

A Mixed Methods Approach for Assessing Student and Staff Perceptions and Experiences of a New Collaborative Transnational Pharmacy Programme

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Summary

This doctoral thesis reports on a longitudinal, mixed methods investigation of staff and students' views, expectations, and experiences of a collaborative pharmacy programme between Cardiff University School of Pharmacy and Pharmaceutical Sciences (CU) and Taylor's University School of Pharmacy (TU). Despite a growing body of empirical research on transnational staff and students' expectations and experiences, longitudinal mixed methods studies are rare. This study combined a qualitative interview-based and focus group approach with a quantitative questionnaire-based method. The overall aim is to gain a better understanding of the teaching and learning experiences of staff and students in a transnational education (TNE) programme. The qualitative element explored staff expectations and experiences in the early stage of the collaborative programme while student expectations and experiences were investigated at different points in time throughout their 4-year pharmacy study. The quantitative element investigated and compared the learning environment perceived by participating students in TU and CU.

Data collection took place over a period of 36 months and comprised four phases. In Phase 1, staff and students' initial expectations and experiences of a new collaborative pharmacy programme were explored using staff interviews and student focus groups. In Phase 2, a sample of students from CU and TU were recruited to participate in a questionnaire study to assess students' perceived learning environment. In Phase 3, a number of studies were carried out using focus groups in order to find out students' pre-arrival expectations and post-arrival experiences. Phase 4 involved a self-administered questionnaire with graduate students to assess students' opinions about their overall experiences at the universities.

The study revealed staff and students' expectations and their actual experiences in relation to the delivery of a transnational education. It was found that those students who participated were able to cope with sociocultural adjustment in a new learning environment. The study also provided indications of the need for training and professional development for staff to teach in a transnational environment. Finally, Malaysian students who come from a teacher-centred pedagogy background should be informed and trained earlier before their transfer to lessen the impact brought about by intercultural differences in teaching and learning.

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Abbreviations

ASEAN	Association of South East Asian Nations
CU	Cardiff University School of Pharmacy and Pharmaceutical Sciences
DREEM	Dundee Ready Education Environment
GPhC	General Pharmaceutical Council
HE	Higher Education
HEI	Higher Education Institution
IBC	International Branch Campus
IDP	IDP is an Australian company that is a broker of Australian universities. The acronym stand for ‘International Development Programme’
MoH	Ministry of Health
MoHE	Ministry of Higher Education
MQA	Malaysian Qualification Agency
OECD	Organisation for Economic Cooperation and Development
OSCA	Objective-Structured Communication Assessment
PBM	Pharmacy Board Malaysia
QAA	Quality Assurance Agency
SPSS	Statistical Package for the Social Sciences
SAP	Students’ Academic Self-Perceptions
SPA	Students’ Perceptions of Atmosphere
SPL	Students’ Perceptions of Learning
SPT	Students’ Perceptions of Teachers
SSP	Students’ Social Self-Perceptions
SREC	School Research Ethics Committee
TNE	Transnational Education
TNHE	Transnational Higher Education
TU	Taylor’s University School of Pharmacy
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Glossary

Attrition refers to a student who has been enrolled in a program of studies and fails to continue or make satisfactory progress.

Blackboard is a Web-based server software platform enabling colleges and universities to put their academic, administrative, community and other educational services online.

Drop-out is a person who enrolled in a program of academic studies and does not eventually complete it (Kember, 1995).

Globalisation refers to development of increasingly integrated systems and relations beyond the nation (Marginson and Rhoades, 2002, p. 288).

Intercultural learning refers to the acquisition of knowledge and skills that support the ability of learners to both understand the culture and interact with people from cultures different from their own (Lane, 2012).

Offshore education refers to ‘all types of education study programmes, or sets of courses of study, or educational services (including those of distance education) in which the learners are located in a country different from the one where the awarding institution is based’ (UNESCO and Council of Europe, 2001, Section I, paragraph 8).

Secondment is where an employee temporarily transfers to another job for a defined period of time for a specific purpose, to the mutual benefit of all parties.

Student sojourn is commonly understood as a temporary stay abroad for a specific purpose such as academic study.

Transnational Education (TNE) refers to all types of Higher Education (HE) study programmes, or sets of courses of study, or educational services (including those of distance education) in which the learners are located in a country different from the one where the awarding institution is based. Such programmes may belong to the education system of a state different from the state in which it operates, or may operate independently of any national education system (UNESCO and Council of Europe, 2001, p. 2).

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Chapter 1 Introduction

The focus of this research is on staff and students' views, expectations and experiences of a collaborative pharmacy programme. This chapter introduces the research context and outlines the background information. The purposes of the study and contribution of the thesis are then presented, followed by the thesis structure. The chapter concludes with a short summary of each of the subsequent chapters.

1.1 Introduction to Research Context and Research Site

The current research project examines Transnational Education (TNE) practice in the tertiary education sector, specifically the twinning programme between two universities. In this respect, two learning environments, namely Cardiff University School of Pharmacy and Pharmaceutical Sciences (CU) and Taylor's University School of Pharmacy (TU), were explored. Cardiff first offered pharmacy education in 1919. The current institution, Cardiff University, is one of the top United Kingdom (UK) schools of pharmacy (Cardiff School of Pharmacy and Pharmaceutical Sciences, 2016) and the only one in Wales, with 37 academic staff (three of these work less than 50% of a full time equivalent) and nine teacher-practitioners who contribute to MPharm programme at CU (as of 14th December 2016). In comparison, Taylor's University is a relatively new institution based near the capital city of Malaysia, Kuala Lumpur. Privately funded, it was founded in 1969 as a college but was subsequently conferred university status offering various programmes from foundation to post graduate studies. Taylor's pharmacy school was established in 2010 with its first student intake in January 2011 as part of the 2+2 MPharm programme. To date (December 2016), it has a total of 22 academic staff members and two administrative staff under the management of a Dean. Supporting staff from different departments include laboratory officers, information technology personnel, librarians, human resources and a facility management team.

The research involved the first cohort of students enrolled on the twinning programme in a longitudinal mixed methods study. In addition, staff and other cohorts of students from TU and CU were recruited at different stages later in the study. The studies focussed on the views, expectations and experiences of staff and students. The following section will provide a background of the collaborative pharmacy twinning programme. Several terms

used within this thesis can be found in the Glossary (page viii).

1.2 Globalisation and Transnational Education (TNE)

Globalisation has contributed significantly to progress and transformation in almost all aspects of daily life, including the economic, political, social, educational and cultural situation of most countries across the world. It refers to the “development of increasingly integrated systems and relations beyond the nation” (Marginson and Rhoades, 2002, p.288). Between the 1980s and 1990s, Malaysia began to develop its human resource capacity by producing a productive, disciplined and skilled labour force in order to address the challenges posed by globalisation. The basic strategies and policies implemented in the 1990s on the education system were a result of this initiative (Yusoff et al., 2000).

Internationalisation is a result of globalisation; in the context of higher education it includes the policies and practices undertaken by academic systems, institutions and even individuals to cope with the global academic environment (Altbach and Knight, 2007). The motivation for internationalisation has given rise, most notably, to the phenomenon of TNE (Morshidi, 2005). Over the years, various attempts have been made to define TNE; however, no consensus exists internationally on this terminology. To eliminate confusion, the definition provided by UNESCO’s/Council of Europe’s (2001, p.2) *Code of Good Practice in the Provision of Transnational Education* is used for the purpose of this research project. The definition is as follows:

“All types of higher education study programmes, or sets of courses of study, or educational services (including those of distance education) in which the learners are located in a country different from the one where the awarding institution is based. Such programmes may belong to the education system of a state different from the state in which it operates, or may operate independently of any national education system.”

Synonymously, TNE is often known as ‘transnational higher education (TNHE)’, ‘offshore education’, ‘borderless education’ or ‘cross-border education’ (Knight, 2004). In the United States (US), transnational refers to student exchange programmes. In Europe and the UK, student mobility is the major defining feature of transnational programmes while in the Asia Pacific region, offshore refers to programmes delivered by Australian universities in other countries (e.g. twinning programmes) (Davis et al., 2000).

TNE facilitates the cross-border mobility of programme information, materials, students and staff. The actual mode of delivery and arrangement of TNE is presented in Table 1.1.

Table 1.1 Description of the most common modalities of TNE delivery

Name of institution	Definition
Twinning programmes	An arrangement where an education provider from Source Country A collaborates with another institution in Host Country B allowing students studying at the latter institution to transfer their course credits to the institution in Country A. One qualification is awarded by the education provider in Country A. This may or may not be on a commercial basis and is often referred to as 2+2, 1+3 (in the case of 4-year qualifications), or a similar combination, with the + referring to the fact that part of the qualification is conducted in the host country and part in the source country.
Franchising	An education provider from Country A (the franchiser) grants another institution from Host Country B the right to deliver the franchiser's educational programmes in Country B or other countries. The qualification is then awarded by the franchiser in Country A. Franchising agreements are usually for-profit commercial arrangements and are often referred to as 3+0 (in the case of 3-year qualifications, 2+0 in the case of 2-year qualifications, 4+0 in the case of 4-year qualifications, etc.) where the student undertakes the entire programme in the host or home country.
Programme articulations	In articulation arrangements, students undertake part of a source country qualification in a host country and then transfer to the source country institution with "advanced standing" in terms of study credits and credit transfer to complete the qualification at the education institution in the source country. This sort of inter-institutional arrangements may or may not lead to joint or double degrees.
International Branch Campus	A subsidiary/satellite campus is established by a source country education institution in a host country to deliver its own education programmes. Branch campuses can be established either through wholly owned subsidiaries or via joint venture partnerships with local host country partners.
Virtual/distance learning	The education provider from a source country delivers the education service to students in a host country via a communication interface (usually via post and/or Internet-based solutions) and the students self-direct the learning process.
Corporate programmes	Some major multinational corporations have their own higher education institutions (HEIs) or programmes of study, offering qualifications that might not necessarily be affiliated with any national education system.

Adapted from: (Naidoo, 2009)

In general, Asia Pacific countries (e.g. Malaysia, Singapore and China) are the most active importers (also known as ‘receiving’ or ‘host’ countries) of TNE programmes, while English-speaking countries such as the US, UK, Australia and New Zealand are the main exporters (also known as ‘provider’ or ‘home’ countries) of TNE programmes (Hoare, 2012). The participation of Malaysia in TNE was associated with its historical background and development. Generally speaking, the factors that contributed to the growth of TNE in Malaysia included the following: (1) a high demand of higher education, (2) the lack of awarding power of local private colleges thus the desire to partner with a foreign university, (3) the financial crisis in 1997 that hindered students travelling overseas to study, and (4) the higher education policy reform in Australia and the UK resulting in budget cuts (Chiang, 2013).

1.3 Pharmacy Twinning Programmes in Malaysia

Before 1996, public universities were the only providers of pharmacy education in Malaysia. The implementation of the 1996 Private Higher Education Act and the need for the provision of increased numbers of health professionals, including clinical pharmacists, encouraged the development of Malaysian health professional education in partnership with an overseas university (Quality Assurance Agency, 2010). There are now twenty universities (five public and fifteen private) providing pharmacy education in Malaysia. Out of these, four private institutions had offered a pharmacy twinning programme previously and three have their International Branch Campus (IBC) offering its own pharmacy programme (Ministry of Health, 2015). In a typical UK-Malaysia twinning programme, the terminologies “2+2” and “3+1” are commonly used to refer to two years of study in Malaysia and two years in the UK, or three years in Malaysia and one year in the UK, respectively. Table 1.2 shows the institutions offering twinning programmes with a UK institution before 2014.

Table 1.2 List of Malaysian universities offering a twinning programme with a UK institution before 2014

Malaysia institutions	UK Institutions	Programme	Year programme was first offered
International Medical University (IMU)	University of Strathclyde	Bachelor of Science (Hons) in Pharmacy (twinning 1.5+1)	1996
		Master of Pharmacy (twining 2.5+1)	1997 – 2005
		Master of Pharmacy (twining 2+2)	2006 – 2013
SEGI University College	University of Sunderland	Master of Pharmacy (twinning 2+2)	2008 – 2013
Malaysian Allied Health Sciences Academy (MAHSA) University	Liverpool John Moores University	Master of Pharmacy (twinning 2+2)	2010 – 2013
Taylor's University	Cardiff University	Master of Pharmacy (twinning 2+2)	2011 – 2013

The first pharmacy twinning programme was launched by the International Medical College (currently known as International Medical University) in collaboration with the University of Strathclyde, Scotland in 1996. It was a 2.5 year fast-track twinned Bachelor of Science (BSc) programme using the Strathclyde curriculum, with the first one-and-a-half years offered in Malaysia and the final year undertaken at Strathclyde. The collaborative BSc programme became a collaborative Master of Pharmacy (MPharm) programme in 1997. A new version of the programme was approved in 2006 to accommodate the requirements of the then accreditor, the Royal Pharmaceutical Society of Great Britain (RPSGB). This role is now undertaken by the General Pharmaceutical Council (GPhC). As a result, the twinning model became a “2+2” MPharm (The Quality Assurance Agency for Higher Education, 2010).

In such twinning arrangements, students use the same curriculum, including syllabus, as well as satisfying the entry requirements of the UK twinning partners. Upon fulfilling the graduation requirements, the students are awarded with the partner university’s degree qualification (Higher Education Malaysia, 2009). In addition to a foreign university degree qualification, students can also have a substantial savings on tuition fees and living expenses overseas when they choose a twinning programme. For example, in 2012, if a student enrolled on a TU pharmacy twinning degree programme that offers two years of study in Malaysia with the last two years in CU (i.e. ‘2+2’ twinning degree), he/ she can save up to RM150,000 (approximately GBP27,000) in tuition fees compared to when he/ she completes the entire 4-year degree in the UK.

1.3.1 TU-CU Pharmacy Twinning Programme

The ‘2+2 MPharm’ offered by CU and TU started in 2011. The programme consisted of two phases, Phase I and Phase II. Students undertook Phase I training in TU, which comprised two years of study in Malaysia and then transferred to CU for Phase II, for year 3 and 4 studies. In addition, Taylor’s offered a 4+0 Bachelor of Pharmacy (BPharm) programme in which students could choose to study the 4-year pharmacy programme solely in TU. Initially, the first two years of study were common and students could select to undertake the 4+0 BPharm in Malaysia or the 2+2 MPharm towards the end of their second year (if they

satisfied the progression requirements of the respective host institution). The schools were no longer recruiting twinning students in 2014 and the last enrolment was in September 2013. The main factor contributing to the termination of the collaboration was the divergence of the requirements of the regulators meaning it was no longer possible to have a common first two years of the programme.

As of December 2016, the TU-CU MPharm twinning programme has produced three cohorts of graduates while one cohort of students are still in Phase 2 of the 2+2 MPharm programme. For the purpose of clarity, the two groups of students involved in the study would be referred to as Cohort 1 and Cohort 2: these are the students who have graduated from the programme. Cohort 3 and Cohort 4 students were not involved and they were still in their year 3 and year 4 study, respectively, in CU, at the time of research. Appendix 1.1 provides a breakdown of the number of students who enrolled, graduated and dropped out from the programmes between 2011 and 2013.

With an overall objective to provide the same overall educational experience to students in both institutions, the division of responsibilities between the TU and CU partnerships had the following elements (Waterval et al., 2015); (1) the host institution (i.e. TU) hires their own academic staff under local employment conditions to deliver the programmes, (2) the host institution is responsible for the recruitment of (often local) students, (3) the home institution (i.e. CU) provided educational programmes. In addition, visits from the home university's academics are usually for the purpose of teaching support and quality assurance. Academic visits are typically brief, thus the teaching delivered was usually in an intensive manner (Debowski, 2003, Leask, 2004, Dunn and Wallace, 2006).

1.3.2 Accreditation of the 2+2 MPharm Programme

Pharmacy twinning programmes in Malaysia, similar to pharmacy programmes offered by local universities, require recognition and accreditation by the relevant bodies. It is the responsibility of the Higher Education Institution (HEI) to ensure and monitor the appropriate standards and quality being offered (UNESCO and Council of Europe, 2005). Recognition and accreditation of a pharmacy programme is regulated and monitored by the Ministry of

Higher Education (MoHE) and the Ministry of Health (MoH) under the purview of the Pharmacy Board Malaysia (PBM). The Malaysian Qualifications Agency (MQA), under the MoHE, is responsible for the quality assurance of higher education for the public and private sectors. A university that is provisionally recognised by the MQA is allowed to recruit and enrol students into their programme. The pharmacy programme is monitored by the PBM every year until the students undergo provisional training in order to determine if the student is qualified for a provisional or full recognition as a pharmacist (Ministry of Health Malaysia, 2015).

The 2+2 MPharm programme at TU is the same as the Cardiff University MPharm degree which required accreditation by the GPhC (General Pharmaceutical Council, 2011a). Pharmacy education in the UK is a 4-year undergraduate master's programme that results in the MPharm degree. Historically, the entrance to a pharmacy profession required successful completion of a three-year BSc or BPharm degree, followed by a 12-month pre-registration placement under appropriate supervision (Sosabowski, 2008). The course changed to a 4-year programme in 1997 (Adcock, 2001). After the four years, graduates proceed to a 12-month pre-registration year in a choice of sector that includes hospital, community pharmacy and pharmaceutical industry before they can register as a pharmacist with the GPhC (until 2010 with the RPSGB). In the context of TNE, the main role of the GPhC is to ensure the student's overall experiences of the TU-CU MPharm programme is equivalent to those who study the full 4-year pharmacy course at CU.

The split of the RPSGB into a professional leadership body, the Royal Pharmaceutical Society (RPS) and a separate regulatory body, the GPhC, was made formal when the Pharmacy Order and the General Pharmaceutical Council (Constitution) Order came into force in 2010 (John, 2013). The GPhC assumed responsibility for pharmacy regulation from the RPSGB, effective from September 2010 (General Pharmaceutical Council, 2011b). The council has two related education quality processes: accreditation and recognition.

The initial process for accrediting a new MPharm degree, including those delivered outside the UK, is probationary until the first cohort of students has successfully graduated. After the first year visit (Step 1), probationary accreditation is granted and the institution can proceed

to Step 2 where continuance of probationary accreditation will be granted. A full accreditation of the first two years of an MPharm degree delivered outside the UK may be given if standards are being met. After the initial accreditation, a 2+2 MPharm degree will be harmonised with the reaccreditation cycle of its parent MPharm degree delivered in the UK (General Pharmaceutical Council, 2011a). In August 2015, the TU-CU MPharm programme was fully recognised and accredited by the GPhC and PBM as the graduates fulfilled the necessary requirements.

1.4 Motivation and Purpose of the Study

With a background in twinning education, the researcher completed her first two undergraduate years in the IMU-University of Strathclyde pharmacy programme in Malaysia. The researcher then continued her study in the UK and graduated from the University of Strathclyde with an MPharm degree. As an undergraduate student, she experienced first-hand what it was like to be a student in a twinning programme. Indeed, the researcher was already familiar with pharmacy twinning programmes when she joined TU as a member of academic staff in June 2010. The academic visitation to CU, which occurred in November 2010, yielded a fruitful discussion pertaining to research in the area of pharmacy education, particularly the newly developed pharmacy twinning programme.

This research project is an opportunity to further explore the TU-CU collaborative programme. As there is relatively little published research or reports related to UK transnational provision, it was decided to address the following research question:

What are the expectations and experiences of students studying through a transnational 2+2 undergraduate pharmacy programme?

In order to address this research question, it was important to seek the views of not just the students on the 2+2 undergraduate pharmacy programme but also other stakeholders such as staff at both institutions and CU students. The overall aim is to gain a better understanding of the teaching and learning experiences of staff and students in a transnational education (TNE) programme. In order to achieve the aims, the following research objectives have been

developed:

- (1) to explore the reasons for students choosing TU and the 2+2 MPharm pharmacy programme;
- (2) to explore the expectations of staff and students of a new 2+2 MPharm pharmacy programme;
- (3) to explore the experiences of staff and students of a new 2+2 MPharm pharmacy programme;
- (4) to examine and compare the learning environments in the pharmacy schools at CU and TU;
- (5) to explore the expectations and experiences of transferring students studying through a transnational 2+2 MPharm pharmacy programme; and
- (6) to investigate graduate students' overall experiences of the 2+2 MPharm pharmacy programme.

1.5 Contribution of the Study

It was hoped that this study could provide a greater understanding of the expectations and experiences of TU and CU staff and students of the pharmacy twinning programme. As the programme was new to both institutions, understanding staff and students' perceptions could help the management to identify important issues relating to setting up and delivering a collaborative programme. This should allow the schools to address any areas of concern and implement continuous improvements. It was also important for staff to reflect on their practice using the students' feedback.

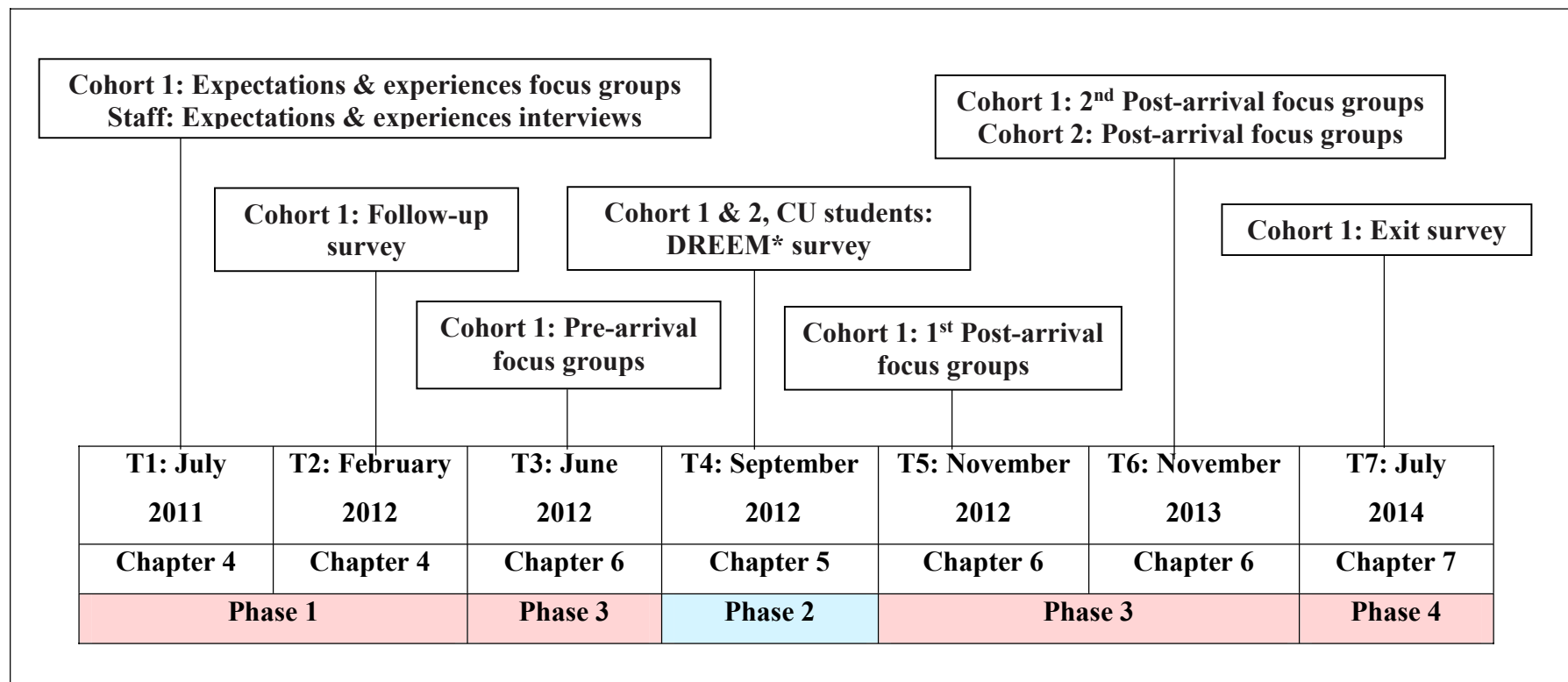
In addition, in light of fierce competition among the pharmacy schools in Malaysia, the findings should highlight the reasons for choosing an undergraduate pharmacy programme and identify factors affecting student's choice of university. This could provide information to the Dean and the marketing department at TU, which could help them with strategic planning for recruitment and better advertising for the programme. Furthermore, the learning environment in a pharmacy twinning programme is under-explored. The current study will provide hopefully information about students' perceptions of their educational environment.

Moreover, the findings may be of practical interest to administrators and educators involved in international student transfers. International student transition is not a new area of research, but under the TU-CU arrangement, students in the twinning programme are third year students when they first arrive at Cardiff. These students will be under similar pressures as first year students with regards to adapting to a new environment but at a different stage of study. Knowledge of the special needs of the transferees will be important for any school who may wish to run a similar form of TNE programme in the future.

This longitudinal study will add to the current knowledge through research in higher education especially in the context of the pharmacy twinning programmes. The current research will also help educators review their practice and potentially contribute towards their professional development.

1.6 Stages of the Research

Figure 1.1 outlines the stages of this multiphase exploratory study. The first phase of research began in 2011 with student focus groups and follow-up survey, and staff interviews exploring their initial views, expectations and experiences of the collaborative programme. The second phase of the research study consisted of a questionnaire to CU and TU students examining their perceived learning environment. The subsequent phase involved a series of pre-arrival and post-arrival student focus groups. Students were invited to share their expectations and experiences of the programme at the time of the research. The last phase of research was conducted in July 2014 and focused on graduates' experiences of the collaborative programme using an exit survey. A summary of each thesis chapter is presented in the next section.



The dates shown are the start dates for the phases

*DREEM: Dundee Ready Education Environment Measure

T: Time point

	Qualitative research
	Quantitative research

Figure 1.1 Overview of longitudinal multiphase mixed methods research

1.7 Structure of the Thesis

The remainder of this thesis is organised into seven chapters.

Chapter 2 is the literature review. It outlines the rise of global students in TNHE and its implications. It provides a review of relevant literature that frames the research.

Chapter 3 discusses the methodological choice, explaining why mixed methods research was appropriate for the present study and what potential benefits could be obtained. Moreover, it will outline the research questions and research design.

Chapter 4 contains the empirical study investigating staff and students' perceptions in the early stages of TU-CU collaboration. It gives a description of how qualitative data was collected through staff interviews, student focus groups and student follow-up surveys.

Chapter 5 describes the use of the Dundee Ready Education Environment (DREEM) questionnaire to assess the educational environment perceived by participating students in TU and CU. This quantitative study involved both TU and CU students and focuses on students' perceptions of various aspects of their learning environment.

Chapter 6 concerns THNE students' transitions. The study explored the expectations of Cohort 1 students prior to departure and their actual experiences during the first semester of study in CU. Experiences at other points in time were also investigated. In addition, Cohort 2 expectations and experiences in their first semester of study at CU were explored.

Chapter 7 describes the use of a questionnaire utilising open-ended questions (i.e. exit survey) in capturing graduates' experiences during their undergraduate programme at TU and CU.

Chapter 8 discusses the overall results collected, draws conclusions and makes recommendations and suggestions for future research.

Chapter 2 Selective Literature Search

2.1 Introduction

This study explored staff and students' perceptions about their twinning programme. In this literature review, the theoretical foundation of the present study will be described, including stakeholder theory, and current research specific to transnational students and staff.

2.2 Refining the Search

The main search engines that were used were Google Scholar, Google, ERIC, and Web of Science. The search terms used were shown in Table 2.1. As the database searches produced very large numbers of references, to filter the many irrelevant results and make the search more effective without compromising the outcomes, a few strategies were adopted.

Firstly, Boolean operators [AND] combining the search terms were used. AND reduces the number of results retrieved by combining different search terms to make the outcomes more relevant, e.g. transnational education AND staff experiences. Secondly, citation searching was done using Google Scholar and Web of Science. This strategy was used to find a list of papers that cite the relevant articles which the researcher found. It was a very effective way to find papers on the same or similar subjects, and to discover how a known idea or innovations have been confirmed, extended or corrected. Finally, ERIC and Web of Science have pre-formulated search filters which the researcher used to refine the results.

In addition, the reference lists of selected papers were manually searched to identify additional publications of interest. Following a review of the title and abstract, potentially relevant studies were separated from those deemed irrelevant. Of the remaining articles, those considered suitable for inclusion in the literature review were identified, obtained and reviewed.

Table 2.1 Databases and search terms used to identify the literature

Databases searched	Search terms The following keywords were used singly and in combination with each other
ERIC Web of Science Google Scholar Google	Academics in transnational education Articulation Choosing to study pharmacy Collaborative education Education environment Experiential learning Factors affecting students choice Final year students experiences First year experiences Foreign student experience Graduate experiences Higher education stakeholders International student learning International student transfer Learning environment Learning style Offshore provision Overseas campus Overseas education Stakeholders Staff experiences Staff expectations Student expectations Student satisfaction Student sojourners Transnational education Transnational higher education Twinning programme

The literature search established that, in recent decades, a rapid increase has been observed in the volume of work published on the topic of stakeholders in higher education. Research specific to TNE was found to be lacking. Furthermore, Australian research on transnational teaching was at the forefront in terms of developing literature on the professional development of academics teaching in transnational contexts (O'Mahony, 2014). In terms of TNE, the vast majority of papers emphasised policies and quality assurance issues which were not the main focus of the current research. Guided by the research topic which focused on the stakeholders (staff and students) in TNE, publications were reviewed and evaluated so that only those related to first-year experiences and expectations of international students or TNE were considered. The key papers identified are briefly summarised in Appendix 2.1.

The following section (2.2) introduces the notion of stakeholder theory and reviews the literature on stakeholders in order to gain an understanding of those who are significant in academic settings.

2.3 Stakeholder Theory

Stakeholder theory first emerged from management literature in the context of business studies. According to Freeman (1984a, p.46), stakeholders are defined as ‘any group or individual who is affected by, or can affect, the achievement of an organisation’s objectives’. Within this concept, a person, informal group, organisation, or institution can all be considered stakeholders. The theory considers that the final outcomes of any activity should account for stakeholders’ views and not only those of the owners or shareholders of an organisation (Frederick et al., 1992). In addition, effective stakeholder management starts with stakeholder identification, a process which involves upper management (Freeman, 1984b, Polonsky, 1995, Mitchell et al., 1997, Bryson, 2004). The fundamentals of stakeholder analysis provides a better understanding of who the stakeholders are and what satisfies them. This can assist in defining how to meet their needs and comply with their demands.

Higher education literature includes multiple lists of stakeholders, although there is no consensus regarding the definitions of stakeholders and how to recognise them (Mitchell et al., 1997, Burrows, 1999). Burrows (1999) proposed the following list of stakeholders of HEIs: governing entities (e.g. General Agreement on Trade and Services, GATS), administration, employees, clientele, suppliers, donors, communities, government and non-governmental regulators, financial intermediaries, and joint venture partners. In addition, Rowley (1997) and Leveille (2006) suggested that the stakeholders in TNE include, but are not limited to, students’ families, employers, academic staff, administrative staff, potential employers, students, graduates, the host and provider universities, and the government. Researchers who attempted to prioritise stakeholders in a HE system found that students and staff were top of the list (Chapleo and Simms, 2010, Mainardes et al., 2010). However, these studies were generally conducted in individual universities of interest, so their outcomes cannot be generalised without further research. The current research focused on two key

groups of stakeholders, namely students and staff. Due to the timing of the study and because it was a new programme, this study was only able to collect full data of Cohort 1 for their entire programme from Year 1 to graduation. Nevertheless, Cohort 2 students and CU second and third year students in the academic year 2012/ 2013 were invited at different time points to add knowledge and understanding to the phenomenon under study.

Competition and international cooperation have led to a situation where trust in the standard of higher education is no longer a sufficient basis for guaranteeing quality (Kettunen, 2008). In this context, HEIs have a specific agenda for stakeholder identification, which is quality assurance (Kettunen, 2015). Feedback from stakeholders could be used to improve the development of activities undertaken in HEIs (European Association for Quality Assurance in Higher Education, 2009). Nevertheless, stakeholders' requirements can change over time, so continuous evaluation of feedback could assist HEIs in defining their objectives and improving their processes in order to meet stakeholders' needs. Conversely, neglecting its stakeholders might limit success and lead to insufficient quality assurance in HEIs (Kettunen, 2015).

In this research, the students and staff are regarded as the primary stakeholders in the TU-CU collaborative programme. The following sections will review the studies undertaken in the context of TNE focusing on staff and students. The review also encompasses first-year experiences, international student transition and graduate experiences in the context of HE.

2.4 Academic Staff in TNE

Most research in the context of TNE has been conducted by researchers in Australia. This is not surprising as Australia is one of the top exporters of TNE services and also the leading destination for international students (Tsiligiris, 2014). Across the literature, the prominent theme observed was the specific development needs of staff in the unique TNE environment. Researchers have highlighted that the employment of quality staff, who are willing to deliver and administer the programme, is an important factor in assuring the success of an offshore programme (Dobos, 2011).

Content delivery is an important factor in ensuring that TNE delivery is on par with its domestic equivalent. Therefore, universities need to develop strategies to build and maintain similar standards between the host and home institutions. In addition, the ability to attract, retain, and develop highly-qualified staff is of pivotal importance. Proper induction of academic staff involved in TNE programmes is essential to both the quality and equivalence of teaching and learning (Gribble and Ziguras, 2003, MacDonald, 2006). Gribble and Ziguras (2003) also highlighted the need of international academics to be adequately prepared for distinct academic and cultural encounters in the unique transnational learning environment.

However, Dunn and Wallace (2006) found that many universities in Australia may not have kept up with the development. Academics involved in TNE teaching reported that their universities did not have specific induction programmes to orientate them with the countries in which they were required to teach. Academics also pointed out that teaching international students abroad was qualitatively different from teaching international students in an Australian campus. Although it was a relatively small study, respondents were experienced academics in transnational teaching yet even they admitted the need to be better prepared for teaching in other countries. Also, clearer guidelines should be provided from the institutions. In line with this observation, Dobos (2011) found that academic staff indicated a lack of equality at offshore campuses of Australian universities. Staff involved in transnational teaching identified that communication was often one-way with directives given from the Australian university about assessment and grades, with no opportunity for debate or discussion. There existed a general sense that staff were not treated professionally regardless of whether they were Australian or local staff. However, one staff member did indicate that a positive relationship existed with staff in the home campus when communication was adequate.

Smith (2009) expanded on the importance of recognising staff professionalism and communication between partners. She demonstrated how an initially poor relationship between a home and offshore campus gradually evolved into a more positive one. The relationship improved through the establishment of better and stronger communication between both institutions. Face-to-face contact was also found to have high value in maintaining a positive relationship and enhancing the collaboration. The study further

emphasised the importance of a proper induction process for academics working in the TNE context, not only for those deployed overseas but also those permanently employed at the offshore campus.

In terms of academic professional development, Leask and Hicks (2005) recognised the specific knowledge and skills required for offshore teachers which included; be an expert in their field, able to handle operational issues involved in transnational teaching, be an efficient intercultural learner, and able to demonstrate particular personal attitudes and attributes such as being approachable, patient, encouraging, and passionate about their teachings. More specifically, Debowski (2003) identified the need for professional development in areas such as flexible delivery, e-learning, cross-cultural communication, large group instructional techniques, moderation and curriculum design. Ultimately, intercultural competence has been recognised as an important competency for academics involved in TNE teaching (Greenholtz, 2000, Leask, 2004, Dunn and Wallace, 2006, Dobos, 2011).

