass on all their knowledge to students. Also, students don’t have to face the confusion which is generated when students learn from various nurses. Nurse A may do differently with Nurse B when they are performing the same procedure and students don’t know which one they should follow.

INT
Any others?

M4
No.

INT
You’ve mentioned that you’ve attended the mentor training programme before becoming a mentor. Apart from the training, how do you think about the support provided by the ward, hospital and the nursing college?

M4
I think more training is needed, such as pedagogies. It is because the mentor training programme last for 3 days only, and most of the mentoring examples used in the training programme are provided by us (mentors). I think they should include the essential attributes for mentors in the training programme. Also, I think it would be better if there is an induction programme before becoming a mentor (an official mentor), rather than being a mentor immediately after the training programme. Let say after the new mentors mentoring students for 1 or 2 years, we can see whether they are really interested in it or like it.

INT
Are there any opportunities for you to share your mentoring experience with others?

M4
I don’t think so [laugh]. Maybe we talk about it in our meal time, “How would you facilitate this kind of students?” It is because students have to rotate to different wards in our hospital for placements, and I may know their previous mentors. We may have some discussions in our gatherings. The hospital didn’t provide any channel for us to share, but every 2 months, the mentors’ coordinator will ask us about the problems that we’ve encountered in mentoring. The coordinator helps us reflect our problem to the nursing college and let the college and clinical instructors know what’s happening with their students in the clinical area.

INT
Are there any direct communication between mentors and the nursing college?

M4
We will only find the placement coordinator when we have problems and ask something about student’s background. The nursing college rarely contact us. Usually, if we discover that there is some problem with a student in the first 2 weeks, we will contact clinical instructors and see how they think about the problem.

INT
It's the last question. We have discussed different aspects in clinical learning, which include your mentoring and clinical learning experience, your perception on students, supernumerary status, support and communication. Are there anything related to clinical learning or mentoring that you would like to talk about but we haven’t covered in our discussion?

M4
No.

INT
That’s the end of the interview. Thanks for your participation.