TNE arrangements involve cross-cultural teaching and learning when staff and students go overseas. Knight (2004) described intercultural¹ as relating to the diversity of cultures that exists within countries, communities, and institutions. Bhawuk and Brislin (1992, p.416) suggested that, in order to be effective in another culture, one must be interested in other cultures, sensitive enough to notice intercultural differences and willing to modify behaviours to show respect towards the people of other cultures. Leask (2006) advocates a greater role of academics from home institutions as learners, as well as teachers or role models (Debowski, 2003), with a responsibility to broaden and deepen their understanding of other cultures and to integrate these learnings into their teaching at the home campus. In this context, Dunn (2006) demonstrated that transnational teaching did provide enrichment through added examples and case studies from other countries. Furthermore, Greenholtz (2000) introduced an inventory to objectively measure the intercultural sensitivity of TNE academics in an attempt to assess their training needs. While the inventory was mostly used to assess student's readiness for intercultural learning, no empirical study supports its use in TNE academics. The closest example to this comes from a recent study assessing the cultural competency of

¹ This thesis uses *inter* and *cross* cultural synonymously throughout although there is some debate about distinctions between the two Gudykunst, W. B. 2003. *Cross-cultural and intercultural communication*, Thousand Oaks, CA, SAGE Publications..

students, faculty, and staff from a college with an ultimate goal of producing a more culturally competent nursing workforce to serve the greater community (Kruse et al., 2014).

In summary, although a growing body of research exists in the transnational context, the main focus of the literature is on Western-based academics working offshore for limited periods of time. To date, little consideration has been given to permanent academics working in an offshore campus. In addition, the review of the literature also highlights the need for more studies beyond the predominantly Australian context and for studies that focus on a greater number of individuals with different experiences.

2.5 Students in TNE

The research on TNE students focused on cultural differences and their influence on student learning style. The importance of learning environments was also discussed in view of the intercultural differences. The following sections summarise the existing literature and report on its relevance to the current research.

2.5.1 Student Learning Style and Intercultural Experiences

As far back as ancient Greece, it was noted that students have different approaches to learning. These are learning styles which are often defined as ‘...characteristic cognitive, affective and physiological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment’ (Ladd and Ryby, 1999, p.363). Recognition of students’ learning styles is a vital part of an effective teaching strategy (Felder and Brent, 2005). However, there is no one learning style that is better than the other. The key is to understand different learning styles between students and knowledgeably develop a variety of instructional methodologies to teach them (Williamson and Watson, 2007).

Research findings demonstrated that when student learning styles are compatible with teaching styles, students tend to retain information longer, apply knowledge more effectively, have a more positive attitude towards their subjects, and better achievers (Charkins et al., 1985, Felder and Silverman, 1988, Boles et al., 1999). Robotham (1999) later argued that

there is a lack of evidence to support the view that matching teaching and learning styles provide any educational significance. Ziguras (2001) and Eldridge and Cranston (2009) found that transnational students were able to adapt to a different learning style, while others suggested that they can be trained to develop a versatile learning style (Smith, 2001, Eaves, 2011). Heffernan and colleagues (2010) later highlighted that differences between the learning styles of students are due to intercultural differences.

In comparison to Western learners, Asian students were generally found to be quiet in class, less spontaneous, and reluctant to speak out or seek help. They appeared to lack confidence in their ability to communicate and were fearful of causing embarrassment to themselves or their teachers (Ramburuth and Birkett, 2000). Also, they were taught not to question or challenge their teachers instead readily accept the information given. Teachers were regarded as having the authority in the class (Chan, 1999), thus questioning and challenging them was considered disrespectful (Monteiro and Sharma, 2011). Moreover, over-modesty in Asian students made the Western participative style of learning less acceptable to them.

Chinese students' learning styles were the most discussed in the aspects of intercultural experiences in TNE. Students with a Chinese background (especially those from Malaysia, Singapore, Hong Kong and China) were classified as learners who heavily relied on repetitive rote-learning and memorisation (Ballard and Clanchy, 1991). These are regarded as surface learning approaches as opposed to deep learning approaches, the latter requiring a greater level of understanding of analysis, problem solving, and communication. In general, Asian students adopted a teacher-centred or so called 'spoon-feeding' approach of surface learning style (Goh, 2008). Spoon-feeding literally means feeding one with a spoon. Metaphorically, it means no opportunity for one to think or act for oneself (Samah, 2009). Samah further explained that it refers to behavioural treatment given to someone so pampered that it compromised his/her self-development. Pedagogically, spoon-feeding might impede independent learning and could deter creativity and innovativeness among learners, and undergraduates in particular. Rehm (2010) later explained that students who have been spoon-fed ended up learning the material through rote memorisation without questioning why or seeing the big picture.

Arguably, Cooper (2004) demonstrated that the Chinese tradition of memorisation through repetition can be used to deepen understanding and achieve high levels of academic performance among Chinese accountancy students. Hoare (2006) provided evidence that Singaporean Education and Training course students were skilled at using repetition to ensure retention of information and to enhance understanding (Watkins and Biggs, 2001). While the above established that memorising can aid depth of understanding in Asian students' learning, it is important that the teachers provide adequate coaching and practice because discipline and persistence are required to commit the knowledge to memory (Zinkiewicz et al., 2003).

Wong (2004), in his longitudinal study of Asian international undergraduates in a university in Australia revealed that Malaysian undergraduates experienced teacher-centred learning, rote memorisation, and 'spoon-feeding' during their high schools in Malaysia (Nalliah and Thiagarajah, 1999). The students were lost at the beginning of the semester at the university as a result of different teaching styles practiced by the university. However, after two months, the students were able to adapt to the new learning styles adopted by the university. The students confessed that they preferred student-centred learning styles as they were able to have more freedom and were in control of their own learning. Similarities were observed in a cross-sectional study conducted by Monteiro and Sharma (2011). Malaysian transnational undergraduate students experienced a culture shock in New Zealand due to differences in learning and teaching style. In this interview study, students revealed that they were accustomed to traditional teacher-centred learning approaches in Malaysia and found that the student-centred learning approach was hard to cope with. While the researcher concluded that cultural adaptation was the key to overcoming barriers transnational students encountered with teaching and learning, there was no follow-up on how well students adapted to the teaching and learning later in the programme. Nevertheless, the study further confirmed that the teacher-centred approach learning style adopted by Malaysian students throughout their education at home had a great impact on their learning overseas. The surface learning approaches adopted by Malaysian students involved in twinning programmes in Australia and the UK were further exposed by Goh (2008). Students in the interviews were able to discern between teaching practices that were obstacles to their use of higher level learning approaches. The criticisms of the teaching practices were that they were 'not constructive, non-committal, apathetic, showed favouritism and did not cater to the needs of different

students' (p. 11).

Through using different methodological approaches, the above studies confirmed that transnational students have to cope with the challenge of cross cultural adjustment. Paulston (1992), Berger and Luckman (1966), and Leavitt (2003) explained that in the process of adjustment, some aspects of cultural beliefs and values will never be completely abandoned for another. Parties involved, especially academics, should be fully informed of the cultural challenges students encounter during the transition process and be prepared to provide support whenever possible. In addition, academic training could take place to improve staff teaching performance. The suggestions provided can nurture students' experiences in the host country and create comparable experiences emphasised in TNE.

2.5.2 Learning Environment

Goh (2008), in her exploration of the students' approaches to learning, also asked about students' perceptions of their learning environment. The concepts of learning environment, education climate and educational environment are used interchangeably in the literature (Pimparyon et al., 2000, Al-Hazimi et al., 2004a, Till, 2004, Roff, 2005).

Bloom (1964, p.54) described the learning environment as conditions, forces (i.e. physical, social, and intellectual forces) and external stimuli which challenge the individual. Genn (2001a) later defined a learning environment as everything that is happening in the classroom, department and/or university and which makes an impact on students' achievements, satisfaction and success. In practice, the learning environment is not limited to student-teacher interactions and teaching-learning activities, but also includes the provision of adequate physical structures and facilities of the university (Harden, 2001). A conducive learning environment with comfortable classrooms, a receptive environment and motivated, skilled and accessible teachers is thought to increase learner motivation which in turn leads to better engagement in learning and improved performance (Hutchinson, 2003). Furthermore, the learning environment has been regarded as one of the most important factors in determining the success of an effective curriculum (Bassaw et al., 2003, Jamaiah, 2008).

In addition, Ramsden (1988) suggested that learning is a response to the learning environment in which the student is situated. It is the student's perceived learning environment, rather than the 'objective' learning environment that influences their learning (Prosser and Trigwell, 1999), behaviour, academic progress, and sense of well-being (Pimparyon et al., 2000, Genn, 2001b, Audin et al., 2003). Students' perceptions of their learning environment are also a stronger predictor of their achievements at a university rather than their prior achievements at school (Lizzio A et al., 2002, Vidaček-Hainš et al., 2010). A positive perception of the learning environment would positively influence student satisfaction, academic achievement and learning behaviours, including the approach to study and assessment (Pimparyon et al., 2000, Lizzio A et al., 2002, Audin et al., 2003, Till, 2004).

The proven connection between the learning environment and the outcomes of students' achievements, satisfaction and success underscored the importance of evaluating the learning environment (Pimparyon et al., 2000, Goldie, 2006, Abraham et al., 2008, Aghamolaei and Fazel, 2010). Identifying and addressing improvements to the environment can promote effective learning. This is even more crucial in the context of a twinning programme because of the culturally hybrid learning environment (Leask, 2004, Dunn and Wallace, 2006, Hoare, 2006). In addition, the UNESCO and Council of Europe (2001) 'Code of Good Practice in the Provision of Transnational Education' stated there should be an equivalent or comparable programme between the host and home institution. The principle of equivalence includes the admission of students for a course of study, the teaching and learning activities, the examination, assessment requirements and the overall learning environment. However, the author remarked that the quality, through the duplication, would be less than perfect because of the geographical separation of the teaching and learning environment (Pyvis, 2011).

Most surveys seeking to measure students' perceptions of the learning environment in HE focused on four areas; students, knowledge, assessment, and community (Bransford and Brown, 2000). In the context of TNE, the learning environment was often explored to understand the quality of teaching and learning (Leask, 2004, Dunn and Wallace, 2006, Pyvis, 2011). In Leask's (2004) study, she focused on the intercultural learning of students in a transnational business programme. She stressed that understanding the teaching and

learning environment requires effort and commitment of the teaching team. She further concluded that the successful integration of learning and teaching within the complex learning environment has the potential to enhance teaching and improve the quality of TNE delivery. Within the same context of intercultural learning, Pyvis (2011) attempted to examine and compare the quality of TNE of a culturally different student cohorts, namely Chinese and Australian. As quality of TNE requires 'equivalent' or 'comparable' learning approaches, it was suggested that the teacher-centred learning environment in the Chinese campus should be 'overcome'. In the discourse about quality and learning environment, the ways that students learn became the focus for Goh (2008). Her research focused on students' approaches to learning as she sees the approaches adopted by students, whether it is a deep or surface approach, can be helped or hindered by their learning environment. In her research findings, the key obstacle to deep learning was the teaching approaches employed by academic staff. As Hoare (2006) pointed out, it is the lecturer's role to ensure that the 'right' learning emerged from class sessions.

In the context of pharmacy education, Brown (2011) involved pharmacy students in his Dundee Ready Education Environment (DREEM) (See Chapter 3) questionnaire to 'measure' students' perceptions of their learning environment. The large scale quantitative study involved 548 undergraduate students enrolled in 11 health science courses (including pharmacy) at Monash University, Australia. The Likert scoring method used in the questionnaire appeared to be useful in providing an insightful snapshot of the way students view their respective courses and enable the institution to address key issues identified (Bassaw et al., 2003, Till, 2004, Jiffry et al., 2005, Denz-Penhey and Murdoch, 2009). Denz-Penhey and Murdoch (2009) compared the findings of quantitative DREEM with qualitative interviews. The analysis from the DREEM questionnaire was consistent with qualitative information obtained via interviews with medical students.

In spite of the usefulness of the DREEM questionnaire in assessing students' perceived learning environments, Whittle and colleagues (2007) advocated the combined use of the DREEM questionnaire with qualitative interviews. This is because DREEM alone cannot provide information about the concerns underlying poor scores. In turn, qualitative analysis allows for the identification of specific areas that require remediation.

In summary, despite the popularity of transnational programmes between Malaysia and the UK, it was found that no study to date has focused on the comparison or equivalence of these two different learning environments. As students could react differently in response to perceived teaching and learning environments (Biggs, 1987, Meyer and Muller, 1990), a comparative study of learning environments between TU and CU would benefit the stakeholders in better understanding their needs beyond the Australian context.

2.6 Ongoing Quality Assurance

Transnational programmes require enhanced quality assurance because of the complexity of teaching arrangements, geographical separation and cultural challenges (Hussain, 2007). As a result, national quality assurance systems in both host and home countries are the mainstay in scrutinising the programmes. The accreditation process as outlined in Chapter 1 is a commitment to quality by all HE providers. Discussion in the literature showed an indispensable relationship between education quality, student satisfaction and students' expectations and experiences. The following sections focus on research with the general aim to achieve quality education by understanding students' expectations and experiences, and what satisfied them.

2.6.1 Evaluating Satisfaction

Students' academic experiences were the most significant determinants of overall satisfaction and quality of education in HE (Gibson, 2010). They relate to the quality of teaching, skills and knowledge acquired, as well as the curriculum of the programme. Other predictors of student satisfaction include their emotional behaviours towards the university, which are categorised as non-academic factors (e.g. sense of belonging within the higher education). In the context of TNE, students' emotions are greatly influenced by their exposure to cross-cultural teaching and learning, engagement with institutions (i.e. host and home institutions), and the university's responsiveness to their concerns and suggestions (Gibson, 2010). A summary of student satisfaction predictors is shown in Table 2.2.

Table 2.2 Common set of predictors of student satisfaction

Key variable	Alternative descriptors
Academic staff/ teaching	Quality of instruction, expertise and interest in subject, degree of caring, helpfulness, accessibility, feedback provided
Classes/ curriculum	Overall design and delivery, usefulness scheduling, content, availability, class size/ logistics, level of difficulty
Advising support	Accessibility, reliability, professionalism, helpfulness, responsiveness, understanding
Skills developed	Relationship skills, critical thinking, intellectual growth, social/ moral awareness
Preparation for future	Preparation for or furthering career, expecting good job/ quality of life
Services/ facilities	Availability, access, physical aspects, usefulness, IT support
Social integration	Opportunities to socialise, campus safety, sense of belonging, enjoyable experience, diversity of student body
Student centeredness/ responsiveness	Responsiveness to student concerns/ suggestions, helpfulness, academic support, financial aid
Pre-enrolment factors	Accuracy of information provided, 1 st , 2 nd , 3 rd choice, admissions and orientation, degree to which met expectations

Adapted from (Gibson, 2010)

Boyle and Sastrowardoyo (2012) expanded on the findings reported by Gibson (2010) and developed a four-phase model (i.e. pre-enrolment, academic, connection and post-degree experiences) detailing TNE graduate students' satisfaction factors at different stages of their studies. However, due to the limited sample size, further research is required to explore these satisfaction factors. Nevertheless, the model suggests that evaluation of students' satisfaction factors should start at pre-enrolment phase and continue throughout the programme.

Miliszewska and Sztendur (2012) attempted to assess student satisfaction when they were doing their TNE studies. The study was very large scale and involved students in eight TNE computing programmes offered in Hong Kong, Malaysia, Singapore and Vietnam by Australian universities. Student satisfaction with various attributes (related to instructors, technology, programme management and administration) were compared. Written comments provided by students gave an understanding of how their learning experience encouraged or frustrated them. Overall, the Miliszewska and Sztendur's quantitative study provided stakeholders involved in teaching, developing and managing the programme an insight into students' views on their programme's effectiveness.

2.6.2 Assessing Expectations and Experiences

Expectations have been variously defined as desires, wants, and needs of customers (Teas, 1994). They are influenced by individual needs, prior experience of the service, word-of-mouth communication, external contact from the service provider, and the cost of the service offered (Zeithaml et al., 1990). Establishing expectations of ‘customers’ is the first and most critical step in delivering service quality and aids in creating effective marketing plans for universities (Zeithaml et al., 1990, Hill, 1995). It also acts as a benchmark (Chapman and Pyvis, 2006) and represents an important determinant of satisfaction (Mai, 2005): one would have high levels of satisfaction when expectations are being met (Kotler and Clarke, 1987, Appleton-Knapp and Krentler, 2006).

Thus by understanding them, educators can exert some control in correctly informing students about the expectations of a programme (Appleton-Knapp and Krentler, 2006). This is especially crucial in first year students as experiences during the first semester at university may be critical in a student’s decision to continue or discontinue studies (Kantanis, 2000). A better alignment between student expectations and the reality of their first-year experiences could increase their engagement and retention (Kantanis, 2000, McInnis et al., 2000, Crisp et al., 2009). Therefore, the more congruence that exists between a student’s expectations and the experiences offered by the institution, the more likely the student is to persist in his/her studies (Braxton et al., 1995).

Many reasons were cited for students leaving a programme such as change of intentions, uncertainty for the future, other commitments, lack of adjustment, academic difficulty, academic boredom, financial difficulty, and isolation (McInnis and James, 1995). Enabling factors that could assist first-year transition include the availability of student support services, accessibility to information technology services, the usefulness of the resources, the relevance of study material and study skills support (McInnis, 2002). Orientation programmes before the semester starts are also an effective enabler aiding the transition process during the first year (McInnis and James, 1995, McInnis et al., 2000, Hillman, 2005). However, orientation is just a start and student support should span throughout the entire university journey. The key is to support students while at the same time facilitating their

independence (McInnis and James, 1995). It is also important for first year students to have a sense of belonging to a learning community (Bateson and Taylor, 2004) as the assimilation into the university culture socially and academically can foster their success (Kantanis, 2000). Bowles and colleagues (2011) later identified intrinsic (i.e. student-centred) and extrinsic (i.e. university-led) factors as two distinct groups of enabling factors for first year transition. She suggested that universities could concentrate on the extrinsic elements, which are within their control to enable successful transitions. Ziguras (2009) and Eldridge and Cranston (2009) studied learning behaviours and revealed that transnational students were able to adapt to different learning approaches if supportive measures were in place especially during the initial transition phase.

While most studies exploring first-year transition (college freshmen entering institutions of higher education) did not involve transnational students, research did provide insights into the importance of understanding first-year transition and the factors affecting a successful transition (Krallman and Holcomb, 1997, Brinkworth et al., 2008, Crisp et al., 2009, Bowles et al., 2011). Unlike the settings depicted in existing research, transnational students are in a special learning environment where there are two entry points into university life; one when they first enter university life and then the transition from home to host campus. The differences in intrinsic and extrinsic factors at these two different points of entry are worth exploring (Nukpe, 2012).

In the context of TNE, expectations and experiences of students in transnational programmes in Australia were studied. Leask (2006) examined the characteristics of academic staff most valued by transnational students. It was discovered that students expected teaching staff to exhibit particular skills and knowledge within an intercultural context. Chapman and Pyvis (2006) explored the reasons why Malaysian students enrolled in Australian offshore programmes in Malaysia. They found that students shared the belief that associates international education with quality learning. They expected the quality of teaching in an international programme to be higher than local ones. Also, students viewed an international education as a status symbol, provides international exposure and outlook, an investment in career advancement, and a pathway for personal growth and development. These aspirations effected their decisions to study in a transnational programme. Pyvis and Chapman (2007)

described these motivations as positional and self-transformative investments. In their study, despite the criticism by Malaysian students (mainly on teaching practices, course materials and learning demands) students generally accepted the experience as part of the challenge in transforming themselves. The current research would further explore Malaysian pharmacy undergraduate students involved in TNE that are not part of an Australian offshore programme, i.e. UK offshore programme.

Hoare (2006) conducted a longitudinal study of transnational student and staff experiences in Singapore. Her fieldwork showed that intercultural differences have consistently influenced and transformed students and academics at every level of the programme. Nevertheless, academics developed cultural competency and at the same time, students adapted relatively quickly to new pedagogies during their sojourns².

Student sojourns, foreign students and overseas students are all terms which refer to international students who leave their country of origin to undertake tertiary study abroad (Ramsay et al., 2007). Similar to international students, transnational entrants are students who undertake tertiary study abroad but transfer their courses (or credits) delivered by an overseas institution to the home institution ultimately leading to an undergraduate degree. Studies of international students showed that students expected to experience a range of emotional and physical challenges in response to the loss of unfamiliar signs and symbols (which included words, gestures, customs, and norms learned during early socialisation). These sudden changes also led to a sense of loss, fear of rejection, confusion in role definition, anxiety, and frustration. Researchers have characterized these series of changes and stresses as culture shock (Oberg, 1960, Adler, 1975), learning shock, education shock (Hoff, 1979, Yamazaki, 2005), language shock (Agar, 1996), role shock (Byrnes, 1966, Minkler and Biller, 1979) and assessment shock (Mohamad et al., 2006). Ability to identify these issues should assist academics in preparing and delivering lessons that could help students adapt to the culture of learning in TNE. The realisation of the challenges faced by transnational students might also allow academics to take the necessary actions to make the TNE transition quickly and painlessly. When students change to fit in the host culture, adaptation takes place but

² A sojourn is commonly understood as a temporary stay abroad for a specific purpose such as academic study Ward, C., Bochner, S. & Furnham, A. 2001. *The psychology of culture shock*, Hove, Routledge..

various degrees of adaptation could happen depending upon personal and situational characteristics (Gudykunst, 2005). Successful adaptation can facilitate personal growth and development (Byrnes, 1966, Adler, 1975, Anderson, 1994, Furnham, 2004).

Experiences of transnational entrants were mostly discussed in the context of cultural differences occurring in Australia. It was not until 2014 that a small scale study was carried out to explore the experience of students enrolled in UK based TNE programme (National Union of Students, 2014). Three prominent themes identified were access to resources, support from academic staff, and equity/standards of both institutions involved in the TNE programmes. However, it is relevant to note that this was a small scale research, thus a larger scale study involving more students may give more confidence to the research findings.

2.7 Student Support

2.7.1 English Language

Briguglio (2000) revealed that many international students required English language support. In his study, transnational students indicated that they need support on all four macro skills of listening, speaking, reading and writing, with the highest priority in writing and speaking. Students did not always feel confident that their speeches are easily understood by local staff and students. Remedial approaches were proposed by Lane and colleagues (2004) and Gregory and Wohlmuth (2002). These include establishing language centres, providing tailor-made courses, actively encourage students to enrol in various programmes and expand any support to target not only first-year students but all cohorts.

2.7.2 Cultural Issues

The cultural issues in relation to TNE staff and students were discussed in section 2.3 and 2.4.1. As far as cultural support is concerned, Briguglio (2000) suggested that universities needed to play an active role in supporting the student's own culture and in assisting students to learn about the local culture. This could be done by encouraging cross-cultural interaction in classroom learning, promote more mixing between overseas and local students in

university housing, having a mentor scheme between local and international students, and organising more cultural activities where such mixing could occur.

2.8 Summary of Literature Review

In summary, the challenges facing TNE are evident and far-reaching but the potential benefits are considerable. Due to its popularity, there exists a need at both national and local level for the clear identification of factors contributing to the success of the programme. In a broad sense, staff and students within a twinning programme are key stakeholders and represent a unique population in the HE system, so there is a necessity to ask questions about their experiences.

In conclusion, this chapter has explored the existing literature discussing the questions and research related to this thesis. This analysis of the literature has demonstrated that much of the previous research on TNE was initiated by Australian universities, an unsurprising observation given their status as one of the most active providers of TNE. The literature also provides evidence of the multiple ways in which the main stakeholders' voice should be considered in order to achieve a good TNE outcome. It was found that a large body of research was related to cultural phenomena as they affect teaching and learning pedagogy in TNE. While existing research has contemplated the connection between academic approaches to education and overall programme satisfaction, it also exposed the lack of research on student and staff interactions. A need therefore exists to supplement the established knowledge of TNE with a more inclusive study that is representative of those parties involved in the TU-CU collaborative programme.

Chapter 3 Methodology

This chapter describes methodology. The following section (3.1) will first explain the rationale behind the selection of the methodology, followed by detailed explanation of the development and operationalisation of the study. Ethics in relation to the study are also considered.

3.1 Research Design

Longitudinal research is well suited for investigating phenomena that change over time as it concerns the collection and analysis of data over time. It involves the repeated observations or examination of a group of users at multiple time points, with respect to one or more study variables (Plano Clark et al., 2014). Mixed methods (Tashakkori and Teddlie, 2003) design is a procedure for collecting, analysing and ‘mixing’, for example, both quantitative and qualitative data at some stage of the research process within a single study to understand a research problem more completely (Creswell, 2003). It has been used widely in many fields e.g., psychology, sociology, education and health sciences (Johnson et al., 2007).

Guided by the research question, the study aimed to address six research objectives (refer section 1.4), which involved taking multiple measures over an extended period of time. Within the longitudinal study, the rationale for mixing is that neither quantitative nor qualitative methods are sufficient by themselves to capture the whole phenomenon. When used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis (Greene et al., 1989, Denscombe, 2008, Hesse-Biber and Leavy, 2011). The benefits of triangulation, which involves converging different sources of information from quantitative and qualitative data also add rigour and credibility to the study and are powerful reasons for mixing methods (Guion, 2002, Denzin and Lincoln, 2011)

In quantitative research, the researcher relies on numerical data (Charles and Mertler, 2002). It uses mathematically based methods (in particular statistics) to help explain phenomena by collecting such data (Creswell, 1994). Among the strengths of the quantitative approach are;

data collection is relatively quick, data analysis is relatively less time consuming, research results are relatively independent of the researcher, and it is useful for studying large numbers of people (Johnson and Onwuegbuzie, 2004). However, the measurements generated by a quantitative approach tell only how often or how many people behave in a certain way and do not adequately answer the questions of “how” and “why” (Hancock, 1998).

On the other hand, qualitative research is useful in discovering the meaning that people give to events they experienced (Merriam, 1998). In relation to the current research, it provides a description of students’ and staff personal experiences of the schools. It allows in-depth exploration and can help describe complex phenomena. Nevertheless, qualitative research has its limitations due to its poor generalisability, and findings may be unique to the relatively few people included in the research study. In addition, data collection generally takes more time and data analysis is often time consuming when compared to quantitative research. Also, the results are potentially more easily influenced by the researcher’s personal biases and idiosyncrasies (Johnson and Onwuegbuzie, 2004).

Using mixed methods research the researcher aimed to collect multiple data using different strategies, approaches and methods in such a way that the resulting mixture or combination was likely to result in complementary strength (Johnson and Christensen, 2012). Careful review of the research questions and appropriate selection of approaches increase the effectiveness of the mixed methods approach. Figure 1.1 (pg. 12) outlines the quantitative and qualitative phases of the research project.

3.2 Structuring the Longitudinal Mixed Methods Research

While designing a mixed methods study, three issues need to be considered (Creswell and Plano Clark, 2011); priority, timing and integration. Priority refers to the relative importance or weighting of the quantitative and qualitative methods for answering the study’s questions. Timing relates to the phasing of data collection which can be concurrent, sequential and multiphase combination (Morse, 1991, Morgan, 1998b). Finally, researchers need to decide the appropriate point for mixing of the two strands within the mixed methods designs: mixing during interpretation, mixing during data analysis or mixing during data collection and/or

mixing at the level of design (Tashakkori and Teddlie, 1998).

This study used a multiphase mixed methods design consisting of seven time points (Figure 1.1, pg. 12). Multiphase design is a combination of concurrent and sequential strategies. In addition to the use of two or more methods to confirm, cross-validate and corroborate findings, which was the concurrent aspects, the researcher used qualitative/ quantitative results to explain/ guide the findings of the subsequent study, which was the sequential aspects. Overall, the multiphase mixed methods design was employed to answer the central questions as outlined in Chapter 1 (1.4). Specifically, a concurrent triangulation using focus groups and interviews was used to explore the initial expectations and experiences of students and staff at time point 1 in 2011. Sequentially, the results guided the construction of a questionnaire for use at the second time point with the same cohort of students (i.e. Cohort 1). The questionnaire attempts to determine their experiences from the last semester. The subsequent time points (Point 3, 5 and 6) were a series of focus groups with Cohort 1 students. The qualitative analysis highlighted the expectations of Cohort 1 students before their transfer (pre-arrival) and experiences after their transfer (post-arrival). Cohort 2 students were invited for focus groups at time point 6 so that the transferees' experiences can be better understood and documented. The fourth time point consisted of a quantitative questionnaire, examining CU and TU students' perceived learning environment (as discussed in earlier chapter, and more details in Chapter 5) with closed-ended questions. The longitudinal study concluded at time point 7 with a questionnaire to explore graduates' overall satisfaction of the collaborative twinning programme.

The longitudinal study provided the opportunity to examine the challenges faced by students and staff in the TU-CU pharmacy twinning programme. Each phase has an equal priority in answering the defined research questions. Mixing occurred during the final interpretations and discussions. Figure 1.1 shows the time points of this research applied using the longitudinal multiphase mixed methods research.

3.3 Research Methods

There are various methods of collecting data. The main instruments used in this mixed methods research were questionnaires, individual interviews and focus groups. These different ways of gathering information supplement each other and hence potentially enhance the validity and dependability of the data (Zohrabi, 2013). Quantitative data were obtained through questionnaires with closed-ended questions while qualitative data were collected through questionnaires with open-ended questions, interviews and focus groups.

3.3.1 Interviews

The purpose of interviews is to ‘reveal existing knowledge in a way that can be expressed in the form of answers and so become accessible to interpretation’ (Flick, 2006, p. 160). It is a method where the inquirer intends ‘to obtain a special kind of information’ (Merriam, 1998, p. 71) from the target participants. To this end, the researcher interviews the participants to gain a deeper understanding of what and how they perceive their study in the TU-CU programme.

Individual interviews were chosen as the most appropriate approach with staff, as group interviews (including focus groups) would not have allowed the in-depth exploration of the individuals' views. They are also particularly appropriate for exploring sensitive topics, where participants may not want to talk about such issues in a group environment (Gill et al., 2008). For example, junior staff may be hesitant to express their thoughts in a group interaction especially when they oppose the views of a more senior colleague, thus affecting the validity of the findings.

The semi-structured individual interview approach was selected as the method. It allows flexibility to provide more information than unstructured and structured interviews (Zohrabi, 2013). It consists of several key questions that help to define the areas to be explored but also allows the discovery or elaboration of information that is important to participants but may not have previously been thought of by the researcher (Gill et al., 2008). The details of interviews strategies will be discussed in Chapter 4.

3.3.2 Focus Groups

The origin of the focus group was in sociology (Freitas et al., 1998). It involves gathering small groups of people with particular characteristics for a focused discussion of a particular topic (Krueger and Casey, 2009). It is the collection of opinions of more than one person in one session within a shorter time frame compared to one-to-one in-depth interviews (The Health Communication Unit, 2002). The emphasis is the interaction between participants (Steward et al., 2007). It is the group interaction that aids respondents' recall and stimulates memories of jointly experienced events (Tracy, 2013). It produces data and insights that would be less accessible without the interaction found in groups (Morgan, 1988, p.12). For these reasons, student focus groups were employed in the current research projects.

Successful focus groups start with thorough planning. The following aspects were considered during the planning stage; the number and size of the groups, the participants, the involvement of the moderator, the focus group content, types of questions, and selection of the venue (Freitas et al., 1998).

Size of the Group

With respect to the number of participants in the focus groups, the researcher aimed to recruit four to seven per group, which is within the recommended 'ideal size' of a focus group (Dawson et al., 1993, Kitzinger, 2005, Smithson, 2008, Peek and Forhergill, 2009, Lindlof and Taylor, 2011). The number have enough participants to provide diversity of perceptions but not too many to prevent all from participating (Oppenheim, 1992, Morgan, 1998a, Prince and Davies, 2001, Krueger and Casey, 2009). In addition, at least two separate focus groups were planned at each time point to allow for the possibility of confirming or replicating findings (Remler and Van Ryzin, 2015).

The Participants

There were no inclusion and exclusion criteria for the participants as the whole population was invited. All Cohort 1 students were the target participants for the longitudinal study as

they fit the purpose of the research. Cohort 2 students were invited at a time point to add knowledge and understanding to the phenomenon under study. Segmentation according to location, age, gender and ethnicity were not put into consideration as the number of students were small (Freitas et al., 1998). Also, the population did not differ significantly so there was little reason to separate the groups according to the discriminating factors. The decisions in determining the composition of the group were based on advice provided by Morgan (1988); each participant should have something to say on the topic and feel comfortable speaking with the others. Lastly, consideration was given towards the students' availability per their academic timetable; to ensure timing of the focus groups did not clash with their workshops or lectures, students were allowed to change groups if they wanted to attend together with their friends.

The Involvement of Moderator

The purpose of a moderator (who is also the researcher herself in this research study) in a focus group is to promote interaction, probe for details when necessary and ensure that the discussion remains directed toward the topic of interest (Lewis, 2000). To avoid moderator bias, which would produce data that reflects this bias, the moderator stayed away from giving opinions and controlled her physical influences (e.g. facial expressions, body language, tone, manner of dress, and style of language). The moderator's involvement was mainly restricted to prompts, probes and progressing the discussion when a particular issue had been exhausted. The moderator also ensured no domination of the groups by one or more individuals and that everybody had an opportunity to speak at all times.

In addition, having a moderator from the same cultural background can also minimise moderator bias (Smithson, 2000). It is also important to maintain the same moderator for all groups as she/ he can ensure that the same issues are addressed in all groups. Most importantly, it also facilitates analysis.

The Focus Group Content

To ensure it covers the optimum number of relevant topics within a reasonable time of one to two hours (Freitas et al., 1998), for the current research, questions were carefully drafted based on the research intent. A focus group schedule was used to conduct the session. It is a series of questions and prompts that serve as a 'road map' and memory aid for the moderator. In a way, it is a script that looks much like a semi-structured interview guide (Centres for Disease Control and Prevention, 2008). Typically, the discussion starts with general topics followed by more specific research questions. A draft of the focus group schedule for each stage of the study was designed and reviewed by the research team. The research team consisted of the supervisory team and the researcher herself. The focus group schedule included prompts and probes to gather as much detailed information as possible. The same schedule was used for each focus group but variations may be applied in each session to allow for some flexibility (e.g. addition, exclusion or wording of particular interview questions) (Mack et al., 2005). The final focus group schedules for each study phase are listed as Appendices in the relevant chapter. Each focus group schedule consisted of a list of open-ended questions specific to each stage of this study.

Types of Questions

Questions constructed need to be simple and clear (Vaughn et al., 1996) so that the participants could immediately understand what was asked and respond with answer(s) within seconds. Krueger (2009) classifies questions into six categories; opening, introductory, transition, key, ending, and summary. The researcher attempted to construct questions using this guide and examples of questions are provided in the relevant chapters. In general, open-ended questions (e.g. 'What did you think of the programme?') were used as they can reveal what is in the interviewee's mind as opposed to what the interviewer suspects is in their minds (Krueger, 1988). The 'think back' question was used as well (e.g. "Think back to the time when you first enrolled for the course. What were your expectations?"). The 'think back' phrase helps to establish context and let participants know that the researcher wants them to be specific in their experiences (McLachlan, 2005). The time-shift cues the respondent to speak from experience, which potentially increases the reliability of the response because it

asks about specific experiences as opposed to current intentions or future possibilities.

In addition to verbal questions, activity-oriented questions (called by Krueger (1998) ‘questions that engage participants’ and by Bloor and colleagues (2001) ‘focusing exercise’) were used to promote discussion among students (Colucci, 2007). The strategy is especially useful with young people as ‘warm-up’ or as a transition question. Ranking exercises (Ritchie and Lewis, 2003) were chosen based on the topic to be explored in Phase 1 study. Students were given a list of terms, written on cards, to sort the order of importance (i.e. 1-the most important to 5-the least important). Students were also given the option to add other possible reasons that were not in the list and rank these as well. After each student ranked the items, the moderator then discussed the results with them. The exercise fosters discussion and gets students to think. The emphasis was on discussion of participants’ different point of views. To this end, focusing exercises give variety to the session, avoids boredom and provides an alternative and better way to access peoples’ views and opinions (Colucci, 2007).

Setting and Site

All focus groups took place in venues which were accessible and convenient to all participants. The venues are also far from possible disturbances and noise. This created an inviting, comfortable, relaxing and productive atmosphere, conducive to conversation (Masadeh, 2012). Also, audio recorders were used to aid the transcription of potentially complex conversations (Lindlof and Taylor, 2011). The moderator encouraged participants to speak one at a time to enhance clarity of the audio recording. Seating arrangements were taken into consideration too. Circular or U-shaped table arrangement was used as this allowed everyone to see everyone else, thus encouraging them to listen to and engage with one another (Krueger and Casey, 2009, Masadeh, 2012). In each of the sessions, refreshments were provided to participants to make them feel comfortable so that their experiences are as pleasant as possible. The refreshments were served prior to the start of the focus group to avoid disturbance during the data collection (The Health Communication Unit, 2002).

3.3.3 Questionnaires

Questionnaire utilising close-ended questions not only provide the inquirer with quantitative or numerical data, it is also more efficient because of their ease of analysis (Seliger and Shohamy, 1989). On the other hand, questionnaire utilising open-ended questions provide qualitative or text information which can lead to a greater level of discovery (Gillham, 2000). The current research employed both forms of questionnaires in an attempt to answer different research questions at different time points.

Questionnaire with Closed-ended Questions

A questionnaire with closed-ended questions was used to answer the following research question:

‘Are there equivalent standards between CU and TU learning environments?’

The current project employed a modified DREEM questionnaire to measure the learning environment in each pharmacy school (i.e. CU and TU) and to compare the learning environment as perceived by TU’s students (who studied the MPharm twinning programme) with that of CU (students who studied the 4-year MPharm programme at CU).

The DREEM scale was developed by a Delphi panel of 30 health professional educators from more than 20 countries (Roff et al., 2001) and then tested on students in several countries for validation. It is a 50-item self-report questionnaire based on a five-point Likert scale. The scores reflect the students’ overall perception of five main aspects of their environment, namely; their learning, the teachers, academic self-perception, atmosphere and social self-perception (See Appendix 3.1). The construction of the modified DREEM, the procedures involved in administering the questionnaire and interpretation of results will be discussed in Chapter 5.

Questionnaire with Open-ended Questions

Guided by ‘time point 1’ findings, a questionnaire with open-ended questions was constructed and used in ‘time point 2’ to explore students’ experiences of the previous semester (Figure 1.1, pg. 12). The use of a self-administered questionnaire was deemed to be appropriate as the researcher did not want to overburden the students. A focus group at this time would be too near the next focus group, which was planned to be carried out four months later. In addition, the follow-up survey gave participants a chance to say something they did not discuss (for whatever reason) at the time of the focus group (Ontario Women’s Health Network, 2009).

A questionnaire with open-ended questions was also used as a form of ‘exit survey’ to investigate graduates’ overall experiences and satisfaction with the collaborative programme at ‘time point 7’. The reasons to use a questionnaire as opposed to other face-to-face research methods were due to logistic challenges. At the time of research, students were on holiday thus arranging focus groups with a minimum of four students would be challenging; one-to-one interviews were not feasible as the main researcher resides in Malaysia while the students resided mainly in the UK. The decision to use a self-administered questionnaire was also partly made based on the fact that all target participants were having their break after their final exam. While waiting for their results, the students could occupy their time by participating in the survey. The researcher recognised the potential disadvantages of a questionnaire. For example it does not allow the researcher to probe more deeply into issues. To overcome this, telephone or Skype call interviews could be conducted with an individual participant if any answers needed further clarification.

3.4 Stages of the Research Process

The research process can be organised into population and sampling, data collection and analysis (refer section 3.4.2, 3.4.3 and 3.4.4). Prior to commencement of this process, ethical considerations need to be addressed as discussed in the section below.

3.4.1 Ethical Considerations

In compliance with the regulations of the Cardiff School of Pharmacy and Pharmaceutical Sciences School Research (formerly the Welsh School of Pharmacy) Ethics Committee (SREC), permission for conducting the research was obtained before the researcher performed each phase of the study. The ethics approval form was first filled, providing information about the principal investigator, the project title, project description, methods, procedures, participants, and research duration. It is important to note that the research questions and objectives in the ethics application may differ slightly from those presented in section 1.4; this is because the changes were a result of operationalisation as the research was developed and modified as part of the iterative process of qualitative research. Application form and all supporting documents (e.g. information sheet, informed consent form) were then emailed to the supervisory team. After review and correction, final documents were forwarded to the SREC by one of the supervisors. Each phase of study was carried out per the scheduled timeline after approval was granted by the SREC. The relevant paperwork relating to these applications is presented in the Appendices corresponding to each chapter.

The current research project collected and used data from questionnaires, interviews and focus groups. The major concerns of human ethics are consent, confidentiality and anonymity (Yates and McLeod, 1996). Written consent was collected from participants in focus groups and interviews before audio recording took place. However, written consent is not required for conducting the questionnaire survey (UK Data Service, 2016), completed and returned questionnaires already constituted implied consent from the participants (Taylor et al., 2006). Nevertheless, in each phase of the study, an information sheet was provided to ensure that participants have the information they need to make an informed decision whether or not to participate in the research.

Written informed consent was obtained for individual interviews and focus groups. The ICH (International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use) Guideline for Good Clinical Practice (European Medicines Agency, 2002) defines informed consent as a process by which an individual voluntarily confirms his/her willingness to participate in a trial after having been informed about all aspects of the trial

relevant to the subject's decision to participate. This process is continuously applied, beginning before consent forms are signed until the subject is no longer involved in the study. Informed consent requires that participants have a genuine understanding of the research. This involves full disclosure of information about the research to the subjects such as research procedures, risks and benefits, rights of the participants, and the voluntary nature of participation. The informed consent form was accompanied by an information sheet, which allows the participants to understand exactly what is involved in the study, what they have to do, and provides protection from liability.

Specifically, the information sheet contains a brief summary of the research. It clearly outlined to the participants the aims of the research, why their participation is necessary, how long is the participation, the process in which they are to be engaged and how anonymity and confidentiality of the data would be maintained. In addition, participants were made aware that they could choose not to answer any questions they were uncomfortable with and could withdraw from the study at any time without any repercussions (e.g. students' academic performances would not be affected if they did not take part). The anonymity of questionnaires would be protected by numerically coding each returned questionnaire and keeping the responses confidential. While anonymity was not possible during one-to-one interviews with staff or focus groups with students, participants were assured that data was treated with confidentiality by removing names and other identifiable information. All collected data and audio files were kept in a password-protected computer. Consent forms were kept in a locked cabinet in researcher's office.

3.4.2 Research Population and Sampling

According to Polit and Hungler (1999, p.37), the population used in the research can be defined as 'an aggregate or totality of all the objects, subjects or members that conform to a set of specifications'. It is a complete group of entities that share some common set of characteristics (Weiman and Kruger, 2001). The target population for this research project was the key stakeholders of the MPharm twinning programme, namely students and staff involved in the pharmacy programme.

Sampling is a technique employed to select a ‘small group or portion from the population’ (Brynard and Hanekom, 2006, p. 54). It is also important to note that an adequate sample size is guided by the concept of saturation (i.e. when additional participants do not provide any additional insights) and Guest and colleagues (2006) proposed that saturation often occurs around 12 participants. Due to small number of students in Cohort 1 and Cohort 2, all students were invited (i.e. the entire population). The staff participants for this research project were selected through purposive sampling. According to Bernard (2002), purposive sampling (also called judgement sampling) requires selecting participants who are knowledgeable about the topic in discussion, and be able and willing to share their knowledge. A summary of participants and sampling method is presented in Table 3.1. Details of the selection process will be presented in the relevant chapters.

Table 3.1 Summary of participants in the research project

Chapter	Time point	Research design	Sampled participants
4	1 and 2	Focus groups, follow-up feedback questionnaire & interviews	<ul style="list-style-type: none"> • All Cohort 1 students • Purposive sample of CU and TU staff
5	4	DREEM Questionnaire	<ul style="list-style-type: none"> • All TU Cohort 1 and Cohort 2 students • All CU students with matching year group
6	3,5 and 6	Focus groups	<ul style="list-style-type: none"> • All Cohort 1 and Cohort 2 students
7	7	Exit survey	<ul style="list-style-type: none"> • All Cohort 1 students

3.4.3 Data Collection

This study, including data collection and analysis, was carried out over a 36-month period commencing in July 2011. Figure 1.1 (pg.13) illustrates the time points involved in data collection. Qualitative research was carried out after students and staff agreed on suitable dates and times. The questionnaire was administered to students from the twinning programme and CU students at a selected time point. Detailed procedures of data collection will be discussed in relevant chapters.

3.4.4 Data Analysis

Quantitative data was analysed using Statistical Package for Social Sciences (SPSS) software; the details will be discussed in Chapter 6. The strategies used for qualitative analysis were basic thematic strategies (Braun and Clarke, 2006) with illustrative quotes in the reports.

Qualitative data analysis and collection occurred temporally. A digital audio recorder was used to capture the data in the focus groups and interviews. Once each focus group and individual interview was completed, the researcher transcribed the discussion '*ad verbatim*' from the audio recorder as soon as possible (Halcomb and Davidson, 2006). Anonymity of the participants was assured by removing all identifying details such as name, workplace and profession, and replacing them with codes (Corti et al., 2000). For quality assurance, the researcher then listened to the recording once more to ensure no typographical errors and to allow correction of missed or incorrect words. Similarly, compiled data from the follow-up survey was read and re-read to ensure accuracy of data. Data analysis using the six-step process of inductive thematic analysis as outlined by Braun and Clark (2006) (see Table 3.2) was utilised.

Using an inductive approach meant that the themes were identified by establishing strong links to the data. The themes would not be driven by the researcher's theoretical interest in the area or topic, rather they were data-driven (Patton, 1990). Inductive thematic analysis is a recursive process where the researcher moves back and forth as required to identify, analyse and report patterns (or 'themes') within the data. After verification of the accuracy of the transcripts, open coding was performed line-by-line for each transcript. It is a process whereby the researcher identified segments from the text that contained meaningful units and created a 'label' or 'code' for them. After open coding of three to four transcripts, the researcher would outline a few preliminary codes. She then coded the remaining transcripts using these codes and added new codes when she encountered data that did not fit into any existing code. All codes were inputted into a MS Excel document with its illustrative quote. Once all transcripts had been coded, the researcher reviewed all data within a same code to ensure consistency. Codes that shared specific commonalities were then grouped into the same theme. Various themes were then generated and reviewed for consistency across the

entire data set by the research team to increase their reliability. The relationships between themes were also considered so that the flow of the story could be identified and developed. Similarly, compiled data from the follow-up survey was analysed using the same approach.

Table 3.2 Phases of thematic analysis

Phase	Description of the process
1. Familiarising yourself with the data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts and the entire data set, generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Adapted from (Braun and Clarke, 2006)

3.5 Clarifying Researcher's Bias - Reflexivity

Qualitative results can vary in interpretation because the researcher is trying to socially construct the reality of the research participants using their own perceptions (Salazar et al., 2015). This might lead to the development of different, although equally valid, understandings of a particular situation with the same set of data. It is impossible to eliminate all bias in qualitative research as a researcher's background and position will affect what he/she chooses to investigate, the angle of investigation, the methods most adequate for the purpose of research, the most appropriate findings, and the framing and communication of conclusions (Malterud, 2001).

Malterud (2001, p. 484) argued that ‘preconceptions are not the same as bias, unless the researcher fails to mention them’. The important thing is researchers acknowledge that their preconceptions and perspective may introduce bias and affect the results. A study is valid only if the researcher’s standpoint is fully incorporated and becomes transparent throughout the study. Therefore, researchers self-awareness within the reflexive process is paramount (Flick, 2006).

Adopting a reflexive approach means evaluating research procedures and practices critically from one or more perspectives to minimise bias (Jones, 2011). It is an attitude of attending systematically to the context of knowledge construction especially the effect of the researcher, at every step of the research process (Cohen and Crabtree, 2006). It is perceived as an integral process where qualitative researchers can validate their research practices (Cutcliffe and McKenna, 2002, Pillow, 2003, Kingdon, 2005). In qualitative research, the researcher reflects continuously on how their own actions, values and perceptions impact the research setting, data collection and analysis (Gerrish and Lacey, 2006). It is one strategy researcher used to ensure that the research is credible and accurate (Cutcliffe, 2000).

A possible strategy to minimise moderator bias is to ensure that the moderator shares a similar background with the participants as this could facilitate discussions by putting participants at ease (Smithson, 2000). However, it is important to note that the researcher was very involved with the participants due to her role as a lecturer at TU. Thus, she had to consider her thoughts, feelings and responses, and any potential bearing these may have on the resulting data. This was the case during the interviews and focus groups where she was careful to remain as neutral as possible in her questions, responses and body language.

In addition, the researcher recognises herself as a former transfer student (albeit with a different institution), thus every effort was made such that her past experiences were not shared with her research subjects. Cultural bias, which involved the researcher’s view on the respondents’ behaviour from her own cultural point of view, would be minimal as the researcher is familiar with both the Western and Eastern cultures due to her family and education background. The researcher also acknowledged her current working relationships with her colleagues, therefore these relationships were not disclosed to the students so that

they can be candid and honest during the focus groups.

Likewise, during the process of analysis, the researcher reminded herself to be careful not to selectively identify themes which fitted with her own preconceptions. Instead, all attempts were used to work inductively so that the data can speak for themselves (Coffey and Atkinson, 1996, Marks and Yardley, 2004). This then allows the participants' voices and views to spontaneously emerge.

3.6 Summary

This chapter has provided an introduction to the research strategy, the process of obtaining Ethics Committee approval to proceed and the methods employed in different phases of the research. The next chapter will describe the first stage of the research involving students and staff. Specifically, the discussion will focus on the use of semi-structured individual interviews, focus groups and questionnaire with open-ended questions for data collection.

Chapter 4 Staff and Students' Initial Views, Expectations and Experiences of a Collaborative Pharmacy Programme

4.1 Introduction

As described in Chapter 2, students' expectations and their experience during their first year have a tangible influence on their engagement and success (Crisp et al., 2009). The more congruence or "fit" between a student's expectations and the experiences offered by the institution, the more likely the student will persist in his or her studies. Additionally, there is a lack of research beyond the context of academia in Australian offshore programmes. Staff expectations of the transnational programme are also an under-explored topic. This phase of the study (Phase I), as the first part of the longitudinal study, provide an avenue for first year pharmacy students and staff to articulate their views, expectations and experiences of TU-CU's new pharmacy twinning programme. It is hoped that the research results would provide a deeper understanding of the relationship between the expectations of students entering university, the experiences of first year students, and the staff expectations and experiences in a new pharmacy school.

4.2 Aims and Objectives

Phase 1 study aimed to examine staff and students' expectations and experiences. It will focus to address the following research objectives (see section 1.4):

- (1) to explore the reasons for students choosing TU and the 2+2 MPharm pharmacy course in this study;
- (2) to explore the expectations of staff and students of a new collaborative pharmacy programme; and
- (3) to explore the experiences of staff and students of a new collaborative pharmacy programme.

4.3 Ethical Considerations

As outlined in Chapter 3, ethics approval was required because it involved human participants (Morgans and Allen, 2005). Ethics approval for this phase of the study was sought and granted by the SREC (see Appendix 4.1). An information sheet and a consent form were part of the application for ethics approval. Signed and dated consent forms were collected prior to the research. Adequate time was given for participants to review the consent form and understand all pertinent information. Participants were also reminded that participation is voluntary; they could withdraw from the study at any time.

4.4 Study Population and Sampling

4.4.1 Staff

At time of research, there were 6 academic staff, 3 laboratory staff and 3 administrative staff working at TU. On the other hand, there were around 37 academic staff (three of these work less than 50% of a full time equivalent) and nine teacher-practitioners who contribute to the MPharm programme at CU. It was neither practical nor necessary to obtain the views of every academic staff member at both schools. Furthermore, not all staff members were involved in the collaborative programme. The participants were, therefore, a purposive sample. The researcher selected individuals with a broad range of interests and knowledge of both the topic and the population (Babbie, 2007).

In selecting TU staff for this research, it is important to note that all TU staff with direct involvement in the collaborative programme totalled only 12. These included the six academic staff (i.e. staff teaching Year 1 modules), three laboratory staff (i.e. staff involved in practical classes) and three administrative staff (i.e. staff who deals with administrative work related to these 2+2 MPharm students). Inclusion of the six non-academic staff would enrich the results obtained as they had a lot of day to day involvement with the students. Secondly, all visiting academic staff from CU were selected (as they were the staff who gave lectures, ran practical/workshops for the TU students at TU). Thirdly, CU staff who were leaders of Year 1 or Year 2 modules were selected because as module leaders, they were the

contact points at CU, even if they did not visit Malaysia. They were responsible for the transfer of teaching materials and thus would be more exposed to the collaborative programme.

4.4.2 Students

The study population comprised of first year pharmacy students in the 2+2 MPharm programme for the 2011-12 academic year at TU. The target population was 26 students (see Appendix 1.1) for the focus groups at time point 1. The number of students had reduced to 24 at time point 2 as another two students withdrew from the programme as a result of poor academic performance.

4.5 Data Collection and Subject Recruitment

Individual semi-structured interviews were undertaken with the staff at this stage while focus groups and questionnaires with open-ended questions were used for students per the methodology described in Chapter 3.

4.5.1 Staff Interviews

In order to recruit staff, an email invitation (Appendix 4.2) along with an information sheet (Appendix 4.3) and consent form (Appendix 4.4) were sent to eligible participants two weeks before the proposed interview dates. The participants were asked to reply to the email to indicate their availability for the interviews. A suitable date and time was then arranged between the participant and researcher. Participants were reminded to submit their consent forms prior to the start of the interviews. A few printouts of the consent forms were made available on the day of the interview in case participants forgot to bring their original copy.

All staff at TU (n=12), including six academic staff, three laboratory staff and three administrative staff who had substantial involvement in the collaboration, were invited. A semi-structured interview guide (or 'interview schedule') was developed to assist data collection. A draft interview schedule (Appendix 4.5) was first designed by the author and

reviewed by the supervisory team. The final schedule (Appendix 4.6) consisted of a list of specific open-ended questions related to the research questions as listed in section 4.2.

The interview schedule was developed to allow flexibility within the discussions and to make sure each interview covered the topics as much as possible. The order in which topics were presented during the course of the interview may vary. In other words, the interviewer does not read from a standardised script but follows the flow of the interviewee within the scope of discussion in each individual interview (Rubin and Rubin, 1995, Silverman, 2010).

4.5.2 Student Focus Groups

To recruit students for the focus group, an information sheet (Appendix 4.7) was developed and provided to target participants during their hour long class break. A copy of the consent form (Appendix 4.8) was also given. The information sheet described how confidentiality would be maintained and all personal information will stay anonymous for the final report. In addition, a reply slip was attached at the bottom of the information sheet where participants can state to participate or opt out. The potential participants were given one week to consider all the information to ensure no coercion. They then returned the completed reply slip and consent form or bring them along on the day of the focus group. The researcher's contact details were supplied in case further information was needed.

Face-to-face invitations were used instead of email invitations because some of the students might not be familiar with the focus group procedure, supplemented with written information. A brief introduction of the purpose and process of the focus group could help students better understand what was expected from them. The presence of the researcher during recruitment also allowed students to ask questions or clarify any doubts.

The individuals who agreed to take part were randomly assigned into groups. The researcher then contacted the students to arrange a convenient time to hold the focus group. An email was sent the day before the group meeting to confirm attendance and remind participants of the venue and time. Participants were reminded to submit their consent forms at the start of the focus group. Printouts of the consent forms were made available during the focus group

in case students forgot to bring a copy with them.

To assist in data collection, a focus group schedule was used to lead the discussion (Morgan, 1998a). It was a script similar to a semi-structured interview guide that contains open-ended questions. The discussion started with the general topics after which the focus was towards more specific questions. A draft of the focus group schedule (Appendix 4.9) was designed and reviewed by the research team. The final focus group schedule (Appendix 4.10) consisted of a list of specific open-ended questions related to the research questions listed in section 4.2.

Focusing exercises were also used to promote discussion within the focus group (Bloor et al., 2001). Ranking exercises (Ritchie and Lewis, 2003) were chosen based on the topic of exploration. Students were given a list of terms, written on cards, to sort the order of importance (e.g. 1-most important to 5-the least important). Students were also given the option to add other possible reasons that were not in the list and rank these as well. Content was developed from papers determining factors that influenced students' choice of pharmacy programme (Jesson et al., 2009, Keshishian, 2010). The two ranking exercises (see Table 4.1 below) also served as an ice-breaker to build rapport. Furthermore, they enabled participants to feel more at ease as they interacted with each other while trying to complete the task.

Table 4.1 Details of printed cards in focusing exercise

Instructions: Using the reason cards, please select all applicable and rank your top five reasons of choosing pharmacy course?	
1. A specialty that is close to medicine 2. Family/ friends in the profession 3. I like pharmacy 4. Interest in science 5. Job opportunities 6. Income 7. Job satisfaction	8. Teacher's advice 9. Most suitable for girls 10. Job guarantee 11. Status of profession 12. Contribution to healthcare team 13. Others
Instructions: Using the reason cards, please choose all applicable and rank your top three reasons of selecting TU pharmacy programme?	
1. Appeal of the campus 2. Twinning programme with Cardiff University 3. Experience of Taylor's 4. Recommendation from family/ friends	5. Family/ friends applying in the same university 6. Affordable tuition fees 7. Good reputation 8. Others

4.5.3 Student Follow-up Survey

Five focus groups were conducted between July 2011 – August 2011. A follow-up survey (Appendix 4.11) was distributed one semester (September 2011 – December 2011) later, in early February 2012. The follow-up survey contained open-ended questions designed by the researcher and reviewed by the supervisory team prior. The design of the questions was based on the issues raised during the focus groups. Students were invited to write down their comments and concerns pertaining to their experiences with the MPharm programme for the past three months. An additional column was provided for students to give feedback on any other points that were not featured in the focus groups. In addition, the follow-up survey gave participants a chance to say something that was not discussed during their focus group (Ontario Women's Health Network, 2009).

The target participants for the follow-up survey were the same group of 2+2 MPharm students (that is, Cohort 1). The survey was distributed during class break to all eligible students by the researcher. Potential participants were given one week to complete the form. Participation was voluntary. Students were asked to place their completed forms in a collection box which was made available outside the researcher's office for a week to allow for anonymous submission. A week later, a reminder email (Appendix 4.12) was sent to remind students about the submission. The follow-up survey was re-sent together with the reminder email. The collection box was made available outside the researcher's office for a further week to allow for anonymous submission.

4.5.4 Location and Room Set Up for Interviews and Focus Groups

TU has an open-plan office space for most academic staff; only those with managerial posts have their own private enclosed office. Hence, some of the staff were interviewed in their private rooms while others in the pre-booked dispensary's counselling rooms. 'Do not disturb' notices were placed outside the rooms to inform students and staff that interviews were in progress. If the participants resided in Cardiff, the researcher checked their TU visiting schedules. Interviews were carried out in the dispensary's counselling room or visiting lecturer's private room during their visits. At a later stage, the researcher travelled to CU and

met some of the interviewees. A private and quiet room for the interviews was pre-booked by a staff member in Cardiff prior to the researcher's visit. During the interview and with consent, an audio recorder was placed in the middle of the table to capture the conversation.

All student focus groups were conducted at TU in a pre-booked classroom that was free from interruptions and distractions. During the focus group, the participants sat around tables placed in a circular or U-shaped form so that they could see each other to promote interaction (Krueger and Casey, 2009, Masadeh, 2012). With all the students' consent, an audio recording device was placed fully visible in the middle of the table to capture their comments. Refreshments in the form of snacks and drinks were provided to make the participants feel comfortable so that their experience are as pleasant as possible. Students were encouraged to have their refreshments prior to the start of the focus group to avoid excessive noise and disturbances.

4.6 Data Analysis

As described in Chapter 3 (Section 3.4.4), data analysis of the qualitative data was carried out using inductive thematic analysis (Braun and Clarke, 2006). This applies to data derived from interviews, focus groups and follow-up surveys. Themes were combined for both students' focus groups and follow-up surveys but interview data was analysed separately. The mixing of all data only occurred during the interpretation and discussion of results.

Prior to data analysis, complete transcripts of each interview and focus group were prepared. In addition, data from follow-up surveys was compiled for each question so that it can be analysed. A data-driven inductive approach (Boyatzis, 1998) was used to avoid any pre-determined ideas while the researcher keep an open mind when going through the data (Braun and Clarke, 2006). Also, the researcher were being mindful of her preconceived notions and biases. For instance, the researcher believed e.g. the questions she asked, as it might have impact on the resulting data (Riley et al., 2012). This process of reflexivity was an integral part of the qualitative approach.

Following verification of the accuracy of the transcript, open coding was performed line by line for each transcripts. Words, phrases, and/ or sections of text that represented a fundamental unit of meaning were assigned to codes within each transcript. The coding was reviewed across transcripts to ensure that the same codes had been applied consistently. Codes that share specific commonalities were grouped into the same theme. Various themes were then generated and reviewed for consistency across the entire data set by the research team to increase their reliability. The relationship between themes was also considered so that the flow of the story could be identified and developed.

4.7 Research findings

4.7.1 Response and Demographics

Appendix 4.13 and 4.14 outline the anonymous details of staff and students who took part in the research. To protect the participants' identities, each staff was assigned an alphanumeric code (e.g. F1) which comprised a letter (F for TU and G for CU staff) and a number (based on the order they were interviewed). Similarly, the students' code comprised a letter (C) and a number according to the order in which the focus groups were conducted.

Staff

A total of twenty-two staff (100% of those invited) accepted the invitation. Interviewees from CU (n=10) included staff from all four main disciplines within the school (pharmacology, clinical/pharmacy practice, pharmaceutical sciences, and medicinal chemistry). Seven interviewees were module leaders while three were staff who made a contribution to the teaching of Year 1 and Year 2 modules of the 2+2 MPharm programme. Each interview lasted 33 to 44 minutes. At TU, 50% of the staff interviewed were academic staff (n=6); the rest were laboratory (n=3) and administrative personnel (n=3). Due to the small size of the schools, the level of details associated with the characteristics of the individual interviewees were presented in a limited way in order to preserve their anonymity.

Students

Participants were all first year pharmacy students at TU. Twenty-six students were invited to participate while twenty students (77%) were recruited for the focus group. All students were Chinese in their 20s. Most of the participants (65%, n=13) held South Australia Matriculation (SAM) as their primary entry qualification. A total of five focus groups (each comprising four students) were conducted. Each focus group lasted 50 to 90 minutes in length. For the follow-up survey, twenty-four students were invited to participate while twenty students (n=20) returned their questionnaire within one week after the last reminder was emailed (83% response rate).

4.7.2 Themes Identified From Students' Focus Groups and Follow-up Surveys

This study sought to investigate the initial views, expectations, and experiences of students who participated in the learning activities at TU. The data collected from the participants are largely exploratory in nature. Findings reported here combined data from the focus groups and follow-up surveys. Seven broad themes were identified, which are presented in Table 4.2 with illustrative quotes.

Table 4.2 Themes and illustrative quotes of student focus groups

No	Themes	Illustrative Quotes
1	Reasons for choosing pharmacy programme	<i>C6: When patient come back and praise you back...you feel like very happy.</i>
2	Reasons for choosing Taylor's University	<i>C12: My experience is very good and then the lecturers like they are knowledgeable and then they...they are approachable also...so, choose Taylor's as my first choice.</i>
3	Issue with timetable	<i>C8*: Very relax at beginning but very very pack at the end of the semester. Why don't just make it average at the first place. Every week different timetable which is very annoying. This semester gap too big! Every day class last until 5pm which is very tiring.</i>
4	Teaching and learning in Taylor's University	<i>C14: They (lecturers at TU) read from lecture from other...it feels like they don't even know what they are talking sometimes.</i>
5	Facilities	<i>C15: The copies of the books are limited also... I mean the copies...so sometimes like, I borrowed a book, then I have the chance to read, but then when I wanted to go</i>

		<i>and renew, then someone request for it...so I cannot finish my book, then I have to return it and then wait for another person borrow then I go and request again.</i>
6	Advantages and disadvantages of the MPharm programme	<i>C14: I think doing the MPharm would be your knowledge is wider as in you learn more things because you go out there, and you, I mean you experience a lot of stuff, compared to you just doing here...I mean you just do your own countries stuff.</i> <i>C17: It is harder to find a job in the UK with a degree from twinning programme (as compared to a 4-year undergraduate MPharm degree obtained in the UK).</i>

* Responses from follow-up survey

Theme 1: Reasons for Choosing a Pharmacy Programme

Fifty percent of participants (n=10) chose pharmacy as their first choice undergraduate programme. The other ten students chose other subjects as their first choice namely accounting, biomedical, dentistry, dietetics, food science, mass communication, medicines, nursing, pharmaceutical sciences, and psychology. They ended up in pharmacy for the following three reasons: (1) results did not achieve the minimum requirement for the desired course, (2) change of mind after careful consideration, (3) influence of parents. These reasons were discovered using focusing exercise.

The focusing exercise (i.e. ranking exercise) comprised of thirteen cards. Details of the printed cards are presented in Table 4.1. Most students chose “job satisfaction” as their first reason. Students felt that job satisfaction will come from their professional duty of counselling, being able to offer help to others and recognition from patients. They felt that it is very rewarding when a patient returns and shows appreciation for what a pharmacist has offered:

C6: When patient come back and praise you back...you feel like very happy.

“Job Guarantee” ranked as the second reason. Students comprehend that under the compulsory service posting system in Malaysia before 2012, a qualified pharmacist graduate will be offered a one year provisionally registered pharmacist (PRP) contract position

followed by a three year fully registered pharmacist (FRP) contract position by the Ministry of Health Malaysia. It was perceived that pharmacy is a profession where people rarely get fired and they can obtain jobs easily, either to work for others or open their own pharmacy. “Income” was ranked as the third reason. More than half of the students expected a high monthly salary for a newly-qualified pharmacist. A few stated that they expected their monthly salary to range between RM3000-6000 (GBP600-1200). “Status of profession” ranked as the fourth reason for choosing the pharmacy programme. Most students believed that, as pharmacists, they could gain respect from society. “Interest in science” was number five in the ranking exercise. Students felt that studying pharmacy may be a ‘good fit’ because they are interested in chemistry and biology.

While the above are the top five reasons why students chose pharmacy, some students chose it for other reasons such as “a specialty that is close to medicine”, “contribution to healthcare team”, “family/friends in the profession”, “I like pharmacy”, “job opportunity” and “most suitable for girls”.

A few students felt that a pharmacy course is similar to a medicine programme. Therefore, instead of taking medicine, which is tougher and takes a longer time to accomplish, they chose to study pharmacy (i.e. 5 years as compared to 4-year pharmacy course). Parental wishes for them to study medicine also contributed to the reason for picking a pharmacy course. It is evident that some students had chosen pharmacy because of the influence of their parents or relatives:

C6: I think is my aunt...my auntie I guess...cause I still remember she...pharmacy is not her first choice, and she failed chemistry in form 4 and then when she entered pharmacy she did quite well, she got first honour, at first class honour and then she manage to skip masters straight away go to PhD and now she is in Australia got the most top youngest pharmacist or what...so I think I should follow her footstep.

The wide range of career opportunities also attracted some students to study pharmacy. Although only some students stated it as a factor affecting their choice of pharmacy programme, most students agreed that pharmacist’s work is not limited to retail or hospital

pharmacy but can be expanded to other fields like business marketing, industry, research and education. It is also believed that one who holds a professional qualification has higher chances to work overseas. Last but not least, pharmacy is a job that was felt to be suitable for girls; students described that working as a pharmacist offers flexibility in working hours, so a working mother would have a good work-life balance.

Theme 2: Reasons for Choosing Taylor's University

Most students chose to study at Taylor's University because of the twinning arrangement between Taylor's and Cardiff University. This twinning arrangement attracted students due to the fact that students can go overseas in the later years of their study. In addition, compared to a twinning programme offered in other universities, this arrangement does not require students to make a decision to transfer right at the beginning of the course, rather they have flexibility to decide later in their second year of study.

The second most common reason to study at Taylor's University was because students had studied at Taylor's in the previous year for their pre-university programme. They spoke about the 'experience at Taylor's' being good and attributed this to the facilities, management and the lecturers:

C12: My experience is very good and then the lecturers like they are knowledgeable and then they...they are approachable also....so, choose Taylor's as my first choice.

Many students agreed that Taylor's University is a reputable institution. They thought that Taylor's is famous as an award-winning institution with good academic results. In addition, its long history in Malaysia attracted them to study at Taylor's:

C17: What I did notice was that Taylor's is actually one of the oldest private universities for 40 years. So, come to think about it...if there has been standing here for quite a long time then, obviously, the management will be more structured compared to other private universities.

Other reasons for choosing Taylor's University included affordable tuition fees and the appeal of the campus. Participants thought that Taylor's tuition fees were affordable compared to other universities that offered twinning programmes. In addition, Taylor's offered discounts for their returning students which can be quite a significant reduction:

C13: Ya, to compare with other universities, I think it's consider very good, because we are like the first year, we get to use all the new things, and the new facilities, and we are actually paying like probably like 70% of the tuition fees from other university. Like my friend in IMU (International Medical University), she actually paying like, I think RM25,000 (GBP4,900) for a semester, but we only pay like 16 (RM16,000, approximately GBP3,100), so it's consider cheaper and for Monash (University of Monash) [the tuition fees] also is quite expensive.

Campus facilities are an attraction to students. Many students liked the variety of food available on campus, the relaxing lakeside environment and the modern buildings:

C7: I like the environment is like the view is very open...you get a very open feeling...may be when they designing...I feel very modern very hip. You feel very...two in one...very modern...second is that you get the nature view around the campus, in that's may be very welcoming for you to study that.

Friends and family applying at the same university was also one of the reasons students chose to study at TU. They liked the fact that they could socialise with their old friends from primary school and college.

Theme 3: Issues with Timetabling

University workloads were a surprise to the majority of students. Most students found that they had a high workload in terms of lecture hours and assessments in the first semester. Students raised concerns about the short semester break, however it should be noted that this was the case only for Cohort 1 students. An ordinary academic year lasts 12 months (e.g. September 2010 – September 2011), but TU Cohort 1 students had a seven-month time

schedule for Year 1 (i.e. Jan 2011 – July 2011). Each semester lasted eleven weeks, which is the same time given for CU students but semester break and holidays were shortened, and the second semester started immediately after the students completed semester one. Due to the short semester break and the pressure of exams at the end of Semester 2, the majority of students felt that they should be given more time to prepare for their exams.

The organisation of the timetable failed to meet students' expectations. Students expected to have the flexibility to choose the schedule for their classes and to have a constant timetable but they had a changing timetable every week. The issue of workload and teaching timetable experienced by these Year 1 Semester 2 students continued when they proceeded to Year 2 Semester 1. In the follow-up survey during their Year 2 Semester 2, written feedback from most students were negative on timetabling. The comments were related to the timetable they had in the previous semester (i.e. Year 2, Semester 1). The prominent issues raised were unevenly distributed classes throughout the week, last minute changes of the timetable and late classes that lasted until 5pm:

C1: very very very bad! The first few weeks of schedule was so free and the last few week towards the first exam was packed with assessment, assignment and class. Everything was done so last-minute. The schedule is unevenly distributed.*

C8: Very relax at beginning but very very pack at the end of the semester. Why don't just make it average at the first place. Every week different timetable which is very annoying. This semester gap too big! Every day class last until 5pm which is very tiring.*

C7: The way the timetable was arranged in semester 3 was really bad. The busy slots during the last few weeks could have been evenly distributed to the beginning of the week rather than having the whole lectures being moved to complete the syllabus.*

C11: It would be better if the timetable is really fixed (no last-minute changing) as outstation students will not have any problems in booking flights.*

Theme 4: Teaching and Learning at TU

A few students expected the course content to be tough; however, some students did not expect the course content to be so difficult in the first year of their study. They expected to have more tutorials, more time for question and answer sessions, discussions, and interactive learning activities; however, this was not the case in class. Students described their classmates as quiet and there were not many interactions among students or between students and lecturers. A few students further explained that classroom experiences were not as great as what they had experienced during their pre-university classes at Taylor's College, where students were engaged and there were discussions among students and lecturers in the classes:

C13: It was cause previously when I did my pre-u (pre-university), my class was a very interactive class, and we learned a lot from interactions, like asking questions and stuff, but like the class setting now is like is very quiet and like I am not used to it la...like people rarely, I mean my peers rarely ask question, and so it's like I learn more from people asking questions and stuff like that, ya, this is like, too much of like a one way like lecturer jus teach...teach...teach and then you just sit there and absorb.

In addition, practical classes could be rather confusing when information given by lectures and laboratory assistants was conflicting and this failed to meet their expectations. In general, students felt the need to be briefed, as they felt quite lost when they were not informed about the procedure before the start of the laboratory work:

C9: I mean...I guess our expectation for...for practical at least for me...was based a lot on how I went through it in SAM (South Australia Matriculation). When doing practical is like always before that, the lecturer will explain to us what they expect us to do and then...sometimes we are demonstrated to this and then happened this and then but then we come to this one, it is like...everything in the book, you just read and then you do...and then whenever we look at the book and it's like really...huh? Then when we ask the lecturer or ask the lab assistant, one will give us another answer and then another answer...so...very confusing.

C13: I personally feel that, for one of our pharmacology experiment, the one with F3, I felt like F3 and F4 didn't have mutual understanding before they came for the lab, because when we ask F4, he is like... go ask F3 and when we asked F3, F3 told us how to do it, and then after that when F4 see it, and then he is like no no no...you are not supposed to do it this way, so in a way that I think that they, they two do not come to a mutual understanding on what we are supposed to do.

In contrast, most students appreciated the arranged placement as they could see the real practice of a pharmacist. Also, a few students mentioned that they particularly enjoyed classes conducted by guest lecturers from the School of Medicines and School of Bioscience at Taylor's University. In terms of expectations of lecturers, it was found that students had a pre-determined picture of the academic staff; they expected TU staff to have the following qualities: (1) Experienced, (2) Helpful, (3) Well prepared for lecture and practical workshops, (4) Be able to explain the content delivered, (5) Provide briefing before practical workshop start, (5) Be clear in communication.

When elaborating on their experiences, many students commented that strong accents of some staff made the learning and communication difficult in class. This is because students could not understand what the lecturers were saying in the classroom. One student stated that the lecturer would get angry because they could not answer what he was asking:

C15: I think accent problem to me during lecturer, sometime is a bit difficult to catch what they want, what they are trying to tell us because of the accent, and the pronunciation.

C13: from F4, I mean although it's better now, but sometimes I find that like doing tutorial classes, when you try to approach him to ask him question, he do not understand what you are trying to ask, so he answer you another thing, but then you ask again, then he will get angry...so, it's quite hard to like tell him...because I am trying my best to tell him, and I think that he is trying very hard to understand my question, but he just don't get the question that I am trying to address to him.

Another student added that a lecturer knocked her on the head when she could not comprehend what was told during a practical session. A few students commented on the unprepared TU lecturers as compared to CU lecturers. For instance, one lecturer appeared constantly doubtful in class causing the delivery of the lecture to be rather confusing. Also, some participants expected to have visiting lecturers from CU as this was what they were told during Taylor's marketing activities:

C15: Sometimes I feel that the lecturers are not prepared, may be when they come in [to class], they don't really prepared themselves for what they are teaching, not like Cardiff lecturers, they really prepared well, and then they can explain everything without looking at the slides but for our lecturers...I think they most likely like reading the slides more than explaining to us.

C5: he...when he explain that time right, he doubt himself also, look at the whiteboard like for few second...think...ok like that then explain again...then keep flipping the PowerPoint slide to the front and back...keep repeating the same thing...make me very confused.

From the classroom experiences, some students felt that the learning was not effective when the lecturers just read from the lecture notes without explaining:

C14: They read from lecture from other...it feels like they don't even know what they are talking sometimes.

They later found out that the lecture notes were not prepared by the TU staff who delivered it but rather, it was the CU staff who developed all the teaching materials. Students stated that they did expect the lecturer to create their own lecture notes. Also, lecture notes should be provided before the class. However, students mentioned that not all lecturers would upload lecture notes to Blackboard (the TU virtual learning environment) before the class. In the follow-up survey, majority of the students commented that some lecturers did not upload the lecture notes before the lecture. In addition, they commented that there should be a better organisation of lecture notes in Blackboard.

In the follow-up survey, some prominent issues related to TU lecturers persisted. Students commented that some lecturers still read from slides, did not prepare for class and had strong accents. Time management was a new issue: a few lecturers exceeded the scheduled lecture time and this caused the students to have no break time and further delayed the subsequent lecture. In addition, extra classes needed to be scheduled on some occasions. However, quite a number of students noticed there were improvements in the majority of lecturers. They remarked that lecturers put in effort to explain the lecture content, gave explanation and examples so that they could easily understand the content. In addition, TU lecturers were helpful, friendly, responsible, and replied to emails promptly. There were also a few students who described two particular lecturers who were too long-winded, spoke too fast, did not prepare for classes, and always read from slides. Overall, the majority of students indicated that the academic staff were good and efficient but there were a few lecturers whom they felt made no effort in teaching. They appreciated lecturers who put in the effort and made improvements in their teaching:

C8: Some of the lecturers let me felt that they didn't prepare the lecture slides that came into the class and delivered the lectures. I have observed this quite a few times because he/ she was reading the slides and then thought for few minutes then only explained. Sometimes even explained till I also confused about it. But most of the lecturers are good because they prepared the lectures and even put in their own experiences as an example for us which made us easily to understand. Lecturers are friendly and easy to approach so when we have problems, we can seek help from them.*

Theme 5: Taylor's Facilities

Students reported that, very often, they would access the internet as a means of acquiring information to support studying. This is why they claimed that Wi-Fi service on campus was necessary. Students criticised the fact that there was no Wi-Fi access in the only classroom pharmacy students used for their daily lectures and that Wi-Fi access on the campus seemed to have a slow connection speed. In relation to library facilities, comments from a few students included insufficient copies of books and that the period of loaning was too short. E-books had been made available to students; most students found this helpful but one

student stated that she found it difficult to use an e-book as the distraction of Facebook and Twitter made it hard to concentrate:

C15: The copies of the books are limited...so sometimes like, I borrowed a book, then I have the chance to read, but then when I wanted to go and renew, then someone request for it...so I cannot finish my book, then I have to return it and then wait for another person borrow then I go and request again.

C13: I personally don't like electronic copy, because they are very hard to work with, it's like you are on the computer and it's so hard not to go on Facebook or Twitter or anything like that, and I feel that like it really...I very hard to work with electronic copies, so I personally don't like electronic copies.

For the laboratory facilities, one student appreciated that the equipment in the laboratory was new and the laboratory was spacious to do their work:

C13: Practical part for me personally I think that is very good, because it's just a few of us and get to use two labs, we have a lot of space to work with, and then the apparatus are new, so I was like nothing to complaint about that.

Students were glad to have a variety of food choices but the average spending of RM15-20 (Around GBP2.90-3.90) per meal was rather expensive when compared to a lunch meal they had somewhere outside the campus.

Theme 6: Advantages and Disadvantages of the MPharm Programme

Choosing the MPharm was felt to have a number of advantages. For one, the passing mark for the MPharm programme is lower at 40 percent as opposed to the BPharm which is set at 50 percent. Also, students felt that they would be over reliant on their parents if they stayed in Malaysia but in the UK, they would live alone and therefore, they could learned to become independent. In addition, the experience and exposure to a different environment, weather, food and culture in the UK attracted them:

C14: I think doing the MPharm would be your knowledge is wider as in you learn more things because you go out there, and you, I mean you experience a lot of stuff, compared to you just doing here...I mean you just do your own countries stuff.

The title awarded by Cardiff which is a Master of Pharmacy as compared to Bachelor of Pharmacy awarded by the Taylor's programme were perceived to be an advantage of the MPharm programme. Students perceived a better chance during a job interview with an MPharm as compared to a BPharm certificate:

C17: If I am an employer and when you come[for interview] and you were graduated from UK then they will presume that you have better advantages than those around here...that is the general assumption.

However, students brought up a few issues about money. They knew that tuition fees and the living cost would be higher if they were to study in the UK. Also, income tax is higher if they were to work in the UK. Furthermore, students mentioned that adapting to a new environment takes time. It could therefore be difficult for them if they chose the MPharm programme, and this was particularly important as the third and fourth year makes a significant contribution to their final degree grading.

4.7.3 Themes Emerging from the Staff Interviews

The findings of this part of the study have been arranged into eight themes as presented in Table 4.3 together with illustrative quotes.

Table 4.3 Themes and illustrative quotes for staff interviews

No	Themes	Illustrative Quotes
1	Staff Expectations	<i>F3: I hope and expect the research collaboration with them...and in this way I have contacted staff who visited here and they gave me a very positive response and I am in touch with them maybe in near future I will have some research collaboration with them.</i>
2	Perceived benefits of the twinning programme	<i>F1: The programme giving an opportunity to Malaysia student to do their UK programme MPharm at lower</i>

		<i>cost compare if they go direct to MPharm in UK, and simulating the things as equal to Cardiff University what they are doing over there, so the students may not have much of difference, so even though it's within Taylor's University, so that way the students will be for the students will be an advantages</i>
3	Commitment of the Academics	<i>G2: I am very clear about the responsibilities and I see my responsibilities as being to assist in the delivery of the course. To assist in the evaluation of the students and...evaluating the course program that I [am] teaching.</i>
4	Heavy load	<i>G5: I think it's taking quite lot of time and effort to set up and there is a lot of administrative work.</i>
5	Communication and collaboration between CU and TU staff	<i>F7: I don't know the culture, I think they won't allow the uh, the technical staff to actually communicate with the lecture, so they want lectures to lectures to communicate which is fair enough but uh so then the lecture will pass the knowledge to us, but what I preferred is to communication between technical people to the other staff.</i>
6	Teaching & learning implications	<i>F4: Because I have already teaching for 11 years and I need only very little time for the preparation for the lectures and I am repeating all the time.</i>
7	Structure / facilities concerns	<i>G2: One of the problems is that blackboard 9 (the TU virtual learning environment) isn't effective, an effective way to transfer information and...and PowerPoint for example because it is difficult to access in Malaysia.</i>
8	Quality concerns	<i>G2: The concern is always the, what is delivered in Taylor's is equivalent to what is delivered in Cardiff.</i>

Theme 1: Staff Expectations

Most TU academic staff expressed that they expected good support from CU in terms of provision of teaching materials and student transfers. The majority of staff have expected to work closely with CU personnel to ensure the smooth running of the programme. One staff member expected that there would be research collaboration between CU and TU. Expectations from TU administration included support in the registration process, advice on the entry requirement for students who were interested in the programme, and the number of students required to start the MPharm programme. From the laboratory staff, one of them had voiced that she had high expectations of the CU programme and CU's experienced staff especially in the area of pharmaceutical courses. She had hoped that appropriate guidance and mentoring from CU's team would help them in setting up TU's home grown pharmacy

programme. Another staff member expected cultural exchange would take place when it involved teaching staff and practices in different countries.

A few staff at CU had no real expectations of the collaborative programme while others have quite diverse expectations. While the dissemination of information was not thorough or even at CU, some staff stated that they were the minority at CU who were told about the collaboration and were asked if they were interested to get involved, i.e. to travel and teach at TU at some point. One staff member stated that he had expressed his interest and thus expected to travel to TU and teach some classes at some point. Another staff member hoped that collaboration between TU and CU was not only limited to teaching but also research:

G2: Expectations for me, as a member of Cardiff, because I showed interest in the collaboration, it was an expectation that I would uhm...at some point come out to Taylor's. There would be an expectation that I would help with the delivery of some teaching and also observe some classes as well.

G1: I hope that we can have opportunities to not just teach together but research together as well

A few CU staff expected that there would be good communication between TU and CU. Also, some expected the quality of students and examination process would be the same between the two schools:

G10: We didn't know the staff or...most haven't been...haven't met any of the staff, so that was main expectation, there will be good interaction in terms of any queries or problems...uhm...to work, I thought we will be working quite closely with the equivalent in uh...in Taylor's.

In addition, a few staff members expected the workload would be increased as the TU teaching and administrative work involved would be on top of their already high teaching commitment. This is especially challenging when they need to make travel plans to TU to teach:

G6: My workload has gone up, uhm...there is more work involved but it has allowed me to uhm...come over to visit Taylor's...uhm...and I have been personally surprised...I have been, I thought it was its exceeding my expectation, uh...the facilities are really good, the students are enthusiastic and polite.

Quality of staff at TU was one of the concerns of CU staff and one shared that the recruitment of staff was still on-going but he expected that there would be sufficient, well qualified academics staff to teach the MPharm programme:

G2: So I supposed I had an expectations that uh...there would be sufficient well qualified staff in place at Taylor's uh...I think that has been achieved just but I think it was a bit a bit uh...uh felt like a, a little bit of rush and we didn't quite know, uh...because...because recruitment is still going on.

Theme 2: Perceived Benefits of the Collaborative Programme

During the interviews, it was clear that all TU and CU academics agreed that the collaborative programme offered benefits to academics and institutions. Benefits to CU that were discussed included generating income for CU; developing and broadening cultural perspectives of CU academics and students, and facilitating networking and research opportunities:

G1: I think the potential advantages are that we (CU) will increase the diversity of students in coming to Cardiff that we, I hope have improved our teaching practices because of the experience of having to share that material with Taylor's.

G9: It's good for us to collaborate with other staff in other locations. I hope in the future, there could be may be in some research collaboration.

G4: The advantage will be, I am sure, exchange and improvement in how pharmacy practice and law is taught and assessed and that would be a big advantage for Cardiff because seeing how a degree is delivered, and how things could be improved here [at TU]. An improvement made here will apply equally in Cardiff so that Cardiff degree

should benefit and the students' experience of those coming to Cardiff should be better as well.

The collaboration also provided secondment³ opportunities for CU academics at TU. The secondment referred to visits from CU academics to TU as guest lecturers. Each visit typically lasted between five to 10 days, and CU academics took on the various responsibilities of teaching and learning at TU during visits. Although there was no formal pre-posting training provided for CU staff going to TU, CU academics acknowledged that the secondment had opened a new world of learning. It provided a platform for collaborative learning experiences in terms of culture, healthcare practices, and academic development:

G5: I found very very very good, very useful. I like Malaysia. Quite keen to come here (TU)... that's given me some more experiences as a teacher outside of my own teaching environment here, to teach from overseas students, actually overseas is quite a new thing for me...so it's quite useful.

G9: I already said that, a greater awareness of how international students learn, I guess a great aware trying to be inclusive in teaching, and that's something I do in Cardiff not just for Taylor's but I am more aware of making sure of things there, I guess, try to use a lot of different types forms of teaching.

One TU staff member also revealed the benefit on his personal development in setting up a new facility for the programme:

F7: Enjoyable here (at TU) is like learning a lot of new things and also...and I find it very interesting to set up the thing. Actually it's a learning curve for all of us as well because we have no ideas on these dispensary, and all these you know pharmaceuticals science and pharmaceutical technology, making tablet, doing quality control all these things, so I feel like that's a very interesting and something new for them.

³ A secondment is where an employee temporarily transfers to another job for a defined period of time for a specific purpose, to the mutual benefit of all parties.

A few TU staff perceived the collaborative programme would help to build TU's reputation. Some staff agreed that TU-CU collaborative programme was the attraction for some students who joined the programme. The university would gain increasing popularity due to its partnerships with CU:

F2: Yes, I can see because it can see the incoming, the 2nd cohort of the students uh...the popularity I mean the name in and the fame of Taylor's University collaborate with Cardiff has gone into the market well, so we managed to fill up all the 50 places which is the maximum places that we offered and we have over demand than the supply at the current state.

F1: Most of the parents are interested to put their child in the programme because of the Cardiff University collaboration even though Taylor's University new for this pharmacy program.

TU academics felt that cost was one of the major advantages for students of the MPharm twinning programme. Students were given an opportunity to study a UK course at a lower cost. Even though it was partly conducted in Malaysia, the course promised to offer an equivalent experience as those students who are based in Cardiff. Another advantage was the flexibility of the choice of BPharm or MPharm programme. Students were allowed to make decisions as to whether to transfer to CU at a later stage of the study, which is before Year 3 starts at CU. At the time of research, all participants expressed their interest to transfer.

In terms of other benefits for students, TU academics perceived that the major advantage for MPharm students would be having a qualification that allows them to be registered in the UK and Malaysia. CU staff also highlighted that the collaboration offers Malaysian students internationally-recognised qualifications from an established university in UK:

G2: I think that the drive for this were the wish of the Malaysian government to develop pharmacy as a subject area to train pharmacy professionals. And having the link to Cardiff in UK, the well-established UK School of Pharmacy as well I think very helpful.

Theme 3: Commitment of the Academics

Some participants expressed their commitment to ensure the quality of the collaborative programme. Assessment moderation was discussed as part of the responsibilities of CU academics. In some instances, CU academics were also required to do double marking:

G1: We (CU staff) have the responsibilities for the course that Taylor's could run the materials they wanted to but that we continued to invest in Cardiff staff coming here for quality assurance purposes, for visiting lectures to add a bit of spice..

G1: This time on my second visits [to TU], I had more of a role in establishing procedures for exams to make sure that there is a good transfer of information during the exam period between Taylor's and Cardiff staff so that the exams can be effectively moderated, quickly and the turnover rate is appropriate.

G3: I have spent just over three weeks since March in Taylor's so that's quite a lot of work time that I spent in Taylor's. It also means that I am delivering lectures which I don't normally deliver in the UK. So that's take up more of my time.

Theme 4: Heavy Load

The collaborative programme was felt to have had a negative impact on CU's academics overall workload as they needed to support the teaching and learning activities at TU. CU staff shared that there was significant time devoted to training TU staff and support the teaching and assessment at TU:

G8: It has significantly increased my workload and I would say more this year than last couple of years with so many new staff taking over the module in Taylor's, of course have to start again in terms of giving guidance.

G1: Obviously there's been a time commitment in coming to Taylor's. There's also being a time commitment in the communication with Taylor's and the preparation of material

for Taylor's staff to deliver.

G3: I marked all of the exam papers last year and then a number of questions from the first year examinations. I imagine that this year it will involve the first year and the second year examination. I am marking lots of papers.

The new responsibilities at TU were seen as an added workload to academic responsibilities at CU and were a hindrance to research productivity:

G4: It's obviously the time away from Cardiff and for me personally, trying to keep on top of the Cardiff work, and do the new Taylor's teaching all in the same time is a challenge.

It was expected that the workload would further increase upon students transferring from TU to CU:

G2: Of course the expectation that a number of student will come (refers to transferring to CU) in the autumn of 2012 to join the course in Cardiff so there would be an increase in students numbers for Cardiff in Year 3, and Year 4 and that provides extra challenge particularly because students, for example will require research projects in Year 4 and that is require extra resource.

Yet, there was an expectation that the time and workload would improve with the maturity of the collaboration.

Theme 5: Communication and Collaboration between CU and TU Academics

In this study, communication was recognised to be the principle focus underlying cooperation and collaboration. TU staff stated that the modes of communication used with CU staff were mainly emails, Skype sessions, and teleconferences. The following is an example where communication was made between TU and CU staff via Skype:

F3: If there is a problem I mean because I have talked with my counterpart in Cardiff, if we have any problem, we can Skype with them also.

Some CU staff said that communication provided an opportunity to learn, but was not fully achieved:

G1: At the moment, sometimes it feels like the traffic is one way that we tell Taylor's everything and there is maybe necessary the opportunities for us to learn in the opposite direction.

Quite a number of TU and CU staff highlighted some barriers to effective communication. Barriers highlighted by CU staff included geographical differences and lack of a formalised system for discussion. One undisputable fact is that there is a 7-8 hour time difference between Malaysia and the UK (the UK is seven hours behind when it is British Summer Time), which made it hard for communication to progress:

G6: There's a problem. Cardiff to Taylor's then there is a time difference, some you know communication, trying to talk to someone actually much harder, and simple little things like most of our phones in Cardiff you can't call internationally, so we can't pick up the phone and call you.

Both CU and TU staff also agreed that communication was affected when it was not clear with whom they should have communicated. The issue was particularly prominent among laboratory staff at TU:

G1: I think that's one of the key issues was communications and knowing who to communicate with, how to communicate most effectively.

F7: We have actually requested to have at least one contact. They (TU lecturer) said they will provide but they're yet to provide any contacts with the lab staff and that's why we feel it's like communication breakdown.

F8: I don't know the culture, I think they won't allow the uh, the technical staff to actually communicate with the lecturer, so they want lecturers to lecturers to communicate which is fair enough but uh so then the lecturer will pass the knowledge to us, but what I preferred is to communication between technical people to the other staff.

Laboratory officers at TU expressed helplessness when there was no communication between the local academic staff and UK staff to discuss the procedure and results of practical prior to the classes. One recommendation for improvement made by the TU staff was a visit to CU by TU staff. The mutual visit was believed to improve understanding on what was to be delivered and operations of the programme:

F8: ...very much less communication, sometimes it just couldn't, I can't, most of the time I just predict what is going to happen, solely now dependent on practical manual and the particular lecturer, and the particular lecturer also quite new with the Cardiff system. They are also trying to guess the thing, because I learned it through during the trial run, when didn't get expected results and me and the particular lecturers are having some trouble in guessing and what's happening in everything.

F2: I believe a good understanding and a good communication between Cardiff and Taylor's is very important. Communication among the staff especially the counter parts on every modules is very crucial. Once both parties understand what need to be delivered, agreed upon, what to deliver that definitely helps the running of the school and the program and the modules... to suggest a few, I guess...mutual visit what we have like Cardiff lecturers come over like the Cardiff staff come over or Malaysian Taylor's staff to go over Cardiff, these are the good practice.

Theme 6: Implications on Teaching and Learning

CU staff recognised the importance of modifying their mode of delivery at TU to ensure that it was clearly understood by TU students:

G4: I think, oh...you (students at TU) didn't understand that, so I am going to say that in

a different way, but one thing I try to do anyway whenever I am teaching is to speak quite slowly quite loudly and quite clearly.

According to the twinning programme agreement, CU was responsible for the programme content. CU academics shared that delivery of some aspects of the syllabus, such as those related to the UK's pharmacy laws and regulations, were challenging. The students' unfamiliarity were a result from them not being exposed to the UK healthcare system and therefore, more time was required to provide a clear understanding of the systems and processes:

G4: I have tried to use Malaysia and keep telling them about what may happen in Malaysia or how it relates to Malaysia.

G3: So they (students at TU) don't know what it (the UK pharmacy laws and regulation) is. So then I have to spend time trying to explain what it is which is fine but it takes a little bit longer obviously but then, it's also more difficult for the students then to understand the law.

Nevertheless, there were some TU staff who were confident in delivering the twinning programme due to their experiences in teaching a particular subject:

F3: I am handling the subject, which I am teaching for the last maybe 10 years so I won't feel any problem.

F4: Because I have already teaching for 11 years and I need only very little time for the preparation for the lectures and I am repeating all the time.

Theme 7: Structure and Facility Concerns

Some concerns by CU staff in terms of lecturers and facilities were also shared during the interviews. CU staff expressed concerns regarding the number of qualified academics delivering the twinning programme. It was perceived that TU was yet to have sufficient

qualified academics due to the lack of time for recruitment at the time of research:

G2: One of the concern was the sufficient number of trained staff to deliver the Taylor's program and...it felt as though because of things like the accreditation events, the program was running like a bit behind schedule at some point.

'Blackboard' was the online platform for Cardiff students to access teaching and learning materials. The website was made available to all TU students; however, an issue arose when downloads became slow and students encountered problems logging in. CU staff revealed issues arose due to the incompatibilities of the IT servers. Both TU and CU participants agreed to the need to address the technical difficulties.

Theme 8: Quality Concerns

Quality of teaching and learning as well as assessment was discussed during the interviews. It was strongly agreed by most CU academics that delivering the programme at TU as it was delivered at CU was very important. To ensure the uniformity of the academic content, teaching materials (including PowerPoint slides used at TU) were mostly prepared by CU academics. Both TU and CU staff acknowledged the challenge of delivering academic content prepared by another person, especially when TU had newly-appointed staff. Therefore, it was important to communicate with CU staff if clarification was needed for the delivery. Unfortunately, this communication was lacking as explained by one CU staff:

F3: It's a good thing (refer to PowerPoint slide from CU), which I mentioned that I got all the lecture materials but sometimes...I feel that when you deliver somebody's lecture, it's a bit difficult.

G2: I think the most, be honest the most challenging thing is...delivering other people lectures and not having time and all the freedom before I can to adapt the lectures because the issue I talked about earlier, about I want to make sure the information they take away is the same...

G10: yes, what they supposed to be teaching of the content, the concept behind, it was not understood and so it wasn't taught and most the students failed that coursework, that's why they have to re-ask...ya. You know, again there was a lack of asking for help.

A need to discuss the future development of teaching at TU was highlighted. One CU staff suggestion was to use peer review to allow feedback, improvement, and exchange of learning. Another staff member suggested TU staff should modify lecture notes to suit their way of teaching, and be more involved in the development of teaching materials and exam papers:

G1: So I think that there is need to be discussion about how often this year, how the collaborations gonna continue in a useful way... is it that we come over for a week and just support teaching... and a couple of Cardiff staff come over and effectively act as visiting lecturer for a couple of lectures that we can sit in and quality assure the lectures ...we actually have constructive peer review processes with Cardiff, with Taylor's staff so that we can share...knowledge of teaching practices...

G6: uh....yes, I would like Taylor's staff to take more ownership of the lecture material, so I would like you to feel you can modify and will modify what we send you to better suit yourself...I think...CU participants expressed a lack of input by TU academics into programme improvement.

4.8 Discussion

Both staff and students provided similar yet distinctive information for the 2+2 MPharm programme. This section begins with discussion of staff views, outlining the combined views of TU and CU staff. This is followed by students' views about their experiences throughout their semester in TU. Lastly, a comparison is made between the two main stakeholders (staff and students) examining the discrepancies and similarities of their views.

4.8.1 Staff Views

CU academics had varied experiences. The majority of CU participants felt weighed down

by their workloads from the pharmacy programme; however, they appreciated the support provided by TU academics. On the other hand, TU academic staff perceived the programme as well run and enjoyed the experience of teaching the twinning programme. However, TU laboratory staff were frustrated when they had to deal with the uncertain expectations of the workshops that were supervised by TU academic staff. Overall, CU lecturers have more concerns than TU staff. This might be because as programme providers, CU staff felt more accountable to the programme's teaching and learning standards.

Although not explicitly mentioned by all participants, many highlighted the importance of quality assurance for the TU-CU twinning programme. In addition to accreditation, which is done by PBM and GPhC as discussed in Chapter 1, CU staff performed peer assessments, graded exams, and moderated assessment markings at TU as part of their commitment to ensure quality of the programme (The Quality Assurance Agency for Higher Education, 2014).

In the context of higher education, accountability is generally accepted as the responsibility of an institution for their students' academic performance (Leveille, 2006). Although there are different forms of accountability, the study highlighted that communication between TU and CU was a weakness that needed to be improved as part of the accountability policies and practices of the programme. Both TU and CU staff indicated that there was no formal and regular platform for communication between CU and TU academics which lead to various challenges in programme delivery.

Communications enforce accountability; and what could be learnt from other universities offering TNE programmes was the establishment of a communication protocol as a common guide between both institutions (Murdoch University, 2014). The guide suggested time, reasons and agreed method of communication between institutions be applied throughout course delivery. Ongoing communication could possibly create more discussion opportunities of the various challenges and gaps arising from the delivery of the course. It could enhance monitoring of programme delivery as well as promote exchange of opinions. Regular, face-to-face communication was also important in fostering the relationships between the two campuses (Heffernan and Poole, 2005).

Overall, both CU and TU staff recognised the benefits of the twinning programme, which contributed to their cultural, social, personal, and professional development. Consequently, participants suggested multiple ways to improve accountability. For example, they requested more involvement by TU staff in the Boards of Studies and Examiners, and the development of teaching and learning materials. Also, staff exchange between countries should be promoted to encourage face-to-face communication.

4.8.2 Student Views

This study showed that students offered generally consistent reasons to join a pharmacy programme (Roller, 2004, Willis et al., 2006, Capstick et al., 2007, Keshishian, 2010, Sharif and Sharif, 2014). These reasons included job satisfaction, job security, high income, professional status, and interest in science. It was unsure whether marketers at Taylor's have predispose any of these thoughts onto students' mind during their marketing events but nevertheless, the results provided further insights viz. effective recruitment strategies. By knowing the attributes that attracted prospective pharmacy students, recruiters (and their organisations) could tailor their marketing and recruitment strategies to boost enrolment. For instance, they could highlight the job satisfaction and security of pharmacists in different sectors, e.g. community, hospital or industry as part of their promotion efforts.

This study showed that collaboration with CU was one of the major reasons attracting students to study pharmacy at TU. Malaysian students expected this collaboration would provide them access to an established, internationally-recognised pharmacy education (the CU pharmacy programme), opportunities to practice in the UK, and increased chances of recruitment. As students also wanted to experience the liberty of living away from home and becoming independent, they felt that studying at CU could offer them this opportunity.

In this phase of the study, the researcher identified two key student expectations: experienced instructors and an environment which is conducive for learning. Students, especially those who had previously studied at TU for their pre-university foundation courses, had high expectations of their lecturers. They expected their lecturers to be well qualified teachers similar to those who have taught them in the past. The quality expected by TU students were

in line with those expected by students in an Australian university (Leask et al., 2005). Students' expectations in this phase of the current study suggested that transnational lecturers should be no less than an expert in their fields with good communication skills. In reality, students were disappointed with some lecturers at TU who just read from slides and couldn't provide detailed explanations when asked. They were also concerned about TU staff who taught using lecture notes developed by CU academics as the unfamiliarity with the slides seemed to affect the delivery of the lecture. Lecturers who spoke with heavy accents increased their worries as it was difficult to understand their instructions.

It was important to note that most students in this phase of the current study learned in a language that was not their first language; neither did some lecturers teach in their native language. The majority of the Chinese students in this study spoke Mandarin as their mother tongue; lecturers from India might speak Hindi as their first language. Given the international profile of lecturers at TU (staff came from many different countries and regions), it is not surprising that students needed to adjust to the instructors' accents in lectures, workshops, and other classroom activities (Wu, 2003, Barnes and Loui, 2012). However, as students in the current phase of the study did not expect expatriate lecturers to possess heavy accents, these experiences increased their worries. The concerns brought up by students were discussed in an academic school meeting at TU. While it is hard to change someone's accent, in the academic school meeting at TU, it was suggested that the lecturers spoke a little more slowly during lectures so that students could understand the context better. It was noted in the follow-up survey that improvements were observed in TU staff's teaching after one semester.

Literature review in Chapter 2 (section 2.4.2) informed that student's perceived learning environment influenced their learning. Students' perceptions of their learning environment was also a strong predictor of their achievements. This emphasised that the high expectation of TU students toward the learning environment at TU cannot be disregarded. Students in this phase of the study were impressed with the university facilities provided, for example laboratory equipment and on-site food and beverages. However, they criticised the insufficient reference books in the library and Wi-Fi capabilities. Students were disappointed that TU did not offer Wi-Fi facility at the time of research. As the university recognised that

students have a positive attitude towards using the Internet as a learning tool (Hong et al., 2003), campus-wide Wi-Fi access became available at TU in late 2012. Students could now access the Internet using smart phones or laptops anytime and anywhere on campus. The comments on insufficient library facilities were further investigated by the researcher. It was found that the number of reference books assigned in TU libraries was determined by the number of students. The number of textbooks available met the suggested ratio of 1 reference copy to 8 students per TU policy. To further support the students' learning, TU library e-book catalogue was made available since 2012 and has been continuously expanded. Therefore it was hoped that the students' concerns with library service could be addressed, especially since most students were happy to use e-books.

Students also said the curriculum was more challenging than they had expected. This was possibly caused by the busy timetable (i.e. long hours of lectures and workshops each week) and short semester break. The TU study semester was eleven weeks long. The students' average amount of teaching and learning-contact hours per week was about 19 hours (13 hours of lectures and 6 hours of other small group teaching sessions). This curriculum did meet the standards outlined by The Guidelines to Good Practices: Curriculum Design and Delivery (MQA Council, 2010). At the University College London (University College London) School of Pharmacy, the average weekly timetable of pharmacy courses includes 5-6 hours of lectures, 10-15 hours of practical and 2-4 hours of seminars (University College London, 2012). In comparison, the TU-CU curriculum was lighter. An effective orientation ensuring that students start the course with realistic expectations might help to resolve some of the issues mentioned above. However, the researcher recognised the challenge faced by Cohort 1 students, as semester break and holidays were shortened, the second semester started immediately after the students completed semester one (as explained in section 4.7.2: Theme 3). It was reported that this is the only cohort with a short semester break as all other academic years were run for one full year for the subsequent cohorts.

The current phase of research revealed that managing student expectations at the beginning of a course could help inform students of the realities of university life (Crisp et al., 2009). Krallman and Holcomb (1997) suggested orientation could serve as an important intervention to assist students in developing a realistic view of university experiences. To this effect, TU

has now been offering orientation and transition programmes for first year students to help them adapt to their new settings while providing them a more realistic view of the programme.

4.8.3 Comparison of Staff Views and Student Views

This phase of the study showed that students and staff in the 2+2 MPharm programme shared some common experiences and expectations of CU and TU, respectively. Firstly, successfully ingrained by marketers at TU, students were expecting visiting lecturers from CU as part of the teaching programme. This is also in line with CU staff expectations; they were expecting to travel to TU at some point to teach.

Secondly, since most students thought highly of CU, the collaboration increased their confidence to join the programme. Staff involved in this phase of the study agreed that the collaboration with CU brought advantages to TU in promoting their pharmacy school. As mentioned in Chapter 2 (section 2.5.2), Pyvis and Chapman found that Malaysian students viewed international education as a platform for global exposure and an investment in future career advancement. In line with this phase of the study, the TU-CU MPharm students preferred to study in the UK as they wanted an international exposure that offered a different environment, weather, food, and culture. While there was no evidence of improved chances in getting a job, graduates with CU's MPharm certificate have the advantage of working in both countries (i.e. Malaysia and UK) if they fulfilled the training requirements set by the governing boards.

Thirdly, students and staff seemed to have a similar set of views on heavy workloads. Students revealed that there were too many assignments in a semester which was not what they expected for their undergraduate study. As for the staff, CU lecturers who travelled to TU not only had to teach but also to grade exams and moderate assessment markings. These duties increased their already full teaching load and research activities at CU.

Conflicting messages given to students by different staff during practical sessions confused the students. The students' findings were consistent with the laboratory staff findings; they faced challenges with practical sessions when expectations were not clearly communicated

by the academic team. However, TU staff did not mention any communication issue with students or laboratory staff. To mitigate these problems, prior discussions, consistency of language, and reliable delivery of expectations to students could help to avoid inconsistencies and conflicting messages (Lesikar and Flatley, 2005).

This phase of the current study also drew attention to the lecturers' experiences in the MPharm twinning programme. While some TU academics were confident teachers with considerable experience, certain CU staff expressed concerns about the teaching standards of this programme. Though not expressly mentioned by students about the standard of teaching, some have indicated concerns about certain TU lecturers who could not articulate their opinions and instructions. In the transnational context, due to its complex and diverse learners, cultures, programmes, and modes of delivery (Dobos, 2011), teaching adaptations such as customisation⁴ and contextualisation⁵ were needed to engage learners and promote effective learning. This concept of contextualisation and customisation was pertinently illustrated by a CU staff member when he described how he used a local Malaysian example (contextualisation) to explain a point to his TU students (customisation). Unfortunately, this was lacking in TU staff where students had expressed disappointment with some lecturers who just read from slides and couldn't provide detailed explanations when asked.

It was acknowledged by both CU and TU staff that it could be difficult for one academic to deliver lecture material developed by another. Students expressed the same feeling when they had the first-hand experience of being taught by lecturers who used others' slides. Therefore, good preparation by TU lecturers is essential in order to mitigate the problem. In addition, as CU lecturers welcomed input by TU academics, further collaborative effort should be in place to contextualise (localise) the teaching thereby improving the programme for the students.

⁴ Alignment of a course offering's learning design and materials with its students' profile to promote effective learning

⁵ The adaptation of one or more elements in a course offering to increase its cultural, personal, professional, and global relevance to students in that offering

4.8.4 Summary

Overall, the students and staff provided useful data and insights on the expectations and experiences of a new collaborative programme. The study has highlighted the importance of students' expectations about the quality of teaching staff at the university, i.e. that lecturers were expected to be subject experts, effective communicators and experienced in what they teach. Staff also noted it was important that they were fully prepared to teach their classes. Past experiences helped but support was still needed especially where they were teaching using materials developed by others. It is therefore crucial to ensure that staff are provided with the necessary training and support to meet these expectations.

The focus groups with students highlighted the need for on-going dialogue between students and staff so that a better alignment can be achieved between students' expectations and the reality of university study and culture. Managing students' expectations at the start of the programme could help students frame realistic expectations about the course. Also, a better communication approach between staff at the two institutions could improve their ability to meet students' expectations.

There are some important implications arising from the findings of this study for the staff at TU. While the staff between the two schools had a good relationship, which might be a direct result of the strong ownership of the MPharm programme by CU staff, TU staff had little input in the development of the teaching and assessment materials and they saw themselves as messengers to pass on knowledge to students. A greater involvement of TU staff in the development of programme materials could improve the understanding and delivery of the programme. To achieve this, employing highly-qualified staff in TNE programmes is essential to both the quality and equivalence of teaching and learning (MacDonald, 2006).

4.9 Study Limitations

For the staff interviews, sampling stopped when saturation was achieved (Glaser and Strauss, 1967), that is, when the collection of new data did not provide further insights on the topic under investigation (although there are various views about when the data reaches saturation

point) (Mason, 2010). Within the time frame available to investigate staff comments, the researcher identified a list of potential interviewees and undertook interviews until theoretical saturation occurred (i.e. when the researcher no longer learned much from each subsequent interview). Staff who joined later were not added to the samples as data collection was completed. Furthermore, the researcher was only interested in those comments obtained from the early stages of the programme.

Staff and students were asked to recall their expectations at the same time they were asked about their views and experiences with the programme. An important limitation was that the expectations were measured *post hoc*. Theories of hindsight bias suggest that people generally do not recall the past correctly but rather allow their experiences to influence what they thought or predicted before an event occurred (Hawkins and Hastie, 1990, Fischhoff, 2002). Thus, staff and students' memories regarding what their expectations were may have been biased.

First year students were recruited in this study. As these students had not yet graduated, they might have been hesitant to be entirely honest during the focus group (Linville et al., 2003). Students could be cautious as they did not want to criticise the people who were marking their assessments. They feared that it would affect their marks. Although assurance on anonymity and confidentiality was given, it is still possible that students and staff may have filtered their comments to a certain extent.

Lastly, in qualitative research, a researcher can never be totally value-free or objective, although they can always strive to be rigorous (Shacklock and Smyth, 1998). Therefore, reflexivity is important in striving for objectivity and neutrality (Ritchie and Lewis, 2003). The researcher tried to reflect upon ways in which bias might creep into the qualitative analysis, and acknowledged that her own background and beliefs had the potential to influence the research process.

4.10 Recommendations

The findings of this phase of the study makes a few recommendations to school delivering

transnational education on how challenges can be addressed in the beginning stage of the collaboration:

1. Provide orientation to set students expectations prior to course commencement. When clear expectations are set at the beginning of the programme, it helps to avoid miscommunication and frustration for students. (refer to Section 4.7.2, Theme 3 and Theme 4)
2. Ensure staff involved in TNE understand the purpose of the programme and their responsibility to students. Promote the dialogue and interaction between teaching staff and their students. (refer to Section 4.8.3)
3. Establish strong communication channels with clear protocols between staff in host and home institutions. When frequent communication is maintained, teaching situation can be monitored while concerns and issues can be addressed promptly. (refer to Section 4.7.3, Theme 5)
4. Promote greater involvement of host institution staff in the development of teaching and learning materials in order to provide tailored TNE training for students. (refer to Section 4.7.3, Theme 8)
5. Promote exchange of staff between countries in order to promote face-to-face engagement, team spirit and transfer of ideas. (refer to Section 4.8.1)

4.11 Chapter Conclusions

This phase of the study aimed to examine students and staff expectations and experiences of a new collaborative pharmacy programme. Students and staff views were explored with interviews, focus groups and follow-up surveys. The findings helped to identify the staff and students' initial thoughts about the programme. The opinions given were useful as they draw attention to the aspects that need to be reviewed and those qualities that should be improved. Further work exploring the progress of students might provide a better picture of the overall experience and satisfaction of the twinning programme. The next chapter will examine the learning environment of students in this 2+2 MPharm programme. It aims to measure the learning environment as perceived by both CU and TU students.

Chapter 5 Student Perceptions of their Learning Environment

Chapter 5 (Phase 2) is one part of the longitudinal study undertaken to gain a better understanding of students' perceptions of their learning environment using a quantitative approach. It is the only chapter that involved research with students from both TU and CU. The following sections will first introduce the objectives of this phase of study, design and methodology, followed by findings and research implications. The chapter concludes with recommendations for teaching and practice, as well as suggestions for future research.

5.1 Introduction

Chapter 2 highlighted that it is crucial to understand the current learning environment to ensure transnational students were provided with an equivalent and comparable learning environment similar to the home institution. Chapter 4 highlighted students' concerns related to TU learning environment in the area of infrastructure, facilities and student-lecturer communication. In view of the importance of students' perceptions of their learning environment, which could be a useful tool for improving quality and enhancing the sustainability of a transnational program (O'Mahony, 2014), this phase (Phase 2) of the study focused on examining the learning environment the following research objectives (see section 1.4):

- (1) to examine the learning environments in the pharmacy schools at CU and TU; and
- (2) to compare the learning environment perceived by the pharmacy students at TU and CU.

5.2 Study Design

To assess students' perceptions of the educational environment, a modified Dundee Ready Education Environment Measure (DREEM) questionnaire was employed (Roff et al., 1997). Year 2 and Year 3 MPharm students in the 2012-2013 academic year at two institutions, TU and CU, were invited to participate in the study between September and October 2013.

5.2.1 Original DREEM Questionnaire

Despite its psychometric shortcomings (Dimoliatis et al., 2010, Jakobsson et al., 2011, Hammond et al., 2012), which warrant further inspection, the original DREEM is undoubtedly a useful tool for appraising the educational environment in healthcare-related courses (Roff et al., 1997, Whittle et al., 2007, Aghamolaei and Fazel, 2010, Miles et al., 2012).

The 50-statement closed-question DREEM questionnaire has five subscales:

1. Students' Perceptions of Learning (SPL) (12 items)
2. Students' Perceptions of Teachers (SPT) (11 items)
3. Students' Academic Self-Perceptions (SAP) (8 items)
4. Students' Perceptions of Atmosphere (SPA) (12 items)
5. Students' Social Self-Perceptions (SSP) (7 items)

Each of the 50 statements is scored on a five-point Likert scale: 4 for strongly agree (SA), 3 for agree (A), 2 for uncertain (U), 1 for disagree (D) and 0 for strongly disagree (SD). However, 9 of the 50 items (numbers 4, 8, 9, 17, 25, 35, 39, 48 and 50) are negative statements and have to be scored in reverse manner. That is, 0 for SA, 1 for A, 2 for U, 3 for D, and 4 for SD. The 50-item DREEM has a maximum score of 200, indicating an ideal educational environment. Table 5.1 presents the verbal descriptions of DREEM scores. The construct of the modified DREEM, the procedures involved in administering the questionnaire, and interpretation of results will be discussed later in this chapter.

Table 5.1 Verbal description of DREEM scores

Total score:	Student's Perception of Teachers (SPT)	Student's Perception of Atmosphere (SPA)
0-50 Very Poor	0-11 Abysmal	0-12 A terrible environment
51-100 Plenty of Problems	12-22 In need of some retraining	13-24 There are many issues which need changing
101-150 More Positive than Negative	23-33 Moving in the right direction	25-36 A more positive attitude
151-200 Excellent	34-44 Model course organisers	37-48 A good feeling overall

Student's Perception of Learning (SPL)		Student's Academic Self-Perceptions (SAP)		Student's Social Self-Perceptions (SSP)	
0-12	Very Poor	0-8	Feelings of total failure	0-7	Miserable
13-24	Teaching is viewed negatively	9-16	Many negative aspects	8-14	Not a nice place
25-36	A more positive perception	17-24	Feeling more on the positive side	15-21	Not too bad
37-48	Teaching highly thought of	25-32	Confident	22-28	Very good socially

Adapted from (McAleer and Roff, 2006)

5.2.2 Modified DREEM Questionnaire

The DREEM questionnaire was originally developed for medical students who were based in hospitals as part of their educational environment (Al-Hazimi et al., 2004a, Till, 2004, Jiffry et al., 2005, Till, 2005, Varma et al., 2005, Miles and Leinster, 2007, Al-Ayed and Sheik, 2008, Demiroren et al., 2008, Carmody et al., 2009, Miles and Leinster, 2009, Jakobsson et al., 2011, Rotthoff et al., 2011, Shehnaz and Sreedharan, 2011, Zawawi and Elzubeir, 2012, Preethi et al., 2014). Thus, a modified version of DREEM was used for the pharmacy students to make it relevant to the pharmacy setting. Table 5.2 lists the modified statements used in the modified DREEM questionnaire alongside the original statements used in DREEM. The modified DREEM allowed the pharmacy students to complete the questionnaire about their experience in the pharmacy school and during their community pharmacy placement. The content validity (Bollen, 1989, Drost, 2011) of the modified DREEM questionnaire was obtained through a review process by the research team, which consisted of the supervisory team and researcher herself. In addition, the questionnaire was piloted on a group of students to ensure face validity (Drost, 2011).

Table 5.2 Modified statements under each subscale in DREEM questionnaire

Subscales	Item No.	Original statement	Modified statement
SPT	6	The teachers are patient with patients	During university experiential placements, the community pharmacist teachers are patient with patients
	18	The teachers have good communication skills with patients	During university experiential placements, the community pharmacist teachers have good communication skills with

			patients
SAP	45	Much of what I have to learn seems relevant to a career in medicine	Much of what I have to learn seems relevant to a career in pharmacy
SPA	11	The atmosphere is relaxed during the ward teaching	The atmosphere is relaxed during university community pharmacy experiential placements
	34	The atmosphere is relaxed during seminars/ tutorials	The atmosphere is relaxed during workshops
	42	The enjoyment outweighs the stress of studying medicine	The enjoyment outweighs the stress of studying pharmacy

5.2.3 Pilot Study

A pilot study (also called a ‘feasibility’ study, a small-scale version or trial run) was carried out to pre-test the questionnaire (Baker, 1994). It was done in preparation for the main study (Polit and Beck, 2006). Although a pilot study does not guarantee success in the main study, it does increase the likelihood of success as it can give advance warning regarding weaknesses in a proposed study (van Teijlingen and Hundley, 2002). As part of the current research strategy, a pilot study was used to check that instructions were comprehensible, to assess whether the questionnaire was realistic and workable, to check the wording of the questionnaire, to identify logistical problems that might have occurred, and to estimate the time needed for the study (van Teijlingen and Hundley, 2002, Simon, 2011).

As the school was still new at the time of the study, only three cohorts of students were available: Year 1, Year 2, and Year 3. First year students were not chosen as the pilot sample as they had just joined the course and may not have the knowledge to answer the questions. Second year and third year MPharm students were the target population of the main study. However, if they were exposed to an intervention during the pilot phase, they would respond differently in the main study from those who had not been involved in the pilot study. This change in behaviour might create bias (van Teijlingen and Hundley, 2002). As such, the pilot study only included four Year 3 BPharm pharmacy students at TU.

The pilot study data collection procedures were designed and carried out the same way as the main study. Students were recruited prior to a lecture class. They were asked to provide

verbal feedback after the self-administration of the questionnaire. An improvement was made to move the gender question to the bottom of the page as the researcher realised that three out of four pilot students forgot this question when it was placed at the top of the page. The pilot data was not included in the final analysis as the use of pilot study was merely to invite comments and to inform the researcher about the research process and the likely outcome (Simon, 2011).

5.2.4 Ethical Considerations

Ethics approval (Appendix 5.1) for the study was granted by the SREC without any changes required.

5.2.5 Study Population and Sampling

The study population comprised all second and third year pharmacy students at TU and CU for the academic year 2012/2013. As four Year 3 BPharm pharmacy students at TU were included in the pilot study, the target population for TU was then 64 students: 44 Year 2 and 20 Year 3. The Year 2 students were commencing their second year at TU and Year 3 students were commencing their third year study at CU at the time of the research. TU Year 2 and Year 3 students were reminded to comment on their previous year experiences at TU. The target population for CU was 221 students: 117 Year 2 and 104 Year 3. All CU students were reminded to comment on their previous year experiences at CU.

For the fact that retrospective data was needed, first year students were not included in this study, as they had just joined the course and were not yet in a position to comment on the educational environment. As the study aimed to make comparisons between the cohorts, CU students with matching year of study to TU Year 2 and Year 3 students (i.e. CU Year 2 and Year 3) were invited. There were no final year students at TU at the time of research.

5.2.6 Subject Recruitment and Data Collection

Paper versions of the amended DREEM questionnaire (Appendix 5.2) were distributed (by

hand) at both universities in September and October 2012. The questionnaire was administered to the student groups of Year 2 and Year 3 on different occasions prior to a compulsory teaching session at the beginning of the academic year, where all students were present at the time of research (see Table 5.3). All questionnaires were distributed and returned on the same day to the researcher. Before students completed the questionnaire, the researchers explained the purpose of collecting the data as well as the process of data collection and stressed that students' involvement are voluntary using anonymous questionnaires. The data could not be traced back to individual participants. The researchers also explained that the data would be used for research purposes. Two researchers (PNW⁶ and LH⁷) were responsible for distributing and collecting data. The completed questionnaires were kept in a locked drawer after data entry and the data was saved on a password-protected laptop for statistical analysis.

Table 5.3 Date and venue of DREEM data collection

	Location	Date
TU Year 2	TU Classroom	20 th Sep 2012
TU Year 3	CU Classroom	12 th Oct 2012
CU Year 2		
CU Year 3		

5.3 Data Analysis

SPSS (version 20.0 for Windows) was used to analyse the data in this study. Data were coded: 4 for strongly agree (SA), 3 for agree (A), 2 for uncertain (U), 1 for disagree (D) and 0 for strongly disagree (SD), entered and checked for data entry errors. Negative statement items (item no. 4, 8, 9, 17, 25, 35, 39, 48, 50) were recoded to produce a reverse score, i.e. 0 for SA, 1 for A, 2 for U, 3 for D and 4 for SD before data analysis. For quality control purposes, once all the data was entered in SPSS, the researcher ran a frequency test on all the variables to check if an obscure number was observed within the data (e.g. the questions used a 5 point

⁶ Pei Nee Wong

⁷ Louise Hughes

Likert scale, so an answer of 6 was not possible). Any errors detected would be referred back to the raw data to check for the correct values.

5.3.1 Dealing with Missing Data - Listwise Deletion

Missing data can introduce potential bias in parameter estimations and weaken the generalisability of the results (Rubin, 1987, Schafer, 1997). Ignoring cases with missing data leads to a loss of information, which decreases statistical power and increases standard errors (Dong and Peng, 2013). Therefore, before analysing a data set with missing values, a listwise deletion was performed. It is an *ad hoc* method of dealing with missing data (Peng et al., 2006); it allows the analysis only to be run on cases with a complete set of data. In listwise deletions, a case is dropped from an analysis because it has a missing value in at least one of the specified variables and it deals with the missing data before any substantive analyses are done. It is considered the easiest and simplest method of dealing with missing data (Brown, 1983). Listwise deletions assume that the data is missing completely at random (MCAR). Data is missing completely at random when the probability of obtaining a particular pattern of missing data is not dependent on the values that are missing and when the probability of obtaining the missing data pattern in the sample is not dependent on the observed data (Rubin, 1976). An advantage in using listwise deletions is that all analyses are calculated with the same set of cases.

5.3.2 Validity and Reliability of DREEM

DREEM was developed and validated for international use within health professions' curricula about 19 years ago (Roff et al 1997). It demonstrated robustness in terms of psychometric properties (Roff et al., 1997, Bassaw et al., 2003, Till, 2004, De Oliveira Filho et al., 2005, Jiffry et al., 2005, Till, 2005, Varma et al., 2005, Dunne et al., 2006, Foster Page et al., 2012, Kossioni et al., 2012). In addition, it has consistently displayed good reliability in diverse healthcare settings including medicine, dentistry, nursing, and pharmacy (Soemantri et al., 2010, Palmgren et al., 2014). However, there have been some concerns regarding the psychometric robustness of the instrument (Hammond et al., 2012, Yusoff, 2012). Replication of the five-factorial structure has only been moderately successful, which

indicates some instability in the instrument. The Swedish version of the DREEM instrument has been reported as valid and reliable, except for the factor structure (Jakobsson et al., 2011). The construct validity is also not well supported in both the Portuguese (De Oliveira Filho and Schonhorst, 2005) and Greek (Dimoliatis et al., 2010) studies.

The modified DREEM does not guarantee that the original reliability and validity of the instrument remain when used in a novel environment. Therefore, Cronbach's alpha test (Cronbach, 1951) was carried out to check for internal consistency. Also, the reliability of the instrument and factor analysis was performed to evaluate the construct validity (Drost, 2011). A Cronbach's alpha range between 0.6 and 0.9 was considered acceptable (Nunnally and Bernstein, 1994, Al-Osail et al., 2015). In addition, Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity was used to indicate the suitability of the data to perform an exploratory factor analysis. A KMO index ranges from 0 to 1, with 0.50 considered suitable for factor analysis (Williams et al., 2012). Bartlett's test of sphericity should be significant ($p < 0.05$) for factor analysis to be suitable.

5.3.3 Scales Measurement – Parametric Assumptions

There is controversy about treating Likert response scores as continuous numerical data (also known as interval data) using parametric methods during data analysis or treating them as ordinal data for which non-parametric methods should be used for data analysis (Swift et al., 2013). Bertram (2007) explained that, depending on how the Likert scale questions are treated, a number of different analysis methods can be applied. Norman (2010, p.631) later suggested that Likert data can be analysed using parametric tests without “fear of coming to the wrong conclusion” (Gaito, 1980, Carifio and Perla, 2008).

To analyse Likert data appropriately, Boone and Boone (2012) recommended one to understand the type of data (i.e. ordinal or interval). Likert-type items were assigned numbers to express a ‘greater than’ relationship; however, how much greater is not implied. Thus, Likert-type items fall into the ordinal measurement category. On the other hand, Likert scale items are created by calculating a composite score (sum or mean) from four or more Likert-type items. Therefore, they should be analysed as interval data. Table 5.4 provides examples

of data analysis procedures for Likert-type and Likert-scale data.

Table 5.4 Suggested data analysis procedures for Likert-type and Likert Scale Data

	Likert-Type Data	Likert Scale Data
Central Tendency	Median or mode	Mean
Variability	Frequencies	Standard deviation
Other Statistics	Non-parametric test Chi-square, Mann-Whitney U test, Wilcoxon signed-rank test, Kruskal-Wallis test	Parametric test analysis of variance (ANOVA), <i>t</i> -test, regression

Adapted from (Bertram, 2007, Boone and Boone, 2012)

When multiple Likert question responses are summed together, they are treated as interval data (Bertram, 2007). Although summed scores generally have a more normal distribution than single items, which may work in favour of the parametric *t*-test (De Winter and Dodou, 2010), it is still important to examine the distribution of interval scale data to check if they are normally distributed – that is, bell-shaped and symmetrical about the mean. Statistical assumptions made for the application of parametric procedures to data analysis include (Wu, 2007):

- (1) Parametric tests for a population mean rely on the assumption that the sample data has approximate normal distribution;
- (2) Both ANOVA and regression analyses assume, among others, that the observed response variable is normally distributed.

The visual inspection of frequency distribution using histograms may be used for assessing normality. However, this approach does not guarantee that the distribution is normal (Altman and Bland, 1995, Oztuna et al., 2006). To assist in measuring the shape of the distribution, kurtosis and skewness measurements were used (Doane and Seward, 2011, Field, 2013).

Kurtosis measures the "peakedness" or "flatness" of the distribution. A kurtosis value between -1 to +1 (Bulmer, 1979) is considered very good for most psychometric uses, nevertheless -2 to +2 is also usually acceptable (George and Mallery, 2010, Field, 2013). Positive values of kurtosis indicate a pointy and heavy-tailed distribution, whereas negative

values indicate a flat and light-tailed distribution. The closer it is to 0, the more normal-like the distribution. On the other hand, skewness is the extent to which the data is not symmetrical. A skewness values of 0, positive (e.g. +1) or a negative (e.g. -1), reveals information about the shape of the data (Field, 2013); if the skewness value approaches zero, data becomes more symmetrical, if the skewness value is greater than 1.0 (or less than -1.0), the skewness is substantial and the distribution is far from symmetrical.

In addition, to see whether the distribution is normal, the Shapiro-Wilk test was performed (Ghasemi and Zahediasl, 2012). The Shapiro-Wilk test is based on the correlation between the data and the corresponding normal scores (Peat and Barton, 2005). It provides greater power. Power is the most common measure of the value of a test for normality. It has the ability to detect whether a sample comes from a non-normal distribution (Thode, 2002). If the test is non-significant ($p > 0.05$) it tells that the distribution of the sample is not significantly different from a normal distribution (i.e. it is probably normal). If the test is significant, ($p < 0.05$) then the distribution is significantly different from normal distribution (i.e. it is non-normal).

5.3.4 Comparison of Two Groups – Independent Sample *t*-test

The independent sample *t*-test (or student's *t*-test) is designed to compare means of the same variable between two independent groups. It is used if data is approximately normally distributed. However, empirical evidence has shown that even if the data differ a little from normality and the sample size is large, the *t*-test will still be valid (Glass et al., 1972, Keller and Warrack, 2014). On the other hand, non-parametric tests have less power than the *t*-test when the data is normal but they can have more power when the data is non-normal, in particular when the data is skewed (Blair, 1981, Spatz, 2010).

5.3.5 Comparisons of More Than Two Groups - One-way Analysis of Variance

One-way analyses of variance (One-way ANOVA) are designed to compare means of more than two independent groups. They are used if the parametric assumptions are satisfied (McCrum-Gardner, 2008). In a one-way ANOVA, the F statistic tests whether there are

significant differences among the groups (a p -value <0.05 suggest statistical significant differences). However, the F statistic test does not specify which means are significantly different from the other. *Post-hoc* tests are designed to explore differences among means and provide specific information on which means are significantly different from each other. There are many methods of *post-hoc* for multiple comparisons. The various methods differ in how well they properly control the overall significance level and in their relative power (Day and Quinn, 1989). In this study, Tukey's *post-hoc* test ("honestly significant difference" or "HSD") is considered the best available method as confidence intervals are needed and sample sizes are not equal. In addition, it has greater power compared to other tests under most circumstances.

In summary, normal data distribution was assessed by evaluating the skewness and kurtosis of the distributions and employing the Shapiro-Wilk test. Parametric statistical tests were performed and selected with the assumptions that the data was normally distributed. The student's t -test was used to determine statistically significant differences and, finally, the one way ANOVA was used to determine the difference between the DREEM total and subscale scores based on year level and institution. For this study, $P<0.05$ was considered statistically significant.

5.4 Results

5.4.1 Response Rate and Respondents' Demographic Data

A total of 281 (98.6%) pharmacy students responded to the modified DREEM questionnaires. The response rates from TU and CU were 100% (64/64) and 98.2% (217/ 221), respectively. There were 12 respondents who did not provide information on gender. Overall, Year 2 had 15 students with at least 1 missing item: 7 students had 1 missing value; the rest of the 8 students had missing values ranging from 2 to 41 question items. Year 3 had 7 students with 1 missing value and 3 students with missing values ranging from 3 to 16 question items. Table 5.5 shows the detail of missing data from individual respondents.

Table 5.5 Missing data of individual respondent

No	Year	Case	Location	Number of missing items
1	2	45	TU	1
2	2	54		14
3	2	62		1
4	2	63		1
5	2	85		34
6	2	95		1
7	2	98		22
8	2	109		21
9	2	114		7
10	2	247	CU	41
11	2	251		2
12	2	260		1
13	2	262		1
14	2	263		12
15	2	274		1
16	3	128	CU	7
17	3	149		1
18	3	157		1
19	3	162		3
20	3	166		16
21	3	192		1
22	3	205		1
23	3	210		1
24	3	221		1
25	3	226		1

A listwise deletion was performed on the original data with the assumption that the pattern of missing values does not depend on the data values (this condition is known as missing completely at random or MCAR). Twenty six students were excluded as they did not fully complete the questionnaire. Therefore, 256 questionnaires were analysed (equating to a response rate of 84%). The results presented are therefore based on data analysis using the 256 fully completed questionnaires. Table 5.6 shows the gender, university and year of study of the respondents after the listwise deletion.

Table 5.6 Demographic profiles of participants

Variables		Frequency (%) (N=256)	
		TU (n=62)	CU(n=194)
Year of study	Second year	44 (71.0)	99 (51.0)
	Third year	18 (29.0)	95 (49.0)
Sex	Male	11 (17.7)	68 (35.1)
	Female	51 (82.3)	126 (64.9)

5.4.2 Internal Consistency Reliability

The instrument was found to have acceptable Cronbach's alpha for all subscales except for subscale SSP, which was below the acceptable value 0.6. Cronbach's alphas for five scales were, SPL: 0.773; SPT: 0.687; SAP: 0.682; SPA: 0.769 and SSP: 0.433. The alpha value for the entire DREEM instrument (all items) was 0.908. The KMO test revealed a sampling adequacy of 0.854 and Barlett's test of sphericity reached statistical significance (p -value < 0.001), both supporting the adequacy of the data and sampling for factor analysis. Factor analysis revealed three factors solution, which was found to have internal consistency ranging from 0.586 to 0.939, accounting for 88.8% of the total variation (see Table 5.7). Overall, the pharmacy DREEM was found to have acceptable reliability but internal construct validity could not be established as the data did not support the five-factor structure of DREEM proposed by Roff and colleagues (Roff et al., 1997, Roff et al., 2001).

Table 5.7 Items loadings for the modified DREEM (n=256)

Subscale	Factors		
	I	II	III
SPT	0.929		
SPA	0.586		
SAP		0.934	
SPL		0.591	
SSP			0.939
Percentage of variance	66.621	11.946	10.295
Cumulative percentage	66.621	78.566	88.861

Students Perceptions of Learning (SPL); Students Perceptions of Teacher (SPT); Students Academic Self-Perceptions (SAP); Students Perception of Atmosphere (SPA); Students Social Self-Perceptions (SSP)

5.4.3 Kurtosis, Skewness and Normality Test

The histogram is the easiest way to observe non-normality. A normally distributed histogram has an approximately bell-shaped curve (Limpert et al., 2001). This means the majority of the data lies around the central peak, where the mean and median will be, with the rest of the data evenly spread on either side. Figure 5.1 illustrates the histogram of the mean DREEM subscales scores, corresponding skewness and kurtosis values for the datasets are shown as well. Skewness and kurtosis showed an acceptable range of normality, lying between -1 to

+1, indicating an approximately symmetric distribution.

Shapiro-Wilk normality tests showed a p -value greater than 0.05 (see Table 5.8). Normal distribution of data is indicated. Use of parametric statistics for the rest of the data analysis was thus justified.

Table 5.8 Tests of normality using Shapiro-Wilk

	Shapiro-Wilk		
	Statistic	df	Sig.
SPL	0.987	256	0.022
SPT	0.991	256	0.128
SAP	0.990	256	0.067
SPA	0.982	256	0.003
SSP	0.987	256	0.022
Total	0.994	256	0.383

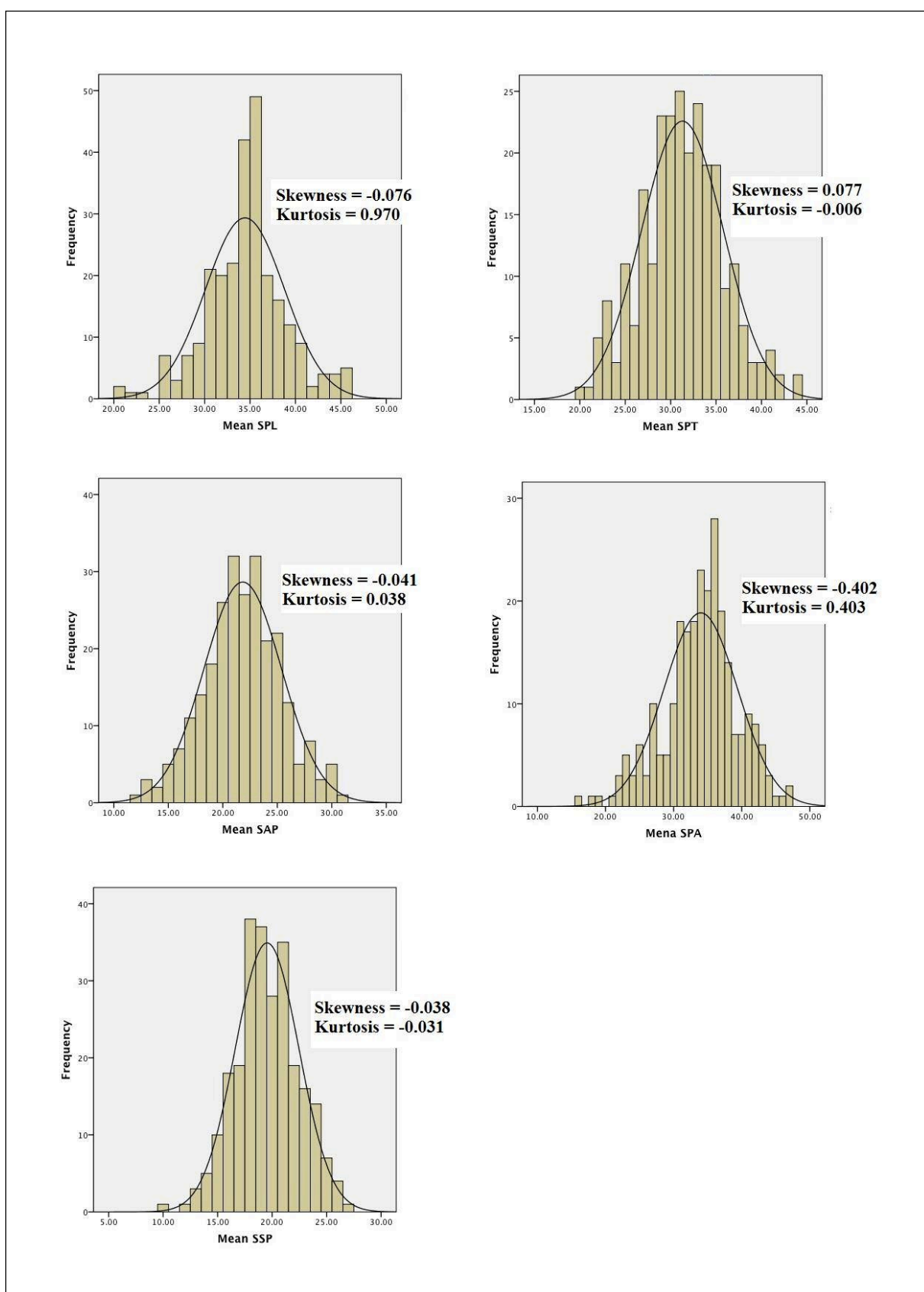


Figure 5.1 Histogram, Skewness and Kurtosis of the mean DREEM subscale scores

5.4.4 Comparison of DREEM Total Scores between TU and CU

All the results presented in the following sections are related to students' previous year's experiences: i.e. Year 2 students were asked to reflect on their Year 1 experiences, and Year 3 were asked to reflect on their Year 2 experiences.

The total score and the scores for each of the five subscales are presented in Table 5.9. The total mean scores were 128 for TU students and 145 for CU students out of a maximum of 200 (with 200 representing an ideal educational environment). The interpretation of each subscale was as suggested by Roff et al. (1997). Despite the differences between the subscale scores, TU and CU scores have the same verbal description, which indicate a more positive than negative learning environment.

Percentages were used because of the different maximum scores of each subscale. The highest per cent scores were observed for SPT (74%) at CU and SPL (67%) at TU. On the other hand, the lowest per cent scores were observed for SAP (69%) at CU and SPA (61%) at TU. Overall, the subscale scores reported by CU students were significantly higher than those of TU students (p -value < 0.05).

Table 5.9: Mean (SD) subscale and total DREEM scores in TU and CU (n=256)

DREEM subscale	TU	CU	Verbal description	<i>p</i>-value
SPL (max = 48)	32.34 (3.9) (67%)	35.11 (4.3) (73%)	A more positive perception	< 0.001
SPT (max = 44)	27.4 (3.6) (62%)	32.6 (4.04) (74%)	Moving in the right direction	< 0.001
SAP (max = 32)	20.5 (3.5) (64%)	22.2 (3.50) (69%)	Feeling more on the positive side	0.001
SPA (max = 48)	29.4 (4.9) (61%)	35.4 (4.7) (73%)	A more positive attitude	< 0.001
SSP (max = 28)	18.0 (2.6) (64%)	20.02 (2.9) (71%)	Not too bad	< 0.001
Total score (for different site of study)	127.7 (13.9) (63%)	145.4 (15.9) (72%)	More positive than negative	< 0.001

Values are presented as mean \pm SD subscale scores (% of maximum score)

Students Perceptions of Learning (SPL); Students Perceptions of Teacher (SPT); Students Academic Self-Perceptions (SAP); Students Perception of Atmosphere (SPA); Students Social Self-Perceptions (SSP)

5.4.5 Comparison of DREEM Total Scores and Subscale Scores between Groups

A one-way ANOVA was conducted to determine if significant differences existed between the total DREEM and subscale scores for all groups (see Table 5.10). A *post-hoc* analysis indicated that CU Year 2 students yielded significantly higher total DREEM scores than TU Year 2 and TU Year 3 students ($F_{3,252} = 27.90, p < 0.001$).

For the subscale scores:

- SPL - TU Year 2 students scored significantly lower than all other groups ($F_{3,252} = 10.04, p < 0.001$).
- SPT - TU Year 2 students scored significantly lower than all other groups ($F_{3,252} = 39.30, p < 0.001$).
- SAP - CU Year 2 students scored significantly higher than all other groups ($F_{3,252} = 9.76, p < 0.001$).
- SPA – CU Year 2 students scored significantly higher than TU Year 2 and Year 3 students but there were no significant difference between CU Year 2 and Year 3 students ($F_{3,252} = 31.87, p < 0.001$).
- SSP – CU students scored significantly higher than TU students. No significant difference observed within TU students nor CU students ($F_{3,252} = 8.47, p < 0.001$).

The highest per cent score was observed for the SPA (76%) in CU Year 2 students. On the other hand, the lowest per cent score was observed for the SPT (58%) in TU Year 2. Furthermore, TU Year 2 also scored the least for SPL (66%), SPA (59%) and SSP (64%). Overall, year-to-year comparison showed that the subscale scores reported by CU were significantly higher than those of TU students ($p\text{-value} < 0.05$).

Table 5.10 One-way ANOVA comparison between groups

	TU		CU				
DREEM subscale	Year 2	Year 3	Year 2	Year 3	F	df	P-value
SPL (max 48)	31.68 ^a (4.10) 66%	33.94 ^b (3.37) 71%	35.80 ^b (4.12) 75%	34.40 ^b (4.36) 72%	10.17	3, 252	< 0.001
SPT (max = 44)	25.93 ^a (3.01) 58%	30.83 ^b (2.46) 70%	33.20 ^c (4.01) 75%	31.88 ^{bc} (3.98) 72%	39.30		< 0.001
SAP (max = 32)	20.63 ^a (3.54) 64%	20.28 ^a (3.37) 63%	23.23 ^b (3.32) 73%	21.21 ^a (3.41) 66%	9.76		< 0.001
SPA (max = 48)	28.43 ^a (4.7) 59%	31.78 ^b (4.71) 66%	36.44 ^c (4.21) 76%	34.40 ^c (5.01) 72%	31.87		< 0.001
SSP (max = 28)	17.91 ^a (2.60) 64%	18.33 ^a (2.50) 65%	20.26 ^b (2.96) 72%	19.77 ^b (2.78) 71%	8.47		< 0.001
Overall (max = 200)	124.60 ^a (13.59) 62%	135.17 ^b (11.81) 68%	148.94 ^c (15.51) 74%	141.66 ^c (15.47) 71%	27.90		< 0.001

Values are presented as mean \pm SD subscale scores (% of maximum score)

^{abcd} Scores with no common superscript in the same row differ significantly (p -value < 0.05)

Students Perceptions of Learning (SPL); Students Perceptions of Teacher (SPT); Students Academic Self-Perceptions (SAP); Students Perception of Atmosphere (SPA); Students Social Self-Perceptions (SSP)

	Range of DREEM subscale scores, verbal descriptions	
SPL	25-36, A more positive perception	
SPT	23-33, Moving in the right direction	
SAP	17-24, Feeling more on the positive side	
SPA	25-36, A more positive attitude	37-48, A good feeling overall
SSP	15-21, Not too bad	

5.4.6 Comparison of DREEM Item Scores between Groups

In order to identify the specific strengths and weaknesses within the educational environments, individual items were analysed. The items that have a mean score above 3 are positive points, indicating areas of strengths. Any item with a mean of less than 2 should be examined closely as they indicate areas of weakness. Items with a mean score between 2 and 3 are aspects of the environment that could be improved (McAleer and Roff, 2001, Miles et al., 2012).

The individual items with the five highest scores and individual items with the five lowest scores at TU and CU are shown in Table 5.11. The statistical analysis was undertaken after negative statements items (4, 8, 9, 17, 25, 35, 39, 48, 50) were recorded to produce a reverse score, i.e. 0 for SA, 1 for A, 2 for U, 3 for D and 4 for SD (McAleer and Roff, 2001). Both groups of students from TU and CU had the highest score for the item (2. *The teachers are knowledgeable*), which shows a high level of agreement between students. Similarly, the lowest scoring item was the same for both TU and CU students: (27. *I am able to memorise all I need*). The results from the one-way ANOVA and *post-hoc* analysis in each DREEM subscale will be discussed in the following section.

Table 5.11 Five individual items with the highest and lowest scores at TU and CU

Item No.	Statement with highest scores	Score
TU		
2	The teachers are knowledgeable	3.29
15	I have good friends in this school	3.24
1	I am encouraged to participate during the teaching	3.19
45	Much of what I have to learn seems relevant to a career in pharmacy	3.18
18	During university experiential placement, the community pharmacist teachers are patient with patients	3.15
CU		
2	The teachers are knowledgeable	3.72
15	I have good friends in this school	3.42
19	My social life is good	3.27
35	<i>I find the experience disappointing</i>	3.25
34	The atmosphere is relaxed during workshops	3.22
Item No.	Statement with lowest scores	Score
TU		
27	I am able to memorise all I need	1.50
17	<i>Cheating is a problem in this school</i>	1.55
8	<i>The teachers ridicule the students</i>	1.58
50	<i>The students irritate the teachers</i>	1.60
35	<i>I find the experience disappointing</i>	1.68
CU		
27	I am able to memorise all I need	1.85
25	<i>The teaching over emphasises factual learning</i>	2.06
9	<i>The teachers are authoritarian</i>	2.07
14	I am rarely bored on this course	2.32
4	<i>I am too tired to enjoy the course</i>	2.49

Items are scored as 4 for SA, 3 for A, 2 for U, 1 for D and 0 for SD, except for negative statements. Negative statements are italicised in the table; for these the scoring was reversed such that 'disagree' gave a high score. For example, the high CU score of '*I find the experience disappointing*' indicated most students disagreed that it was a disappointing experience. Conversely the low score for '*The students irritate the teachers*' represents that most students agreed that this was the case.

Students' Perception of Learning (SPL)

Table 5.12 reveals that statistically significant lower item scores were reported by TU Year 2 students. They felt that the teaching was too teacher-centred [item 48, 1.84 (0.83)] and they were worried that the teaching was not sufficiently concerned to develop their competency [item 16, 2.64 (0.75)].

Students in both institutions agreed that they were encouraged to participate in class (item 1, $F_{2,252} = 0.102, p=0.595$) and the item score was high at > 3 across the group. Of the twelve items in the SPL subscale, three items scored between 2 and 3 (*7. The teaching is often stimulating*), (*25. The teaching over emphasises factual learning*) and (*47. Long term learning is emphasised over short term*) in all groups, indicating areas that could be improved.

Table 5.12 Students' Perceptions of Learning (SPL) – Main responses to DREEM items for students from different group

Items	TU Year 2	TU Year 3	CU Year 2	CU Year 3
1. I am encouraged to participate during the teaching	3.20 (0.59)	3.17 (0.51)	3.15 (0.60)	3.16 (0.47)
7. The teaching is often stimulating	2.80 (0.60)	2.61 (0.70)	2.92 (0.68)	2.89 (0.66)
13. The teaching is student-centred	2.77 (0.740)	3.11 (0.58)	3.12 (0.54)	2.95 (0.53)
16. The teaching is sufficiently concerned to develop my competence	2.64 (0.75)*	3.06 (0.42)	3.24 (0.61)	3.05 (0.67)
20. The teaching is well focused	2.82 (0.66)	3.44 (0.62)	3.24 (0.57)	3.67 (0.47)
22. The teaching is sufficiently concerned to develop my confidence	2.75 (0.53)	2.56 (0.86)	3.16 (0.70)	2.92 (0.65)
24. The teaching time is put to good use	2.64 (0.87)	2.89 (0.58)	3.03 (0.66)	2.99 (0.59)
25. <i>The teaching over emphasises factual learning</i>	2.07 (0.76)	2.11 (0.76)	2.06 (0.91)	2.06 (0.84)
38. I am clear about the learning objectives of the course	2.91 (0.52)	3.17 (0.51)	3.07 (0.70)	2.94 (0.73)
44. The teaching encourages me to be an active learner	2.55 (0.70)	2.89 (0.47)	3.12 (0.60)	2.84 (0.80)
47. Long term learning is emphasised over short term	2.70 (0.70)	2.78 (0.81)	2.97 (0.68)	2.86 (0.75)
48. <i>The teaching is too teacher-centred</i>	1.84 (0.83)*	2.50 (0.62)	2.71 (0.69)	2.67 (0.63)

* Statistically significantly lower responses than student of other groups (ANOVA p -value < 0.05)

Italic items are negative statements

	Items scores > 3, area of strengths
	Item scores between 2-3, could be improved
	Item scores < 2, area of weakness

Students' Perception of Teachers (SPT)

The SPT subscale included eleven items. There were four items with negative statements: (8. *The teachers ridicule the students*), (9. *The teachers are authoritarian*), (39. *The teachers get angry in class*) and (50. *The students irritate the teachers*). All four statements had a score < 2 in TU Year 2 after reversal (see Table 5.13), indicating the students' agreement with the items.

The *post-hoc* study also revealed that the majority of respondents agreed that the teachers were knowledgeable [item mean item score > 3]. Nevertheless, TU Year 2 and Year 3 had statistically lower responses than students of other groups ($F_{2,252} = 14.41, p < 0.001$). The highest means item scores recorded were in TU Year 3 [3.76 (0.43)]. The other items scored between 2 and 3, indicating areas that could be improved.

Table 5.13 Students' Perceptions of Teachers (SPT) – Main responses to DREEM items for students from different groups

Items	TU Year 2	TU Year 3	CU Year 2	CU Year 3
2. The teachers are knowledgeable	3.23 (0.48)*	3.44 (0.62)*	3.76 (0.43)	3.67 (0.47)
6. During university experiential placements, the community pharmacist teachers are patient with patients	3.32 (0.64)	2.78 (0.65)	3.01 (0.63)	2.80 (0.68)
8. <i>The teachers ridicule the students</i>	1.27 (0.87)*	2.33 (0.84)	3.13 (0.78)	3.15 (0.79)
9. <i>The teachers are authoritarian</i>	1.86 (1.05)	1.78 (0.55)	2.10 (1.02)	2.03 (0.91)
18. During university experiential placements, the community pharmacist teachers have good communication skills with patients	3.23 (0.61)	2.94 (0.42)	3.14 (0.69)	2.85 (0.80)
29. The teachers are good at providing feedback to students	2.75 (0.75)	2.89 (0.58)	2.72 (0.93)	2.61 (0.83)
32. The teachers provide constructive criticism here	2.52 (0.82)	2.44 (0.62)	2.89 (0.77)	2.78 (0.80)
37. The teachers give clear examples	2.82 (0.66)	3.17 (0.38)	3.06 (0.65)	2.95 (0.61)
39. <i>The teachers get angry in class</i>	1.27 (0.82)*	3.06 (0.80)	3.32 (0.65)	3.12 (0.73)
40. The teachers are well prepared for their classes	2.57 (0.93)*	3.17 (0.51)	3.20 (0.62)	3.21 (0.54)
50. <i>The students irritate the teachers</i>	1.09 (0.98)*	2.83 (0.86)	2.87 (0.80)	2.72 (0.86)

* Statistically significantly lower responses than students of other groups (ANOVA, p value < 0.05)

Italic items are negative statements

	Items scores > 3, area of strengths
	Item scores between 2-3, could be improved
	Item scores < 2, area of weakness

Students' Academic Self-Perception (SAP)

In the analysis of eight individual items of SAP subscale, three items scored between 2 and 3 across all groups: (5. *Learning strategies which worked for me before continue to work for me now*), (10. *I am confident about passing this year*) and (31. *I have learnt a lot about empathy in my profession*) (see Table 5.14). When talking about their experiences in the previous year, negative item 27 (*I am able to memorise all I need*) had a score < 2 in TU Year 2, TU Year 3 and CU Year 3 students, indicating that students agreed with the statement. On the contrary, item 45 (*Much of what I have to learn seems relevant to a career in pharmacy*) received a high score, > 3 , in most student groups (TU Year 2, TU Year 3 and CU Year 2), indicating the agreement between students about the relevancy of the curriculum to their future career.

Table 5.14 Students' Academic Self-Perceptions (SAP) – Main responses to DREEM items for students from different groups

	TU Year 2	TU Year 3	CU Year 2	CU Year 3
5. Learning strategies which worked for me before continue to work for me now	2.48 (0.85)	2.83 (0.51)	2.90 (0.71)	2.54 (0.84)
10. I am confident about passing this year	2.41 (0.90)	2.39 (0.98)	2.78 (0.72)	2.75 (0.74)
21. I feel I am being well prepared for my profession	2.59 (0.69)	2.28 (0.96)	3.23 (0.68)	2.96 (0.77)
26. Last year's work has been a good preparation for this year's work	2.86 (0.77)	2.78 (0.65)	3.13 (0.68)	2.67 (0.82)
27. I am able to memorise all I need	1.59 (0.90)	1.28 (0.90)	2.07 (0.99)	1.62 (1.00)
31. I have learnt a lot about empathy in my profession	2.91 (0.52)	2.89 (0.47)	2.96 (0.80)	2.80 (0.85)
41. My problem-solving skills are being well developed here	2.55 (0.70)	2.83 (0.51)	3.08 (0.58)	3.15 (0.56)
45. Much of what I have to learn seems relevant to a career in pharmacy	3.25 (0.65)	3.00 (0.59)	3.08 (0.80)	2.73 (0.90)

	Items scores > 3, area of strengths
	Item scores between 2-3, could be improved
	Item scores < 2, area of weakness

Students' Perception of Atmosphere (SPA)

The SPA subscale included twelve items (Table 5.15). The statistically significant lowest mean item scores recorded were for negative statement item (17. *Cheating is a problem in this school*) in TU Year 2 [1.07 (1.04)]. Other negative statements with statistically significant lower mean item scores were: (35. *I find the experience disappointing*) (TU Year 2, $F_{2,252} = 94.22$, $p < 0.001$) and (42. *The enjoyment outweighs the stress of studying pharmacy*) (TU Year 2 and TU year 3, $F_{2,252} = 16.99$, $p < 0.001$), indicating the students' agreement with the items.

Table 5.15 Students' Perceptions of Atmosphere (SPA) – Main responses to DREEM items for students from different groups

	TU Year 2	TU Year 3	CU Year 2	CU Year 3
11. The atmosphere is relaxed during university community pharmacy experiential placements	2.80 (0.90)	2.83 (0.62)	2.95 (0.68)	2.43 (0.88)
12. This course is well timetabled	2.20 (1.13)*	2.78 (0.88)	2.82 (0.77)	2.78 (0.81)
17. <i>Cheating is a problem in this school</i>	1.07 (1.04)*	2.72 (1.32)	3.22 (0.90)	3.22 (0.95)
23. The atmosphere is relaxed during lectures	2.59 (0.84)	2.78 (0.65)	2.97 (0.71)	2.77 (0.79)
30. There are opportunities for me to develop interpersonal skills	2.84 (0.53)	2.83 (0.51)	3.13 (0.63)	2.92 (0.71)
33. I feel comfortable in class socially	2.89 (0.69)*	2.61 (0.92)*	3.29 (0.54)	3.12 (0.73)
34. The atmosphere is relaxed during workshops	2.89 (0.84)	2.78 (0.81)	3.30 (0.50)	3.13 (0.69)
35. <i>I find the experience disappointing</i>	1.23 (0.74)*	2.78 (0.65)	3.27 (0.74)	3.23 (0.71)
36. I am able to concentrate well	2.36 (0.94)	2.56 (0.71)	2.74 (0.65)	2.63 (0.76)
42. The enjoyment outweighs the stress of studying pharmacy	1.84 (0.94)*	1.83 (0.79)*	2.86 (0.80)	2.47 (0.94)
43. The atmosphere motivates me as a learner	2.64 (0.75)	2.72 (0.67)	2.99 (0.69)	2.77 (0.75)
49. I feel able to ask the questions I want	3.09 (0.68)	2.56 (0.78)	2.90 (0.68)	2.94 (0.77)

* Statistically significantly lower responses than students of other groups (ANOVA, p value < 0.05)

Italic items are negative statements

	Items scores > 3, area of strengths
	Item scores between 2-3, could be improved
	Item scores < 2, area of weakness

Students' Social Self-Perception (SSP)

The SSP subscale included seven items. The only item with score < 2 was a negative item: (14. *I am rarely bored on this course*) (Table 5.16), indicating students' agreement with the item. Statistically significant lower mean item scores were observed in item 3 (*There is a good support system for students who get stressed*) (TU Year 2, $F_{2,252} = 7.31, p < 0.001$) and item 19 (*My social life is good*) (TU Year 2 and TU Year 3, $F_{2,252} = 10.16, p < 0.001$). High scores (> 3) were observed in item 15 (*I have good friends in the school*) and item 46 (*My accommodation is pleasant*).

Table 5.16 Students' Social Self-Perceptions (SSP) – Main responses to DREEM items for students from different groups

	TU Year 2	TU Year 3	CU Year 2	CU Year 3
3. There is a good support system for students who get stressed	2.20 (0.80)*	2.89 (0.83)	2.84 (0.80)	2.58 (0.77)
4. <i>I am too tired to enjoy the course</i>	2.09 (1.07)	2.17 (0.99)	2.47 (0.91)	2.51 (0.77)
14. I am rarely bored on this course	1.86 (0.93)	1.83 (0.99)	2.27 (1.05)	2.38 (0.90)
15. I have good friends in this school	3.34 (0.68)	3.00 (0.49)	3.47 (0.68)	3.37 (0.73)
19. My social life is good	2.70 (0.77)*	2.89 (0.58)*	3.33 (0.55)	3.21 (0.74)
28. I seldom feel lonely	2.59 (0.97)	2.33 (0.59)	2.64 (1.30)	2.57 (1.15)
46. My accommodation is pleasant	3.11 (0.78)	3.22 (0.65)	3..23 (0.77)	3.16 (0.83)

* Statistically significantly lower responses than students of other groups (ANOVA, p value < 0.05)

	Items scores > 3, area of strengths
	Item scores between 2-3, could be improved
	Item scores < 2, area of weakness

5.5 Discussion

This study set out to examine and compare the educational environments as perceived by pharmacy students at TU and CU. This is the first use of DREEM at TU and CU, and its first use to compare a learning environment perceived in a transnational pharmacy twinning programme.

5.5.1 Students' Response Rate

A high response rate of 99% was obtained in this study, which provides a measure of reassurance that the findings can be projected onto the population from which the sample was drawn (Wiseman, 2003). However, not all students completed all questions on the questionnaire. Under the MCAR assumption, the remaining sample after listwise deletion remains a random sample from the original population (Cameron and Trivedi, 2005). A completed response rate of 84% was considered acceptable and it showed that the study had access to the views of the majority of the students (Till, 2004, Jakobsson et al., 2011, Shehnaz and Sreedharan, 2011).

5.5.2 Internal Consistency and Construct Validity of DREEM Instrument

In this phase of the study, the overall DREEM scale had an excellent internal consistency (0.90) (Nunnally and Bernstein, 1994, Streiner and Norman, 2008, Al-Osail et al., 2015) based on its administration to 256 students. However, the internal consistency of the five scales were quite variable, ranging from 0.433 to 0.77. This is in line with the studies conducted in Ireland (Hammond et al., 2012) and Greek (Dimoliatis et al., 2010), where the lowest subscale score reported was for social self-perceptions (Ireland: 0.55, Greek: 0.58, current study: 0.43) and the highest was the learning subscale (Ireland: 0.78, Greek: 0.79, current study: 0.77). The total Cronbach's alpha of the DREEM was also higher than that reported by Hammond et al. (2012) and Yusoff (2012) and lower than that of Vaughn et al. (1996), Wang (2009) and Mogre and Amalba (2016).

The data did not support the five-factor structure of the original DREEM proposed by Roff and colleagues (Roff et al., 1997) nor the structure proposed by Hammond and colleagues (Hammond et al., 2012). The findings were consistent with studies conducted in Greece (Dimoliatis et al., 2010), Sweden (Jakobsson et al., 2011), and Malaysia (Yusoff, 2012), in which the construct validity could not be established using factor analysis. The current study suggested the need of revising the putative five-factor model proposed by its developers.

Despite the limitations of its psychometric credentials, DREEM is a useful tool for appraising the educational environment in medical and healthcare-related institutions (Brown et al., 2011, Foster Page et al., 2012, Palmgren et al., 2014). In this respect, limitations need to be considered when interpreting the findings as the samples used were confined to Year 2 and Year 3 pharmacy students in one pharmacy school each in Malaysia and UK, which might not represent the student distribution across all pharmacy schools.

5.5.3 Indication of the Overall Mean DREEM Scores

In general, the findings of the current analysis are comparable with those found by Brown and colleagues on pharmacy students (Brown et al., 2011). In this phase of the current study, students' perceptions of the learning environment were positive rather than negative (with scores of 124-148); however, students did not expect an excellent environment (score of 151-200). TU Year 2 had the lowest overall DREEM scores. This may be attributable to the unpleasant experience they had with individual lecturers at TU (as reported in Chapter 4). The results of this DREEM survey indicate that the majority of students scored the learning environment as positive, which is a particularly important finding in the context of TNE. The importance of ensuring the students' experience is positive at both host and home institution is vital for delivering equivalent learning experiences (O'Mahony, 2014).

Nevertheless, there are specific areas with low subscale and individual item scores which need to be addressed. Differences were observed under each subscale score. It is interesting to note that there were statistically significant differences between each of the subscale scores between TU and CU (refer to Table 5.10) although all subscale scores fell within the same verbal descriptor.

The current study obtained mean subscale scores, which ranged between 58-76% (as a percentage of maximum possible scores). Brown's (2011) study, which involved 116 pharmacy students at Monash University, Australia, also had similar mean subscale scores, ranging from 64-69%. The studies indicated that pharmacy students generally hold positive perceptions toward their course environment. It is therefore worth looking at individual item scores to further explore students' perceptions of the learning environment.

5.5.4 Mean DREEM Subscale and Item Scores

Students' Perceptions of Learning

TU Year 2 perceived the teaching to be too teacher-centred (refer Table 5.12). Globally, many institutions reported similar concerns (Abraham et al., 2008, Demiroren et al., 2008, Thomas B.S et al., 2009, Aghamolaei and Fazel, 2010, Arzuman et al., 2010). When education is teacher-centred, teachers serve as the centre of knowledge, directing the learning process and controlling students' access to information (Weimer, 2002). Tengku Kasim and Furbish (2010) reported that, while Malaysian students showed a preference to student-centred approaches in teaching and learning, it was the teachers who were reluctant to shift their traditional roles from experts to being the facilitators of learning. Yusoff and colleagues (Yusoff et al., 2013) recently reported that in Malaysia, there has been a call for a move from teacher to student-centred learning. The move is to provide students with learning opportunities that promote creative and critical thinking and to train their skills in preparation for the working world.

The findings in this phase of the current study suggest that lecturers at TU should consider student-centred learning approaches to teaching as the approaches bring positive influences to students' academic performance, attitudes toward learning, and persistence in programmes (Froyd and Simpson, 2008). Using student-centred learning approaches to teaching do not mean that teachers do not lecture; it could mean less work in class but more work outside to prepare for lectures and evaluate students' work. Students' initial resistance may be expected if they were asked to behave differently in class. Therefore, it may be helpful to provide

resources to these students so that it reinforces their inclination to accept responsibility for their own learning.

On a positive note, a high score of more than three points has been observed in all groups for item 1 (*I am encouraged to participate during the teaching*). All students perceived that significant efforts have been made to encourage student participation in class. However, it is not known whether students actually participated in class although opportunities were given. Important factors influencing students' participation include students' motivation to learn and the kind of environment and support for participation offered through classroom instruction.

To create such successful active learning environments, both faculty and students must make adjustments to their respective “traditional” roles in the classroom. For instructors who are committed to promote active learning, the challenge lies in helping students understand the necessity of becoming active colleagues in learning. However, researchers have argued that neither teacher behaviour nor student characteristics alone can adequately account for students' participation but rather students' behaviour is a unique outcome of the interaction between these two factors (Turner, 2004). Specifically, it is the different interaction patterns in each class that can influence students' attitude towards learning.

Students' Perceptions of Teachers

The SPT subscale (refer Table 5.13) has the lowest score as a percentage of maximum possible scores. Based on their previous year' experience, TU Year 2 students' low score items were related to: '*the teachers ridiculed the students*', '*the teachers are authoritarian*' and '*the teachers get angry in class*'. In addition, students perceived that they had irritated their teachers. Students' focus group did bring up the issue of communication between students and lecturers. Chapter 4 reported that some lecturers ridiculed students when students could not comprehend what was being taught in class. There were occasions where a lecturer knocked on one student's head when she could not understand what was being told in a practical workshop. The students also reported in the focus group that lecturers got angry easily when they could not answer questions asked by students or when they had to repeat what was said during practical workshops. These would have contributed to students' beliefs

that they had irritated their lecturers. It was noted that previous DREEM studies reported a similar low score for item 8 (*The teachers ridiculed the students*) (Bassaw et al., 2003, Al-Hazimi et al., 2004b, Mayya and Roff, 2004) with the lowest score of 1.27 recorded in a faculty of medical sciences in Trinidad (Bassaw et al., 2003).

As a result of these findings, it is important to remind teachers that respect for the student is critical to the learning process (Denz-Penhey and Murdoch, 2009, Veerapen and McAleer, 2010, Hasan and Gupta, 2013). Excessively harsh criticism is discouraging and damaging to students' self-confidence. In addition, teachers need to be trained in providing constructive feedback so that students can take responsibility for their own learning (Edgren et al., 2010, Veerapen and McAleer, 2010, Unnikrishnan et al., 2012).

As one of the top five low score items at CU (2.07) and a score of only 1.84 at TU (9. *The teachers are authoritarian*), students agreed that their teachers were authoritarian. An authoritarian teacher uses extreme discipline and expect unquestioning obedience from students (Baumrind, 1971). There is often little discussion in an authoritarian classroom environment and students know they should not interrupt the teacher. Since verbal exchange and discussion are discouraged, students do not have the opportunity to learn and/ or practice communication skills (Dever and Karabenick, 2011), became less motivated (Belvel, 2010) and could be ineffective at social interaction (Carl, 2002).

Kurland (2008) emphasised that mutual respect is important in a teacher-student relationship. As long as such respect exists and is communicated to students, they would be appreciated by them. This could be done by encouraging students to express their ideas, consider their ideas seriously, and taking time to understand the source of their ideas and what contributed to their thinking. Chapter 4 highlighted that some TU lecturers were not only unable to explain what they were lecturing, they would even show anger when students could not comprehend them. Students also elaborated that the practical sessions were confusing because lecturer expect students to finish the task without questioning. These incidents could have contributed to the low scores for this item. However, unlike TU, CU students' views were not investigated but the assumption is that students considered their lecturers to be authoritarian when there were no interaction during lecture and when the teacher was

perceived to be cold and impersonal (Baumrind, 1971).

On the other hand, students at TU and CU gave a high score to their teacher's knowledge, agreeing that the academic staff had good pharmacy knowledge, which provided assurance that staff quality between both institutions are equal and comparable.

Students' Academic Self-Perceptions

Items in this domain that scored less than 2 points pertained to students being unable to memorise everything they need in the course (refer to Table 5.14). Numerous studies have reported similar concerns (Bassaw et al., 2003, Al-Hazimi et al., 2004a, Jiffry et al., 2005, Demiroren et al., 2008, Riquelme et al., 2009, Edgren et al., 2010, Zawawi and Elzubeir, 2012).

Pertaining to students' learning styles, it is well known that memorisation (or rote learning) is valued highly in Chinese culture and is used widely in teaching (Biggs, 1996). Previous research has found that students and teachers in East Asian countries often see memorisation and understanding as factors working together to produce higher quality outcomes. In contrast, in the West, it is more common to associate memorising with 'surface' and understanding with 'deep' approaches to learning (Dahlin and Watkins, 2000). It was shown that there is a fine distinction between "mechanical memorisation" and "memorisation with understanding", with the former being used in a surface approach and the latter strategy in a deep approach (Marshall and Case, 2005). Memorisation through repetition can also achieve high levels of academic performance (Cooper, 2004).

In the current study, a reduction in the emphasis on knowledge and an avoidance of overburdening factual load may ease the situation. However, one has to bear in mind that this is a fairly common observation in medical and other healthcare professional programs pertaining to the quantity and quality of information that has to be absorbed during undergraduate studies (Till, 2005).

Students' Perceptions of Atmosphere

Items in this subscale that scored less than 2 points pertained to cheating problems in the school, disappointment with the experiences, and stress over enjoyment. The findings draw attention to the differences between all groups. In general, TU year 2 students were found to have the most negative perceptions (Table 5.15).

At TU, the academic integrity policy and procedures outline the academic conduct that need to be upheld by students at all times. Cheating has been defined as using unauthorised materials or receiving unauthorised assistance during an examination or other academic exercise. It is not known whether cheating is evident at TU or whether it was just students' feeling that it was a problem at the school. At the time of research, no cheating case was reported during the exams however the issue certainly warrants further investigation. The findings also coincide with those from other institutions (Jiffry et al., 2005, Riquelme et al., 2009, Shehnaz et al., 2014). Institutional regulations, fitness to practise procedures, and the GPhC code of conduct for students (General Pharmaceutical Council, 2010) may need to be re-emphasised to students prior to assessments. Furthermore, briefing on the duties and responsibilities of invigilators during assessments may also be required.

TU Year 2 students also expressed their disappointment in the area of school experiences. They felt that the stress had outweighed the enjoyment of the course. Results from Chapter 4 support these findings where there were discussions about the misalignment between students' expectations and experiences on the area of teaching strategies employed by TU staff, timetable arrangement, and facilities at TU. Therefore, special attention should be given to students to promote the overall experience in various aspects of teaching and learning at TU.

Students' Social Self-Perceptions

Items in this subscale that scored less than 2 points pertained to boredom. TU Year 2 and Year 3 students admitted that they got bored of the course. While there was no study on student boredom viz. pharmacy course, the DREEM study produced similar findings in

medical students who also feel bored of their course (Jiffry et al., 2005, Roff, 2005, Arzuman et al., 2010). These discoveries would need to be explored further to identify the causes of boredom and find ways to make it more engaging.

On the other hand, all groups of students gave high scores of more than 3 points to (15. *I have good friends in this school*) and (46. *my accommodation is pleasant*). This is a sign of good social support in these areas. Making friends and forming social networks often go hand-in-hand with success in studies. Findings in this phase of the current study will help the school explore further the social aspects of student life. Taylor's University Pharmacy Students' Society (TUPSS) could play a role in this respect. The society was established in 2013 to enhance students' university experience so that it goes beyond textbooks and classes. It does so by encouraging activities around campus and outside classrooms. This is also possibly a way to improve their work life balance.

There were 16 items that scored between 2 and 3 and this means that there is much room for improvement in the schools' educational environment. However, not a single item scored 3.50 or higher, which means there is no particularly excellent aspect of the educational environment of the pharmacy school. An executive report (Appendix 5.3) on the findings of the DREEM questionnaire has been shared with all CU and TU School of Pharmacy staff. The schools had addressed some of the issues identified from this research (refer Appendix 5.4).

5.5.5 Summary

In comparing the learning environment perceived by pharmacy students at their second and third year at TU and CU, it was found that the students' perception in each aspects: learning, teacher, atmosphere, academic and social life were generally comparable with the exceptions highlighted in Section 5.5.4. Students rated the learning environment second highest on all measures (see Table 5.1 and Table 5.9), with all variables being judged more favourably by CU students than TU students.

5.6 Limitations and Further Work

This phase of the current study acknowledges several limitations. Firstly, the number of participants viz. sample size varied between years of study and site. The extent to which these results can be generalised depends on similar studies being carried out at other pharmacy schools in Malaysia and the UK.

Secondly, there has been an inadequate focus on establishing and maintaining the psychometric credentials. In particular, there is concern relating to the internal consistency of the five scales and construct validity (Wang et al., 2009, Dimoliatis et al., 2010, Jakobsson et al., 2011, Hammond et al., 2012). In addition, the modification of the instrument may have had an effect on its construct validity.

Lastly, as a recognised disadvantage (see section 3.1), the measurement with DREEM, which is a quantitative approach, only informed how many students behaved in a certain way - it does not adequately answer the questions of “how” and “why”. The researcher acknowledged the limitation and therefore qualitative research was carried out in next phase of research to examine students’ insights relating to the items that were scored as unsatisfactory (<2).

5.7 Recommendations

Recommendations were made to the schools at the end of this phase of study. The schools had addressed the issues identified:

Recommendations	Actions
To remind students the examination rules and regulations prior to assessments. (refer Section 5.4.6, Students’ Perception of Atmosphere)	At TU, the importance of academic integrity was reinforced; invigilators were reminded to be vigilant during students’ exams
To use examples of relevant local context in teaching to enhance students’ understanding. (refer Section 5.4.6, Students’ Perception of Learning)	Individual staff at TU to put in effort and be familiar with the teaching materials
To promote the participation of students in various activities at TU. (refer Section 5.4.6, Students’ Perception of Atmosphere)	Students participated in public health promotion events, sports carnival and inter-school pharmacy quiz competitions during their study at TU

5.8 Chapter Conclusions

This phase of the study aimed to examine and compare the learning environment perceived by the pharmacy students at TU and CU. In this phase of the study, students' views were successfully captured with a 50-item modified DREEM questionnaire. The DREEM inventory, notwithstanding its limitations, allowed areas of concern to be highlighted. CU responded more positively than TU students on most items in the DREEM subscale. It was observed that the perceptions of teacher and the atmosphere created the most frustration in TU students' overall experiences. In the end, students at both institutions perceived an overall positive learning environment in their respective schools. In the next phase (Phase 3), investigation would be carry out to further explore students' expectations and experiences related to study transition. Qualitative research would also be carried out to examine students' insights relating to the items that were scored as unsatisfactory (<2) in DREEM.

Chapter 6 Students' Expectations and Experiences of Transfer

6.1 Introduction

The previous chapter examined the learning environment experienced by TU and CU students. Comparison was made to see if there were equivalent standard of learning environments between CU and TU. While the positive results obtained were encouraging, there were certain areas that needed to be looked into closely. This chapter explores what Cohort 1 TU students' thoughts were about their upcoming experience studying abroad at CU (referred to as pre-arrival expectations) and compared it to their actual experiences (referred to as post-arrival experiences). Cohort 2 TU students were also invited to add further knowledge to the study. The time point of this Phase 3 longitudinal study is illustrated in Figure 6.1. The pre-arrival stage assessed students' expectations while they were still in their home country (Malaysia) awaiting to further their MPharm studies in the UK. The post-arrival stages examine their experiences upon arrival in the UK. In this part of the study, students were asked to discuss different areas including, but not limited to, course curriculum, teaching staff, student life, classmates, support services and facilities at the university. It was hoped that the research would help stakeholders determine if they were adequately meeting the needs of the transnational students. The results also aimed to provide useful information to assist the transition of the students in the TU-CU collaborative programme. In addition, the researcher took the opportunity to investigate further the strengths and weaknesses of TU as perceived by the students in relation to the DREEM results, exploring the reasons behind some of the low item scores. In summary, this study will focus to address the research objective outlined in Chapter 1 (section 1.4) and an objective related to DREEM analysis:

- (1) to find out students' expectations and experiences in six distinct areas (course curriculum, teaching staff, student life, classmates, support services and facilities at university); and
- (2) to examine Cohort 1 and Cohort 2 students' insights relating to the items that were scored as unsatisfactory (<2) in DREEM results.

6.2 Ethical Considerations

Ethics approval for the study was sought from and granted by the SREC (see Appendix 6.1-Appendix 6.4). Information sheets (Appendix 6.5-6.8) and consent forms (Appendix 4.8) were sent to students at different stages of the study.

6.3 Study Population and Sampling

As the current research aimed to uncover students' expectations and experiences of transfer, the potential participants for this study needed to meet the following criteria.

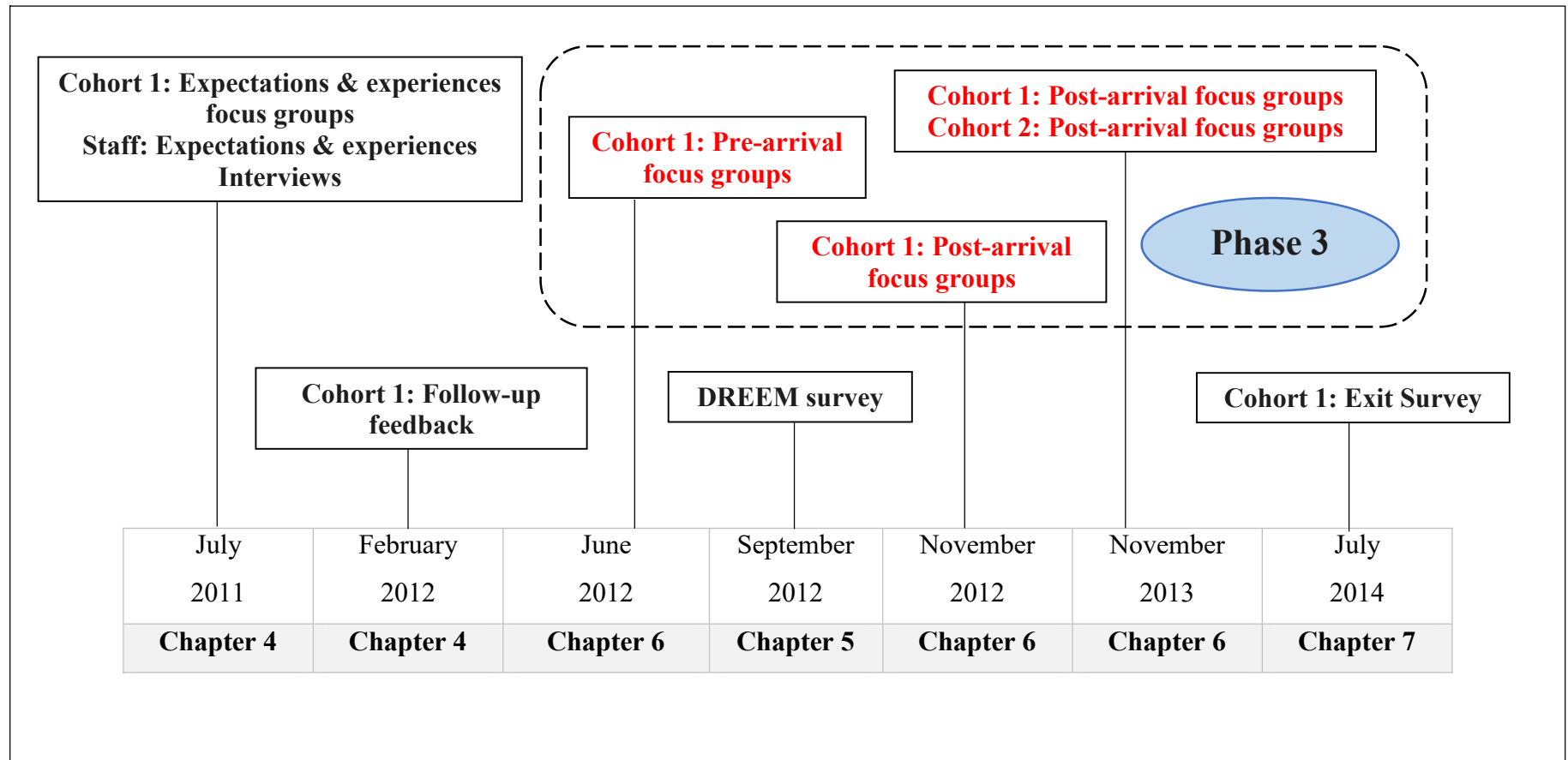
Students for pre-arrival study needed to:

1. have completed the first two years of the 2+2 MPharm program in Taylor's University in June 2012.
2. be intending to pursue their MPharm at Cardiff University.

Students for post-arrival study needed to:

1. have completed the first two years of the 2+2 MPharm program in Taylor's University at the time of research.
2. have commenced their education in Cardiff before October 2013.

According to the information gathered from Taylor's School of Pharmacy Academic Services, 20 students met the sample criteria for the pre-arrival study in June 2012 and post-arrival study in November 2012. For the post-arrival study in November 2013, 41 students (Cohort 1, n=19; Cohort 2, n=22) met the sample criteria. The original 20 students in 2012 were reduced to 19 eligible students in 2013 due to one student withdrew from the programme as a result of poor academic performance.



DREEM: Dundee Ready Education Environment Measure

Figure 6.1 Phase 3 of the longitudinal multiphase mixed methods research

6.4 Data Collection and Subject Recruitment

This Phase 3 study was undertaken between June 2012 and November 2013. Qualitative data were collected from students using focus groups and questionnaires with open-ended questions. The last student focus group for the pre-arrival study was carried out in June 2012 while the last post-arrival study was carried out in November 2013. The rationale for choosing focus groups with students was detailed in Chapter 3.

6.4.1 Focus Groups

Focus group schedules were developed to assist in data collection. Drafts of semi-structured focus group schedules were designed and reviewed by the research team (consisting of the supervisory team and the researcher herself). The focus group schedules included prompts and probes to gather as much detailed information as possible. The final focus group schedules (i.e. one pre-arrival and three post-arrival) (Appendix 6.9-6.12) consisted of a list of specific open-ended questions related to the research questions listed in section 6.1.

Invitation emails (Appendix 6.13-6.14), information sheets (Appendix 6.5-6.8) and consent forms (Appendix 4.8) were sent to participants who were eligible for pre-arrival and post-arrival focus groups. Students were contacted prior to data collection in order to explain to them the purpose of the research and that participation is voluntary. It also assures them that anonymity and confidentiality will be maintained in the final report. Follow-up email reminders were sent to students two weeks after the first invitation. Focus groups were conducted at a mutually agreed upon time and location.

6.4.2 Student Follow-up Survey

Subsequent to each of the pre-arrival and post-arrival focus groups, each participant was provided with an electronic copy of the key questions used in the focus groups (Appendix 6.15-6.16). If participants identified any issues they were not comfortable with during the focus group, they could inform the researcher via the follow-up survey. Similarly, students who could not attend the focus group were invited to fill in an electronic copy of the key questions posed in the focus groups. A submission box was prepared and placed outside the researcher's office for one month after the pre-arrival study to allow

anonymous submission of the follow-up survey. For the post-arrival follow-up survey, students were able to reply via email. For the purpose of anonymity, each returned electronic follow-up survey was saved under a password-protected folder with an alphanumeric code, comprising a letter (C) and a number to make sure students could not be identified in the final write up. Students who had participated in previous stage (pre-arrival) were given the same code in the post-arrival stage in order to maintain consistency throughout.

6.4.3 Location and Room Set up for Focus Groups

As described in Chapter 4 (Section 4.5.4), the focus group room was set up to allow effective audio-recording and privacy. All pre-arrival focus groups were conducted at TU in a pre-booked classroom that was free from interruptions and distractions. At the post-arrival stage, the researcher travelled to CU and met with all the participants. Quiet meeting rooms were pre-booked by a member of the staff in Cardiff prior to the researcher's visit. During the focus group, the participants sat around the tables placed in a circle or U-shaped setting. With all the students' consent, an audio recording device was placed in the middle of the table to capture their response. Refreshments, such as snacks and drinks, were provided to make participants feel comfortable so that their experiences turn out as pleasant as possible. Students were encouraged to have their refreshments prior to the start of the focus group to avoid excessive noise and disturbances.

6.5 Data Analysis

All focus groups and follow-up survey were analysed in accordance with thematic analysis as described in Chapter 3 (section 3.4.4). After verification of the accuracy of the transcripts, the researcher first transcribed the focus group discussions "*ad verbatim*" from the audio recordings and the anonymity of participants was maintained by replacing the students' names and any other identifiable data with codes. Data from the follow-up survey was compiled for each question. Open coding was performed line by line for each transcript. Words, phrases, and/ or sections of text that represented a fundamental unit of meaning were assigned to codes within each transcript. The coding was reviewed across transcripts to ensure that the same codes had been applied consistently. Codes that share specific commonalities were grouped into the same theme. Various themes were then generated and reviewed for consistency across the entire data set by the research team to

increase their reliability. The relationship between themes was also considered so that the flow of the story could be identified and developed.

6.6 Research Findings

6.6.1 Response and Demographics

The individuals who agreed to participate were randomly assigned into groups of five to seven participants. Appendix 6.17 outlines the details of those who took part in the research. The same coding system described in Chapter 4 was utilised where each student was assigned an alphanumeric code, comprising a letter (C for Cohort 1 students and T for Cohort 2 students) and a number. Students who had participated in previous stages were given the same code in order to maintain consistency. Students who participated for the first time were assigned a new code.

In the pre-arrival study conducted in June 2012, twenty Cohort 1 students were invited to participate; twelve were recruited ($n=12$), that is, 60%. A total of two focus groups (each comprising six students) were conducted. Each focus group lasted 30-40 minutes. For the follow-up survey, three students participated and returned their survey form within one week after the last reminder email was sent.

The first post-arrival study (that is those in Cohort 1) was conducted in November 2012: the same cohort of twenty students in pre-arrival stage was invited to participate; fourteen agreed to take part ($n=14$). A total of two focus groups (each comprising seven students) were conducted. Each focus group lasted 60-70 minutes. No follow-up surveys were returned.

The second post-arrival study was conducted in November 2013 (Cohort 2). As one Cohort 1 student withdrew from the course due to poor academic performance, the remaining nineteen were invited to participate in the focus groups; fourteen were recruited ($n=14$). A total of two focus groups (each comprising seven students) were conducted. Each focus group lasted about 60-70 minutes. In addition, 22 Cohort 2 students were invited of which 21 students agreed to participate ($n=21$) (95%). A total of 4 focus groups were conducted. Each focus group comprised of 5-6 students, lasted 50-80 minutes in length. The researcher did not receive any returned follow-up survey forms.

6.6.2 Themes Identified from the Pre-arrival Focus Groups

The responses were categorised and coded into four broad themes, namely, ‘experience-based expectations’, ‘academic expectations’, ‘social expectations’ and ‘personal expectations’ with various sub-themes. Table 6.1 presents the themes that emerged from the pre-arrival focus groups, along with an illustrative quote for each theme.

Table 6.1 Themes and illustrative quotes for pre-arrival expectations study

No	Themes	Illustrative Quotes
1	Experience-based expectations	<i>C10*: I expect the lecturers [at CU] to have their own style of teaching and not solely read from slides without giving relevant examples and explanations.</i>
2	Academic expectations	<i>C5: because we are too use to like food...spoon-feeding, so we will be like worried about the lecturer [at CU] too busy and cannot find them, don't know where to seek for help, since we also quite new to them...not like the others...they are already 2 years with them so...</i>
3	Social expectations	<i>C1: I think it will be hard to mix around there (at CU), although we will...we will try, but I don't think it's easy to mix [with CU students]...we still like, probably we know each other but still we are still...the gang of people because ya...</i>
4	Personal expectations	<i>C15: learn to be independent...because here we are staying...almost...like because we are local, so we are staying with families, so over there (CU) you will be staying alone...everything you have to handle yourself, so I think, it will be quite challenging...</i>

* Responses from follow-up survey

Theme 1: Experience-based Expectations

Students' responses showed a variety of expectations. Most students had quite developed and clear expectations while there were a few who were uncertain or had no specific expectations. It was observed that the experiences students had at TU did influence their expectations about CU. Students were comparing TU and CU while describing their expectations. Comparisons were made on various aspects such as students expected CU to provide more reference books in the library, more past year papers and more exposure outside the classroom (e.g. hospital and community pharmacy placement). Those quotes from comments written in the follow-up survey instrument are preceded by an asterisk (*). Those quotes from focus groups commence with code number (e.g. C22). Regarding lecturers and lecture delivery in CU, students had the following expectations pre-arrival:

C10: I expect the lecturers [at CU] to have their own style of teaching and not solely read from slides without giving relevant examples and explanations.*

C13: I expect the lecturer to know the content of the lectures and lectures run by them should be in a more orderly manner. Besides that, it is also expected that the running lectures follows the schedule and completed as scheduled and not rushed to be completed at the end of the semester with extra hours of lectures. In short, I would expect the teaching staff to have better delivery of the lecture since they are presenting their own lecture slides.*

C22: [I expect the lecturer to be] more professional.

Some students expected more explanation and less confusion during laboratory sessions, workshops and tutorials as compared to what they had experienced at TU:

C10: I expect lab sessions to be conducted with more organisation and clear instructions.*

C11: A more understandable procedure and explanation should be given before carry out experiment.*

Theme 2: Academic Expectations

Academic expectations detailed students' expectations on their learning in the university, the academic support, the transition into the new environment, academic resources and facilities in CU. Some students expected the teaching staff to be readily available when they needed help. However, a few students expressed their concerns that the teaching staff would be hard to contact because they could be very busy dealing with a big group of students. In general, students expected the teaching staff to be helpful, friendly, and approachable.

In terms of learning, the students expected that the course would be tough and difficult in their third year. At the same time, they expected it to be interesting and thorough in terms of understanding and delivery of the lecture topics. It was also found that students expected lecture notes to be provided before classes started. Smaller group discussions

during workshops were also expected. In addition, some felt that their course would offer them a better understanding of the pharmacy programme:

C25: I am expecting the curriculum to be as tough as it was in the previous years. It will be more interesting as we are moving more in-depth in understanding the syllabus. I am expecting some coursework internal assessments and group work assessments as well as presentations.

One student expected a nice and relaxing environment in CU to live and study. Two other students worried that they might not be able to cope with the new learning environment with a larger group of students. Students were also afraid that they would not integrate well with the local students especially when they were required to work with them during workshops.

A list of expected facilities was discussed in the focus groups. These included the laboratory, library, computer lab, lecture hall, sports hall, ATM machine and restaurant/café. Students expected that sufficient equipment would be provided to each student during practical sessions. One student expected the latest technology and equipment in the school.

Students had high expectations of the library. They expected the library to have a wider selection of references with a librarian who can assist in locating journals and references. Also, they expected the library to be big, with a nice design that is quiet for studying. Students also expected the lecture hall(s) to be big as they perceived there would be a large number of students in class.

Despite the fact that most students were not into sports, they expected a range of sports facilities to be available in the university: badminton court, swimming pool, gym, football pitch, cricket pitch and tennis court. Other than that, students expected ATM machines and restaurants/cafes around the campus.

For support services personnel, the students expected them to be helpful, friendly, accessible, efficient and resourceful. The expectations associated with support services revolved around the notion of advice provided. Students said that they expected to get some advice about places to eat, places to visit, the best place to shop, which mobile

telecommunications provider to select, where to get counselling, what to bring to the UK, where to open a bank account and where to seek help when the Internet is down.

Theme 3: Social expectations

The students who participated in a focus group were aware that they would be joining a big group of students while they were in Cardiff. Common expectations among most of the students were that the Cardiff students would be friendly, helpful, approachable, intelligent and out-going. Also, students were positive about getting along with Cardiff's students and expected to work well with them. Some students anticipated that they will meet other Malaysian students while others expected to meet and interact with their peers during social events and extracurricular activities. Other than that, the social life they perceived would be a lot of fun with parties and good nightlife. However, students hoped that there would be no "racist" students in their classes and they would be accepted by them instead of being isolated. One student worried that communication would be a problem as he/ she may not understand the slang his/ her peer speaks.

The buddy system initiated by CU, where each TU transferee was paired with a student in CU, aimed to provide support and communication before the transfer. However, this was believed to not be too effective for some students. In contrast, some transferees did benefit by the peer support mechanism:

C21: like for me right, uh...I replied to the person's email then uh I...I did ask that how's the weather there, then, uh...what...what it will be like when we go there on September right? Will it be hot, will it cold like that...then she did reply me, uh...it was it was quite helpful la...

C1: I didn't receive any email before...I don't know where to find. I was like search, maybe it's in the junk box or something...but it was like, but I can't find any...

Theme 4: Personal expectations

In general, students anticipated student life to be fun and happy. While studying in another country can be very exciting it can also be challenging as students adapt to new ways of doing things. Some students were concerned about stress and did not want to be homesick

once they were in Cardiff. Other students expected to cook their own meals while in Cardiff and share cooking facilities with their roommates. When it came to eating out, the students wanted to explore new food in Cardiff and expected large portions of food at a reasonable cost.

Two students were looking forward to the fun of travelling around Europe and hoped they would be introduced to Cardiff's sightseeing spots while they were there. In terms of accommodation, the research subjects were guaranteed a place to stay for their first year in Cardiff. A few students imagined they would have to deal with a limited space, small toilet and dirty kitchen. On the contrary, some expected the residence to be nice, relaxing and quiet. The rest of the students stated that they were happy as long as the residence was comfortable, clean, near to the campus and city centre, not too noisy and have friendly roommates.

Many students anticipated that experiencing university life away from home would allow freedom and the chance to meet new people in Cardiff. One student thought that she would struggle with household chores like laundry and this would increase the stress level besides the pressure from studying. However, another student hoped to be more independent by doing household chores.

6.6.3 Themes Identified from the Post-arrival Focus Groups

The responses were categorised and coded into nine broad themes, namely, 'challenges and obstacles', 'positive side of studying abroad', 'good learning experiences', 'social experience', 'support services', 'facilities at university', 'recommendation', 'words for juniors' and 'DREEM feedback' with various sub-themes. Table 6.2 shows the themes that emerged from the post-arrival focus groups with an example of an illustrative quote from each theme. The data presented includes quotes from three groups of students, namely; Cohort 1 Year 3 (November 2012 – one month post-arrival at CU), Cohort 2 Year 3 (November 2013 – one month post-arrival at CU) and Cohort 1 Year 4 (November 2013 – 13 months post-arrival at CU).

Table 6.2 Themes and illustrative quotes for post-arrival experiences study

No	Theme	Quotes
1	Challenges and obstacles	<i>C5: They talked too fast may be they (CU student) can understand among themselves because they are used to it. I tend to find it quite difficult to concentrate on listening what they are saying but overall is not a problem, just have to get used to it.</i>
2	Positive side of studying abroad	<i>C21: we went to vacation a lot. I went to a lot of places. Have lots of fun, which I never thought of going...like the Eastern Europe and around UK, ya.</i>
3	Good learning experience	<i>T9: but actually I realise actually the pharmacy here are...they are quite helpful, even though they are very busy, but they will still try their best to solve your problems, to tell you something you know, to help you, they will take their time to teach you.</i>
4	Social experience	<i>C21: we get to interact with the local students, and then uhm...get to exchange information and know what's our strength and weaknesses is, uh...work on our weakness compared to the local students.</i>
5	Support services	<i>C13: like, I asked her (student service personnel) about like working visas, she can like really answer me and for certain question that she cannot answer it's like, may be like the GPhC stuff, those she doesn't really know so can't really answer me but she actually provide slides where that I can go and find out...ya...</i>
6	University facilities	<i>T7: library is very good, and you can renew your book as many times as you want, it's unlike Taylor's, because Taylor's has a limited time, but for this library you can keep on renewing, and you know when, I don't know what's the maximum we can renew but until now I have been renewing so far and no problem. Ya...</i>
7	Recommendations	<i>C13: I think the most important thing is that like may be for them (CU students) in first year and second year, they are not spoon fed at all, that's why they do a lot of learning on themselves, which actually help because you tend to learn more by yourself. That's what I feel and like for this year, like fourth year I actually can remember most of the thing that are taught in class not because the lecturer is good it's because they don't spoon feed you, so if you want to know something you have to find it out by yourself. So that's how I think that they know so much it's because no spoon-feeding at all.</i>
8	Words to juniors	<i>T7: bring more herbs, herbs here is very expensive. Chinese herbs, like Dong gui (Angelica sinensis), Gei Zi (Goji berry)...and you don't have to get winter clothes in Malaysia, because here I got it for very cheap. Inner wear, thermal must get in Malaysia, here cannot find.</i>
9	DREEM feedback	<i>T10: F4, sometimes when we don't know about the things in the class, it's like, laughing at us why you don't know...</i>

Theme 1: Challenges and obstacles

Challenges and obstacles consist of four subthemes namely; culture shock, academic barriers, fees and cost of living and issue of socializing.

Culture shock

Most TU students encountered cultural shock at varying degrees when they moved to Cardiff. Some students were more affected than others. It was caused by the unfamiliar cultural and physical environment, and also by a range of new things they encountered abroad: language, weather, people, food and daily routine. Adjustment took place later on when TU students slowly adapted to the many different ways of life in the British culture.

A few students were not used to the wet and cold weather in Cardiff as opposed to the warm and humid conditions in Malaysia. One student described that Cardiff is quiet after 5pm, especially during winter. They did have the chance to go to parties and experience the nightlife in Cardiff, but they later realised that the social events at night involved drinking alcohol, which they did not like. Students also revealed that the difference in culture had surprised them:

T7: I am quite surprised that last week my tutor ask me out for drinks together with other classmate, I think is like in KL we never face that right, we go and drink with lecturer, so I think is quite different culture, but I didn't go.

T10: The people here they more like to have nightlife, ya, I think this is quite different from KL.

T6: we joining clubs but we are still like see what kind of event they (CU students) are hosting so then maybe we go la. Most probably they are going to clubs, so we are not really that interested.

One student commented that her classmates would ask questions in the middle of the lecture. This gesture surprised her as she described that Asian students would only ask questions at the end of a lecture:

T11: ya, gives us like mental shock like that because everyone [in the class], they can ask question half way, after like the lecturer...after the lecturers go through like a few slides then you can ask questions, ask like really in-depth question, then the lecturer is like, that's a very good question, and even after he explain and everything actually like what was the question... helpful and then in the end of the workshop right, you always see all the Asians right staying back asking question and all the Caucasian bye bye...

A few students confessed that they could not keep up with their classmates who are native speakers, as they tended to speak very quickly. They also felt left out of the conversation in a group discussion. In addition, they claimed that some of their classmates have a strong accent when they speak English:

T10: I find it a bit difficult to deal with Caucasian actually and also there is some workshop, 3110 we need to like mix with other, other course mate, so we are alone Asian in the group, we feel like left out... and it's very hard for us to understand their accent, they really have a strong accent...

T8: in the discussion group, cause they (CU students) will usually like talk among themselves and most of the time is out of topic...sometimes don't really understand what they are talking about...maybe it's the communication barrier or something like that.

T15: when they (CU students) talk to you probably you understand but when you hear them talking to each other, you probably won't get it what they talking about.

C5: They talked too fast may be they (CU students) can understand among themselves because they are used to it. I tend to find it quite difficult to concentrate on listening what they are saying but overall is not a problem, just have to get used to it.

One student perceived that there were racist issues among their peers because she and her TU classmates were left out of the discussion. It was later found out that the CU students made plans (related to a final year project) without informing all of them:

C15: they (CU students) tend to like work on their own, like within a group, there are

a few Asians, like for my group, there are a few Asians and then few are locals, they tend to like discuss within themselves, instead of joining all, all of us and discuss together, which we find it quite racist...

Three other respondents also perceived there was an issue of racism, not among their peers but outside the campus:

T15: erm...just walking home from Talybont South (student accommodation) you know, there are a lot of drunken at night, and they will just come to you and said “ni hao” (means how are you) like that.... and if you don’t response they will come nearer to you and “ni hao” ...and then they will just laugh and go away...

T21: not in class but then when we walking on the street, people will actually tease us and all...because they thought that we are Chinese (from China Mainland)...then they will like, they will like wind down the window and scold bad words...I think we got the really really bad experience.

T11: I was working in the stadium last week, some of them drunk already right, like they will make fun of us, say is that a Welsh slang, I didn’t know Welsh slang is like that, I mean, off course obviously I don’t have Welsh slang right...is that a Welsh slang I hear...and how do you response to them right...no that’s a Malaysia slang...but it’s obvious that they making fun of you...and then they tell you some kind of local joke, and then you don’t understand, it’s like...you really don’t know anything, don’t you...like that, so ya you just ignore them...because it’s unavoidable la, especially when you work...

The new unfamiliar environment also created worries among students:

T4: we have no idea where it is yet and we are suddenly asked to go [to community pharmacy] by ourselves and then the following two weeks it is the individual placement, which is scary, because I need to like take bus alone.

C3: as in the facilities is really good, like the career services and everything, but I don’t like how it’s like scattered instead of like concentrated in one building...so it’s kind of hard for us especially when we are new here...and we have to walk a lot, so

some of them are actually quite far...worried that I will lost my way

Academic Barriers

Within their academic life, TU students faced challenges such as English language barriers, developing relationships with lecturers and peers, and in most cases getting used to teaching and curriculum differences such as the expectation for class discussion or questioning the teacher. In class, some TU students had trouble understanding the lecture because the lecturer spoke quickly. They wished someone would tell the lecturer to slow down, but no students voiced this concern in the class. Students stated that:

T7: for example there is a lecture, he basically just talk to himself, we and we don't really understand what he is talking, I mean he use a lot like jargon which he expect us to know, but we actually don't know anything about that, and he just going on talking his stuff, and he is, I mean he speaks like a bullet train, like no one can understand except himself, so...that's what I feel la.

T10: It's very hard to listen to them (CU lecturers), because they speak very fast, so sometimes if they want to teach us something, you need to like keep ask them to repeat, cause, need to give us some time to note down.

C15: because the lecturers some of them talk very fast then you need to really focus...by the time you write, they will finish the slides...then go for the next one.

The language challenges affected students academically:

T9: and furthermore our patient, before in the Taylor's, all is the Asian people, is like local people so we hear them, we got no problem but here, the patient we face, is the Caucasian, and sometime you need to scare they speak too fast, sometime you need to scare their accent is different with us and then they can't understand what we talking and we can't understand what he talking about. So that's what we scare during our OSCA (Objective-Structured Communication Assessment).

Students made comparisons between the teaching staff at TU and CU. They felt that TU lecturers were easier to contact and they could speak to them face-to-face but they hardly met Cardiff teaching staff which forced them to communicate via email:

S5: [In] Taylor's, you can easily reach the lecturer, so you can just ask them, but here is quite difficult to reach the lecturer, so you have to email them.

Many students expected the workshops to be similar to what they had experienced at TU but some said they were not given enough time to prepare for their OSCA test. The workshop training hours were less compared to what they had at TU. In addition, students commented that lecture handouts were not uploaded to Learning Central (CU virtual learning environment) before the lecture. Some academics did not even upload the lecture handout after the lecture:

C17: but they (CU lecturer) didn't upload the slides up and wouldn't upload the answers up, so they expect that you know everything in the workshop, in that 3 hours with 40 students.

C1: because there is no slides for us to refer, so, and then he (CU lecturer) talks very soft, so, kind of cannot get what he said and they didn't upload lecture slides...I asked already but they ignore me...I emailed him then uhm...he asked uh why do I need it, then I was like I want to play in my iPad so I can, it's easy for me to refer back...like and then he never reply me...I expect there will upload but probably not that fast but he didn't even upload a single slides...ya

Participants highlighted the lack of teaching staff during CU workshops and that they felt they were not given sufficient time to ask questions during the workshop:

C13: For workshop, I think that the efficiency is higher in Taylor's, because it's like only twenty of us...for here I think there's like close to forty and there is only one G11. He has actually no time for us...as in he has time but he don't, as in may be one table only spend like 2,3 minutes to answer your doubts, then he will move on to next table, and there is certain things that you are supposed to cover in the workshop, so practically in three hours you only get to ask him like may be one question, but back in Taylor's if three hours with F1, he can actually teach you from the start to the end.

Furthermore, the main concern both cohorts of students had about their programme was related to the community pharmacy placement. TU students realised that most local students had pharmacy working experience but they lacked such experience themselves. This is further accentuated by the different pharmacy operating systems in Malaysia and the UK:

T6: I feel like they (CU students) got a lot of experience in the community pharmacy, since they have been working during the summer. So, they are quite familiar with the whole environment. I felt like they got a lot of knowledge.

C13: I think at some point, doing a start, we kind of felt like we are not as good as them (CU students) because we don't have any working experience and most of them actually have working experience from what I observed during tutorial classes, so we actually felt quite intimidated by the fact that we are not as good as them.

Not all TU students had a pleasant experience during their placement training scheduled by the university. Some students agreed that the pharmacist was too busy and did not have much time to talk to them:

C11: ...dispensing staff is very friendly, and the pharmacist is very busy, so actually I don't really get to talk to the pharmacist.

T6: they (placement supervisor) are always very busy, so they don't have time to answer your questions.

Fees and Living Cost

Some students had to overcome challenges related to the cost of living abroad:

T7: ya, laundry is very expensive, it cost you 3 pounds 50 pence, very expensive, there is limited load that you can put in...

T11: because the exchange rate is so high right, so every time we spend right, we have to cut on other stuff...when we spend a bit on something then we said this week got to go vegetarian. I mean literally speaking not we don't really go vegetarian but then if

you ask us to buy broccoli and lettuce, broccoli one pound, lettuce 49 pence, we will choose lettuce cause broccoli two meals, lettuce two leaves for one dinner, [so can last] for one week and a half.

T13: steam chicken, ladyfinger, belacan (English: shrimp paste). Here, everyday lettuce, lettuce, lettuce, lettuce, lettuce, lettuce...celery, same price one, 49p, 49p, so change between lettuce, celery, lettuce, celery, lettuce, celery...

Issues with Socialising

Students revealed that the interaction with Cardiff students was generally low. Interactions mostly took place during lectures and workshops. They shared their view that Cardiff students tended to stick to their own group. In a similar manner, TU students also tended to sit together with their own friends in class, rather than mix with other students as much:

T7: In the sense of topic of conversation, you can't really find anything common between Asians and them. So ya, it's quite hard.

C21: They (CU students) don't talk much in class but during meeting (group discussion) in year 3, beginning of the month, they approach us [and] we talk quite a lot, like they asking how is Malaysia, then we ask back how is Cardiff, this kind.

C5: For my group, still stick together, because we actually try to separate ourselves but just too awkward. [So] We just sit together, we can discuss by ourselves, [we knew that] it's more effective we sit randomly with other people, so we got no discussion with other people.

Some respondents were of the view that due to study and daily routine, there was a lack of time to socialise with their peers:

C1: sometimes I feel like uhm because we have too many things to manage, like studies and laundry and this and that, it's like no time for us for me at least to may be communicate to friends or ya, sometime after doing all this thing then you will be tired then you just want to sleep, you got no time to...build up a relationship or better

relationship with friends or whatever.

T10: really no social life, going to school then come back home, and then staying whole day in the room, cooking, eating, then washing clothes everyday...

Theme 2: Positive Side of Studying Abroad

The positive sides of studying abroad comprised of three subthemes namely; see the world, cultural awareness and independence and personal growth.

See the World

From the pre-arrival study, it was identified that students were already excited about the joy of traveling around Europe during their study abroad. True enough, a few students reported their enjoyment of seeing Europe and were glad to be able to view and do things they never experienced in Malaysia:

C21: we went to vacation a lot. I went to a lot of places. Have lots of fun, which I never thought of going...like the Eastern Europe and around UK, ya.

C23: We went to Europe like Paris, Amsterdam, we also went around UK, so it's very nice. We see a lot of stuff, not, cannot see in Malaysia.

Cultural Awareness

Students from Malaysia who were used to a variety of cooked foods for lunch were aware of the cultural difference between Malaysia and the UK but were not happy with the limited choices:

T11: chips, one apple, one muffin, that's your lunch....so ya...you know the differences between lunch in here and lunch in Malaysia. Ya, after that, yesterday went back home a bit imbalance also cause everything [is] so cold. Ya...

Cultural exchange took place when students shared their cooking with students from a different country. For example, some students enjoyed the different style of food offered

by housemates from America. On the other hand, some were frustrated with the students from China who did not want to share the cleaning duties at home.

Independence and Personal Growth

By living and studying in a foreign country, students became more independent, self-reliant, and self-confident as they learned to navigate and live without relying on their parents. From doing laundry to cooking dinner, students took responsibility for managing their lives. Besides the need to prepare food, students had to arrange their time properly to deal with household chores like laundry, grocery shopping and housekeeping. While time management is important, students abroad also need to manage their own money. Some students had a fixed allowance every month, which they had to learn to manage without over spending:

C1: have to arrange the time properly...it's like if you don't wash your clothes, you don't have clothes to wear.

C5: one thing, I have to wake up myself. No one wake me up...think is a chance for me or may be for us to grow up... manage my own money...fixed allowance, so I cannot overspend. Where back home, when I don't have enough money just mummy...that I have extra allowance...but now cannot.

T1: I never do laundry at home, now I do, regularly, I think it's good, this is my first time living away from home, so now I feel very independent...cleaning your room, if you don't clean it, no one else gonna do it for you, you have to do it...that kind of thing...ya...

Theme 3: Good Learning Experience

Independent Learning

Students gave mixed reactions when asked about their experiences in lectures and workshops. Students liked the interactive classroom experiences, which they perceived to be independent learning. They explained that there was less 'spoon-feeding' compared to TU as there was no compulsory attendance at lectures and some CU lecturers expected

students to read hand-outs before coming to class:

C13: I would say is independent, because [we have to] take care of ourselves, and then it's a lot of independent learning in class also. Less spoon-feeding [compared to TU], because back in Taylor's, I feel that like we are spoon fed in some sort of way, but over here, it's not. The lecturer just come in, start talking, you have to listen, if you don't listen it's like up to you, I mean back in Taylor's we have F14 like going on and on, telling us, but here is like, they just run through, it's up to you whether you want to listen.

Community Pharmacy Placement

Contrary to the bad experiences some students had, the majority found the placement exposure in the UK was fun and different (i.e. different in system and regulations) from their placement experience in Malaysia. They also found it helpful for them to contextualise what they had learned in class. In addition, they commented that their placement supervisors were helpful and friendly even though they were busy. Students shared that they were provided with the opportunity to observe medicines use review (MUR) interviews, print labels, talk to patients, witness the destruction of controlled drugs and prepare controlled drugs (e.g. methadone and Subutex®) under supervision:

T9: I realise actually the pharmacist here are quite helpful, even though they are very busy, but they will still even try their best to solve your problems, to tell you something you know, to help you, they will take their time to teach you.

C17: me and C13 actually went to the same one (same placement site), and on the same day, our experience is really good, like when we are first there the staff is really helpful and friendly, and we get to learn a lot, like get to print our labels and the pharmacist actually bring us into a consultation room and see how she collect and do the MUR (refer to Medicine Use Review) thing.

T7: My pharmacist...the independent one (means an independent retail pharmacy) is very enthusiastic. The first time I came, he showed me around, like a tour in everything and they showed me...how he actually accumulate all the control drug, the waste product and dispense it, destroy it one shot, because some pharmacist would

like, once they receive they will destroy it but he said it's not economical because he said it's quite pricey. So he will accumulate everything and destroy one shot.

Teaching Staff

Positive comments were received about CU lecturers. Students found that the lecturers were helpful, professional, humorous, and good at time management in class:

C5: They (CU lecturer) are really helpful. We don't understand anything in the class can just email them, they will explain until you can understand.

T9: Mostly lecturers is really quite professional, and very experience, they know what they are teaching.

Theme 4: Social Experiences

The Joy of Cooking Together

TU students enjoyed the get-together time with their peers from Malaysia, especially when they gather to cook and share food:

C8: I feel like is very fun here because uhm...at home is like is just me and my mum, everything normally la, watch tv and cook...whereas over here is more fun, because uhm...you know you got to talk to friends then go out everyday...almost every day we go out, and then can cook together...we talk at night, it's very fun....uhm...ya.

T5: and then very nice right, we all like one week everybody gather and cook together, we cook bak kut teh (a type of Malaysia cuisine, herbal soup with pork) also.

T10: actually we quite miss Malaysian food. Since we are staying together, and one of our friend T20 also staying together with us so we just three of us will cooking together.

Interaction with Local Students

Some students tried to meet people outside the classroom as a form of fun and entertainment. They joined social activities organised by the school, including sports events at the University of Nottingham, student volunteering societies and British Pharmaceutical Students' Association (BPSA) talks. Also, they joined the Malaysian Students Society which provided them a chance to talk to their classmates outside the classroom. Some also joined the Welsh Pharmaceutical Students Association (WPSA). The overall impression of their local classmates was approachable, nice and clever. They were also helpful in enhancing their learning experience:

C13: I think some of them is quite nice as well, they provide some information about pre-reg (pre-registration) like how to apply and the stuff they will ask during interview.

T11: Some of the girl right they added me on Facebook, very friendly, some of the locals are very friendly, they even told me like, ya is important to do this, is important to do that, like the Erasmus stuff...ya...all this while like they come to talk to me on Facebook, so they asked how are you dealing with the UK weather and everything, if you bump into each other at the corridor and they say hi T11, how are things, how's your OSCA and stuff like that...so, ya...

C21: we get to interact with the local students, and then uhm...get to exchange information and know what's our strength and weaknesses is, uh...work on our weakness compared to the local students.

C11: because we have a lot of workshops, so we tend to get to know like really talk to them quite a lot I think, like whereas in last year (in Year 3), most of the time is lecture, so we always sit together with our own group. We don't really go socialise.

While the accent and speed of speaking always hindered the communication between TU and their local classmates, one student explained that he had to adjust to the British way of speaking while communicating with the native speaker so that the latter could understand him better. Communication with local students improved over the semester. When Cohort 1 Year 4 were asked about their experience with classmates, they expressed an improvement in communication and that more interaction took place in workshops and

during their final year project group discussions.

Theme 5: Support Services

Students were aware of a range of services provided by the student support centre which they appreciated. A few students discussed about the curriculum vitae (CV) writing service provided by centre. They appreciated that the staff taught them how to write their own CV, provided mock interviews and feedback after the mock session, and the posting of job vacancies. Information about working visas in the UK was also very useful:

C8: I think it's good, I think this year...last year, uhm...I went to the student support centre, give them to check my CV, they check for me, then they give me feedback, that's really good.

T11: the CV one...the skill centre they actually like come to our class and then they tell us how to write our CV...

C17: give us compact information about the visa, like next time if you wanna stay here and work, they have all sort of talks.

However, nearly all students expressed their concern about the unstable wireless network connection at home and on campus. They described that the computer room wireless network is not stable and is slow. Printing using wireless connection always created a problem but the wired connection seemed to work fine both at home and on campus.

Theme 6: University Facilities

Students shared in the focus groups the university facilities they had come across: the finance office, printing service, mock dispensary, library, and cafeteria. Some students commented that the facilities at CU were scattered around the city. They found the services hard to locate, especially for newcomers like them. Participants also found that a printing service was not available in the pharmacy building. Students felt that this was inconvenient as the library closed early. In addition, it is far from the classroom.

Students did not have the chance to use CU's mock dispensary facilities at the time of the

first focus group but they had seen the layout and medication displayed. They commented that the mock dispensary was old and the computers in the mock dispensary were not connected to the Internet like the one they had at TU. In addition, students felt that the library was small. Despite its small size, the library provided a good collection of books and was quiet compared to the TU's library.

The comments received from the majority of the students on the cafeteria were negative. A handful of students expressed their dissatisfaction with the cafeteria in the pharmacy building because it did not have a decent selection of food. They further explained that they needed to wake up early every morning to prepare their lunch box. In addition, the cafeteria was perceived as being small and very crowded during rush hour (i.e. lunch hour when students were having their break). However, Cohort 1 Year 4 pointed out that improvements were made such as the installation of a coffee vending machine outside the cafeteria, so that they could enjoy coffee anytime even after the cafeteria is closed.

C23: I still feel the cafeteria is too small...the food is like so less, like every time we want to eat, that sandwich, every day sandwich.

C8: [The cafeteria is] too small because every time like...during lunch hour, all the classes will end then everyone will go to the cafeteria, so it's all crowded...no place to sit...

Theme 7: Recommendations to the school

In view of the lack of experience with community pharmacy in the UK setting, some participants suggested that the school should make additional arrangements for twinning students. Exposure to the UK community pharmacy experience would help them familiarise themselves with the healthcare system in the UK. They also believed that this would help students better prepare for a successful transition to CU.

Students also suggested that a pre-departure briefing should be arranged for future transferees to cover essential information needed for settling in upon arrival. This included advice about visa applications, luggage and what to pack, how to get around in the UK, how to open a UK bank account and pre-registration pharmacist training in the UK. While a pre-departure briefing was provided, it was too near the date of departure

and many of them did not have a chance to attend. Two students have elaborated their experiences at the point of transfer:

Theme 8: Words to Juniors⁸

Students were excited when they were speaking from experience. The following are some advice that they wished to give to their juniors at TU who are preparing for the transfer:

- Do not bring too many clothes and shoes as they are relatively cheaper in Cardiff.
- Bring more food from Malaysia, especially herbs and dried food.
- Be prepared to be an independent learner

Theme 9: DREEM feedback

The research findings from DREEM questionnaires allowed recommendations and actions to be taken for some issues in the schools (section 5.7). The 50-item DREEM questionnaire has a maximum score of 200, indicating an ideal educational environment. Scoring of the 50 items has been outlined in section 5.2.1. Specifically, items that have a mean score above 3 are positive points, indicating areas of strengths, while items with a mean less than 2 need to be examined more closely as they indicate areas of weakness. Items with a mean score between 2 and 3 are aspects of the environment that could be improved. In this phase of the study, students were asked to recall and share the reasons behind the low scores for their experience at TU. Table 6.3 reiterates the low score items presented in Chapter 5.

Table 6.3 Individual items with low DREEM scores at TU

Item No	Item Description	Cohort 1 Year 4	Cohort 2 Year 3
17	<i>Cheating is a problem in this school</i>	1.07	
50	<i>The students irritate the teachers</i>	1.09	
35	<i>I find the experience disappointing</i>	1.23	
8	<i>The teachers ridicule the students</i>	1.27	
39	<i>The teachers get angry in class</i>	1.27	
27	I am able to memorise all I need	1.59	1.28
42	The enjoyment outweighs the stress of studying pharmacy	1.84	1.83
48	<i>The teaching is too teacher-centred</i>	1.84	

⁸ a person who is a lower year of study.

9	<i>The teachers are authoritarian</i>	1.86	1.78
14	I am rarely bored on this course	1.86	1.83

Italic items are negative statements

Students expressed that they felt bored in class because of the lecturer's strong accent. This made it hard for them to concentrate as they did not know what the lecturers were talking about. The lecture's content and the classroom environment also have an impact. The classroom was too cold sometimes which made them sleepy especially after lunch hour. This was further aggravated by the students' busy timetable which did not allow them time to join activities outside class:

T21: some of the lecturer they have very strong accent at first, we really don't understand. It's very dry.

T20: I think some depends on subject also. How can we concentrate as some of the material is very bored.

Students commented that there was too much to learn and to memorise for exams in each module. When it came to preparation for exams, TU and CU lecturers gave mixed messages, which they found conflicting:

S8: sometimes I feel like there is too much to learn, so I think its better they give like what is coming out in the exam...

T21: Actually a lot of the thing that we learnt is very bored and don't know where to focus, actually, we all brought up this problem before, then the lecturer said we have to memorise everything but it's very hard for us to memorise everything. Really cannot I feel.

T19: sometimes the Cardiff lecturer came and they said you just have to appreciate this. You don't have to memorise, you just have to learn.

Students revealed that some lecturers ridiculed students and got angry in class. Students had a feeling that they irritated the lecturers sometimes. A few students provided examples of lecturers making fun of them and one lecturer even made a comment in class,

which was rather embarrassing, especially for the student involved:

T10: F4 sometimes like it's like...ah...sometimes when we know...don't know about the things in the class, it's like, laughing at us why you don't know...

T1: I think what happened is (student) went to see (lecturer A) and said she has something very urgent to ask (Lecturer B). (Lecturer B) was in a meeting and then (Lecturer A) called her and said a student want to see you and it's urgent. (Lecture B) came out and see her, but actually just a small question, so she is damn angry. She told us in class, you don't do that next time but then she didn't mention her (student) name but we all figured out who is was. It was just embarrassing.

N.B. Codes removed to preserve anonymity

Two low scores related to “the overall experience is disappointing” and the fact that students did not think the enjoyment outweighed the stress of studying pharmacy. These experiences were related to lecturers, boredom in the class, and too much lecture content to learn. A few students also felt that elective⁹ subjects were a burden to them:

T10: I think is the lecturer problem like they don't know what they going to teach, they don't understand the learning material...

T21: She talked bad about Cardiff in front of us 3-4 times. She said Cardiff is not good, why you want to go Cardiff so much.

C21: because the context is so pack and a lot to learn, so maybe they feel...maybe we feel more stress then enjoying to study so much.

S5: I think this one will be the same as the one talk about earlier like we have very few people so don't have the chance to do a lot of activities.

T3: actually we don't think it will be that stressful without the electives. We have less time.

⁹ Electives at TU are subjects related to education, such as Malay language class, which serve as a form of enrichment and continuing personal development for the students.

A student further elaborated that:

T10: electives, we are already like complaint many times already, but she still insist that you need this (elective subjects)...but it's like wasting our time [to study the electives].

The above was referred as an 'authoritarian' lecturer by one student. Other students reciprocated that:

T11: ya...elective stuff, like we tell her (F16) like we don't know what's the reason [of taking electives] and then is very hectic and then etc. and then she just say oh...especially T22 case, it's quite sad because got the approval from MoHE (Ministry of Higher Education) to drop electives but it say subjected to dean's approval, and then she went to see the dean, then the dean said no, you must take, then she asked why, because I say so. So and then, then in the end T22 failed a lot of subjects and right now she is out from the MPharm course so I know I think she failed partially because of the electives...

C13: I think maybe it's because of the background we are brought up in, like for Asians, I felt that like we [Asians] always have this mentality that like I am the teacher, you are the student, should listen to me but for here [at CU] it's that like, there are the lecturer, you are the student but the students here tend to like ask more question...like they will actually challenge the lecturer stating that their point of view is correct but whereas for us we always have this mentality that oh...he is the teacher, he should be right, or the lecturer will have the feeling that I am the lecturer, I know more than you...so you must listen to me. I think it's sort of like that background

In the context of teaching style, a few students compared the teacher-centred approach employed by TU staff to the student-centred approach used by CU staff. They said that they preferred the student-centred approach, e.g. they learnt better with question and answer sessions in class. However, when asked about cheating problems in TU, students explained that they did not encounter any cheating problems in the school. They were not aware of it and claimed that their classmates have self-discipline and would not cheat in the exam.

6.7 Discussion

6.7.1 Expectations Based on Experiences

In the current study, students had mostly realistic and positive expectations on different aspects of their learning environment. Some expectations were formed on the basis of their experiences at TU, such as expectations on briefing before carrying out experiments, references available in the library, marking of assessment and the facilities at CU. ‘Normative expectations’ describes those based on what students thought should happen given their past experiences of a higher education institution (Babin and Harris, 2015). As the use of past experiences as a foundation for setting expectations was not an uncommon phenomenon, if the expectations were met, students often had little to complain about.

During the pre-arrival focus groups, most discussions concentrated on academic-related issues. From the experience students had with TU lecturers, it was clear that they expected CU lecturers to have at least the basic understanding of the lecture content as the material was prepared by them. It was perceived that a competent academic staff member should know the content and be able to teach effectively.

In addition, students expected lecturers to have good time management skills during class, organisational skills, professionalism, to be approachable and friendly, which were some of the characteristic of an ideal TNE teacher identified by students studying an undergraduate Business degree offered by an Australian university in Hong Kong (Leask, 2006). Though students were from an art school, the characteristic of teacher in transnational context would still apply. In Leask study, one student expected a lecturer to be hard to approach, as they needed to deal with a big group of students. In reality this was borne out: students in the post-arrival focus groups stated that TU lecturers were easy to contact face-to-face, while in contrast, they had to email CU lecturers as they had difficulty meeting them due to the lecturers’ busy schedules. Nevertheless, CU lecturers were described as funny, helpful, professional, experienced and had good time management skills, which lived up to their expectations.

6.7.2 Intercultural Differences

Experiences of culture shock were discussed in Chapter 2 (Section 2.5.2). No matter how much one researches another country, one is likely to experience unexpected surprises when actually living and studying there. The term ‘culture shock’ was first proposed by Oberg (Adler, 1975). He stated, ‘culture shock is precipitated by the anxiety that results from losing all our familiar signs and symbols of social intercourse’ (p. 177). The effects may range from mild uneasiness, nervousness, fatigue, and loneliness to depression, panic, hypersensitivity, diminished self-worth and loss of perspective (Hart, 2012). Within the context of higher education, it is the international student who travels to another country to study who is typically identified as the subject at risk of culture shock (Pyvis, 2005). Inevitably, not everyone is affected by culture shock in the same way, at the same time or to the same degree. Through the focus groups, it was observed that TU students showed mild uneasiness during the transition period. It was the weather, learning environment, issues of racism and foreign accent that created some uneasiness among them. Students also described that they were surprised with the gesture of CU students who asked questions in the middle of a lecture, and invitations by lecturers to go for a drink.

It was a phenomenon where Western students would ask questions in the middle of the class while Asian students would rush to the front and surround the lecturer to ask questions only after the class. According to the Confucian educational-culture, the teacher is regarded as the most respected master who has all the wisdom and it is impolite to interrupt and ask questions in the middle of the class (Palmer, 2003). This is practiced by many Malaysian students with Chinese origin (Ballard and Clanchy, 1991). On the other hand, being trained differently, Western students are encouraged from a young age to be analytical and critical (Chuah, 2010). It is the Socratic Method that emphasises the importance of asking questions in order to increase understanding and broaden learning in the Western culture (Wang, 2014). The differences in educational-culture also contributed to the learning styles adopted by Asian students (refer Section 2.4.1), which will be discussed further below (Section 6.7.3). Towards this end, the phenomenon observed by TU students in CU classroom was common in the Western society. When TU students adapted to the host culture, they later recognised the benefits brought about by this experience.

Racism is the ill treatment and/ or harassment of another person or group because of ethnic background or skin colour (Ontario Human Rights Commission, 2012). The Wales Online newspaper reported that racism was widespread in Wales (Hutchinson, 2013). However, racism in the UK educational system affects mainly Black students (National Union of Students, 2011). Incidents of racial discrimination occurring on-campus could be difficult to identify as it is usually lacking in malice or a specific target (Webster, 2014). As the issue of racism was raised during the post-arrival focus groups, the researcher and one supervisor tried to understand the race's make up in the mentioned group in order to understand the incident experienced by TU students. It was found that there was no dominant culture in the group as it was made up of students from different nationalities, that is, TU students were not the only Asian. It was perhaps a miscommunication between students that caused the misinterpretation. Off campus, students faced racial harassment involving words and actions directly related to their race as they described strangers winding down car windows and making a vicious verbal attack when they were walking on the street. Students were advised to speak to the authority if they felt uncomfortable or threatened but they explained that though emotionally disturbing, they would rather ignore it as it was just once incident.

Language barriers formed a significant part of the post-arrival focus group discussions. Hofstede (1984) stated that language is the most clearly recognisable part of a culture. The UK Council of International Students Affairs (2013) described that even a fluent English speaker would find it hard to understand regional accents when they first arrive in the UK. People might also speak quickly and one might feel embarrassed to ask them to repeat what they said. The post-arrival focus groups confirmed the above scenario, which indicated that students did feel that native speakers tended to speak fast and they had a hard time understanding them. Students expected to have a language barrier, especially due to the strong UK accent and slang. However, they did not expect that they would not be able to keep up with the conversation, as they were competent in speaking English in casual conversation. Language relate to and reflect the speaker's heritage and culture (Offner, 1996), so one is not required to transform into a 'new person' and speak English like a native speaker. It is believed that students in the MPharm programme could possibly improve their communication with local speakers when they have a better understanding of the latter's culture (Dema and Moeller, 2012).

Many university student support services have suggested ways to minimise the effects of

culture shock (Wu et al., 2015), students should take advantage of the help and support provided. The strategy promoted by most is to 'be prepared' (Zapf, 1991, Brown and Holloway, 2008, Junzi, 2009). If TNE students were better prepared, they would have a better idea of the new place, people and situation, developed more realistic expectations, and increased their confidence to function in the foreign country. In this end, this would make the new environment easier to accept.

6.7.3 Learning and Socialising

Traditional teacher-centred learning approaches in TU was evident in Phase 2 (Chapter 6) where from the pre-arrival study, students admitted that they were accustomed to being spoon-fed at TU. Academically, the objection to "spoon-feeding" was common among students. Students expected learning to take place through interactions between peers in class. The intention to be an independent learner among students was evident. From a pedagogy perspective, spoon-feeding would be activities that prevent possible mental development by doing for the learner what the learner could have done for himself/herself (Mohan, 2000). The teaching and learning culture in CU encouraged students to be independent learners, which is what the students expected as expressed during the pre-arrival focus groups. This phase of the study further highlighted the training and support that TU lecturers need to acquire in order to create a student-centred learning environments.

The community pharmacy placement was an area students actively discussed. Not all placement supervisors were friendly and willing to teach during students' placements. Language issue was evident when students described that they could not understand what the pharmacist said because they were speaking too fast. Some students had an unpleasant experience with their supervisor. Nevertheless, the majority of students enjoyed their placement and stated that learning about the different dispensing systems between Malaysia and the UK was an eye-opener. The biggest challenge about placements was the insufficient training in Year 1 and Year 2 as a result of the differences in dispensing practice and other aspects of the pharmacy profession (due to different law and ethics in the country) (Pharmaceutical Services Division, 2015). For example, fewer than two prescriptions a day are filled at community pharmacies in Malaysia (Chua et al., 2013) as compared to 5,000 – 12,000 per month in the UK (Health and Social Care Information Centre, 2013). Also, doctors in Malaysia are granted rights under the Poison Act 1952

(Law of Malaysia, 2016) to prescribe and dispense medications at their clinics. Other differences included the optional services provided, healthcare systems in the country, and the specific roles of pharmacists in both countries. In this regards, TU students had a strong feeling that CU students who had prior working experience in the community pharmacy during their holiday, had better knowledge of drugs and thus performed better in class. Students felt intimidated and strongly recommended that the school consider a placement for their juniors before the semester started. Recommendations were made and will be discussed in Section 6.9.

In the social aspect, students' positive expectations towards the local students and classmates (i.e. helpful and friendly) were met. However, due to communication challenges, it was natural for the local students to revert to friends of the same background and this resulted in feelings of being excluded. Social events involving drinking alcohol further isolated TU students from their local classmates. However, communication with local students improved over the semester as described by Cohort 1 Year 4. Thus, it could be said that relationships took time. Once Cohort 2 Year 3 adjusted and adapted to the environment, the friendship with local classmates would flourish.

6.7.4 Personal Gain

Studying abroad offers TU students an academic and life-enriching experience. It promotes intercultural and global competencies in them (Engberg et al., 2016). Students became more reflective about their own culture and what the culture has instilled in them (James and Okpala, 2015). This happened because TU students showed increased respect and appreciate the differences between cultures, socially and academically. In addition, given time, studying abroad could improve intercultural communication competency, which is the ability and skills in interacting with people from other cultures (Kelley and Meyers, 1995). When TU students came into contact with a new and unfamiliar culture, a process of adjustment took place as they adopted new behaviours (Gudykunst, 1998). Achieving autonomy was one of the many changes discussed by students as they contrasted the freedom from control in the UK with restriction in the home country. It was shown in this phase of the current study that students became more independent, self-reliant, and self-confident as they took control of their lives.

6.7.5 Technology

Born in the 90s, the participants in the research are Generation Y (born between 1977 and 1994) (White and Kiegaldie, 2011). Research revealed that the traditional talk and chalk would not work with this generation (McCrindle, 2003). This generation has been shaped by the technological revolution that occurred throughout their youth (Goldgehn, 2004) and it is not surprising the students wished for an infrastructure that was efficient and reliable, particularly a well-functioning wireless Internet access on campus. The poor Wi-Fi connectivity at CU disrupted them from going online to communicate with family and friends in Malaysia.

6.7.6 DREEM Feedback

The follow-up questions in relation to the DREEM questionnaires revealed some issues which were first raised during Phase 1 focus groups. It further confirmed some of the issues at TU, such as teacher-centred approach, teachers getting angry in class and the collective concerns that contributed to the feeling of stress and boredom from the course.

It was found that Cohort 2 Year 3 had a strong criticism of a particular lecturer at TU. There were several examples provided by students demonstrating unprofessional and unethical behaviour of that lecturer. Professionalism is ‘a combination of all the qualities associated with people who are trained and competent’ (Cambridge Dictionaries Online, 2016). It is the mastery of a particular field of knowledge or skills and services that are beneficial to a society (MacFarlane, 2001). The unprofessional treatment given to students by lecturer should be reported.

Lecturers need to have ethics as their fundamental value in teaching (MacFarlane, 2001). Ridiculing a student can create ethical concerns (Rafiee and Moattari, 2013). When ridicule is used in the classroom as a means of communication (Myersa and Knox, 1999), it has a negative effect on the classroom climate (Edwards and Gibboney, 1992). Lecturers at TU should be advised of the consequences of such behavior, which could jeopardise students’ learning as they may adopt the practice of keeping quiet in class for fear of being ridiculed when asking a question (Dwyer, 1994).

The research showed that the combination of quantitative and qualitative methods to

investigate an educational environment have advantages over the DREEM questionnaire alone (Whittle et al., 2007). The focus groups generated a better understanding of areas of concerns that required remediation while providing information for improving the learning environment.

6.8 Study Limitations

Firstly, similar to the Phase 1 study, as the participants have not yet graduated, this may have caused them to hesitate to be entirely honest during the focus group. Students would be cautious as they did not want to criticise the people who were marking their assessments for fear of having their grades penalised. Although assurance on anonymity and confidentiality was given, it is still possible that students may have filtered their comments to a certain extent. However, the researcher believed that students were honest as most were quite vocal in expressing their views, which included negative viewpoints. In addition, the researcher lay aside her preconceived ideas and ensure reflexivity throughout the study as described in Phase 1 study (Sullivan, 2002).

Furthermore, in qualitative research, generalisability of one study to another is judged by similarities between the time, place, people and other social contexts (Trochim, 2005). However, this phase of the current study was meant to study a specific phenomenon in the TU-CU student population, hence generalisability of the findings is not expected (Leung, 2015).

6.9 Recommendations to the Schools

Based on the study's findings, the researcher suggests the need to have a specific action plan in order to ensure a smoother transition for subsequent MPharm transferees. Recommendations were made where the following were prepared to increase awareness among lecturers at TU and CU, and also to provide subsequent transferees with some tips on the transfer:

1. A presentation of the study findings (<https://prezi.com/yue1exuk65t8/students-expectations-and-experiences-of-transfer/>) at CU and TU to encourage staff within the school to think about their current teaching approach.

2. A “student transfer handbook” to provide guidelines to Malaysian transfer students.

In addition, students’ suggestions included the following, which were already in place by the time the second cohort of students were ready for transfer:

1. To make arrangements for a community pharmacy placement before the start of the semester. (refer to Section 6.6.3, Theme 7, Recommendations)
2. To provide a pre-departure briefing for the transfer students. (refer to Section 6.6.3, Theme 7, Recommendations)
3. To enhance CU-TU students’ social network via Skype meeting. (refer to Section 6.6.2, Theme 3 Social expectations)

Other recommendation made to school delivering transnational education on how to help students better prepare for a successful transition include:

1. Develop online self-help resources to help students with common concerns and prepare them for the transfer. (refer to Section 6.6.3, Theme 7, Recommendations)

6.10 Chapter Conclusions

One of the most challenging parts of studying overseas for TU students was the British culture, which is completely different from Malaysian’s. This phase of the study showed that both cohorts of students experienced culture shock to a certain degree, which is a natural process of adaptation. Also, both cohorts of students shared some common concerns when it came to their social life, especially interactions with peers and lecturers. Issues of language barriers affected them in several ways including communication with peers, interaction with lecturers and also placement supervisors. Furthermore, both groups of students felt intimidated by classmates because of their inexperience with UK community pharmacy.

While common issues were observed in both cohorts of students after they first transferred to CU (e.g. community pharmacy placement, interaction with locals, lecturers’ accent), Cohort 1 showed improvement and adapted well academically and socially during their Year 4. Despite the challenges faced, they became more self-reliant and took on more

responsibility to advance their learning. Socially, communication with their local classmates improved after increased interaction through class activities and final year projects.

Results of this chapter dealt with the expectations and experiences of the students' transfer process. Students' experiences with the programme provided useful information for lecturers to reflect on their practice. The next chapter, the last part of the longitudinal study, will focus on Cohort 1 graduates' overall experiences of the collaborative programme. While there were good and bad experiences over the course of a 4-year MPharm programme as detailed in Chapters 4-6, it is important for the schools to know what the students have to say about the overall experiences of the TU-CU collaborative programme, and how satisfied they were at graduation.

Chapter 7 Graduates Experiences of the 2+2 MPharm Programme

7.1 Introduction

Previous chapters have discussed the qualitative and quantitative methods used to explore the expectations and experiences of students in the collaborative pharmacy programme. This chapter is the last part of the longitudinal study undertaken to assess the experiences of students throughout their undergraduate education at the universities using a questionnaire with open-ended questions. For distinguishing questionnaires used between chapters, the term ‘exit survey’ will be used for this part of the study. This part of the research (Phase 4) was conducted in July 2013 on nineteen students who were awaiting graduation from the aforementioned collaborative pharmacy programme. The chapter will start with a background and discussion on the importance of the undergraduate student exit survey, followed by the study design and methodology. Research findings related to educational experiences of the graduating students, as well as their plans after graduation, will be discussed at the end of the chapter.

7.2 Students’ Exit Survey and Its Importance

An exit interview is a survey conducted with an employee when he or she leaves a company (Iqbal, 2010). The information from each survey provides feedback on why each employee is leaving and what he or she liked about the employment. Also, suggestions of improvements that can be made by the company could be provided (Nigam and Mishra, 2014). In the education sector, there are two types of exit surveys. The first type of survey targets students who leave the institution before completing the programme (Glogowska et al., 2007). It explores the social and organisational impact on student retention (Tinto and Pusser, 2006). Reasons provided for withdrawal can assist universities to find strategies to improve student retention. The second type of survey seeks the views of graduates who have completed the programme through a graduate exit survey (Sohail and Shaikh, 2004, Mohamed et al., 2012).

A graduate exit survey is a method of collecting information on the quality of undergraduate education from the perspectives of students upon the completion of their degree programmes (Mohamed et al., 2012). It gives students the opportunity to comment

on the many areas of their experiences regarding the faculty, the curriculum, and the services. At the same time, it serves as a medium to notify the institution of their future career and education plans, and provides a candid assessment of their growth as students (Smithson, 2000). Many universities used it to capture students' satisfaction towards the university programme, their experiences throughout the programme, future plans, and suggestions on improvement. Information collected can be used to review and enrich the quality of the programme. It also helps to communicate areas for improvement so as to meet the future needs of students (Mohamed et al., 2012).

In the UK, the National Student Survey (NSS) (Edgren et al., 2010) is the main vehicle for student feedback in UK universities (England, Wales, Northern Ireland, and participating HEIs in Scotland). It was launched in 2005 to gain access to the opinions of final year undergraduate students regarding the quality of their degree programmes. The results of the survey are used to compile university league tables, which is a way of making the HEIs in the UK more accountable. However, there are criticisms from academics and students who feel that the NSS does not truly tell the public how engaged students feel (John, 2014). Despite its use at Cardiff University, NSS does not give full insights into what life at a university is actually like. Also, it is difficult to extract the data relevant to a single course (i.e. pharmacy) as courses are often grouped together. In addition, the results could not be used for collaborative programme as the researcher do not know which responses are from TNE students.

7.3 Aims and Objectives

This phase of the current study aims to explore final year students' wider perceptions towards the collaborative MPharm programme. The data collected can inform practice, which can benefit the existing students in the TU-CU collaboration. The results will also allow TU and CU to reflect upon student responses and implement changes that will benefit their students. In summary, this study would focus to address the last research objective outlined in Chapter 1 (section 1.4):

- (1) to investigate student experiences during their undergraduate programme at the universities, and
- (2) to identify any areas for improvement of the collaborative programme.

7.4 Research Design

As described in Chapter 3 (Section 3.3.3), questionnaires were adopted as the research method as opposed to face-to-face qualitative research methods due to logistical difficulties. At the time of research, target participants were on holiday, thus arranging focus groups with a minimum of four students was challenging. One-to-one interviews were not feasible as the main researcher resides in Malaysia while the students resided mainly in the UK. A self-administered questionnaire was therefore considered the most suitable method. This questionnaire used free format response boxes, as such qualitative data were collected. It allowed target participants to fill it at their convenience during the break.

7.4.1 Research Instrument

After conducting a literature review on research related to student exit meeting and survey, an initial draft of exit survey was prepared and sent to the supervisory team for review. The final copy of the exit survey (see Appendix 7.1) consisted of eight open-ended questions and prompts to probe for clarity:

- (1) What were the best parts of your learning experience in this whole programme at Taylor's University and Cardiff University? [Probe: Why is it so?]
- (2) What were the worst parts of your learning experience in this whole programme at Taylor's University and Cardiff University? [Probes: Why is it so?]
- (3) Did your experience in the School of Pharmacy (at Cardiff) meet your expectations? [Probe: Please explain your response.]
- (4) Do you have any suggestions for the School of Pharmacy (at Cardiff) as how to improve the experience for future students?
- (5) What would you do differently if you could do it over again?
- (6) What you will miss most after leaving Cardiff?
- (7) What are your next steps after graduation?
- (8) What do you expect to be doing five years from now in relation to your career?

7.4.2 Ethical Considerations

Research ethics approval forms were submitted and approval granted by the SREC (Appendix 7.2). An information sheet (Appendix 7.3) and consent form (Appendix 7.4) were part of the application for ethics approval.

7.4.3 Study Population and Sampling

All Cohort 1 pharmacy students who had moved from TU to CU and who had just completed their final year of study (n=19) were invited to complete the survey form.

7.4.4 Subject Recruitment and Data Collection

All eligible students were contacted through email to ascertain their willingness to participate in the survey (Appendix 7.5). The purpose of collecting the data, including anonymity, confidentiality, and voluntary participation were outlined in the email. Along with the invitation email was an attachment of the survey form as a Microsoft Word document. Students were asked to insert their answers into the blank spaces underneath each question. Two follow-up email reminders were sent to all students two and six-weeks following the questionnaire. Completed surveys were returned to the researcher via the email address provided. Anonymity and confidentiality of participants were maintained using methods described in the previous chapter (Section 6.4.2).

7.5 Data Analysis

Data collected from the survey forms were analysed in accordance with thematic analysis as described in Chapter 3 (Section 3.4.4) with an inductive approach (Boyatzis, 1998, Marshall and Rossman, 2006). The researcher first compiled all data collected and read through the data to get an overview, and then returned to each set of data and read them carefully again. The importance of reflexivity in conducting qualitative research, which addressed the researcher being aware of how her knowledge and experience could influence the data gathering and analysis, was also taken into account (Sullivan, 2002, Carolan, 2003, Flick, 2006, Jones, 2011).

7.6 Research Findings

7.6.1 Response and Demographics

All final year pharmacy students (n=19) undertaking the 2+2 MPharm graduate degree at CU were invited and eleven survey responses were received. Appendix 7.6 outlines the details of those who took part in this part of the research and their previous participation in this longitudinal research. Students' post-graduation plans were explored. Figure 7.1 shows more than half (55%) of the respondents planned to complete their pharmacy pre-registration training in the UK.

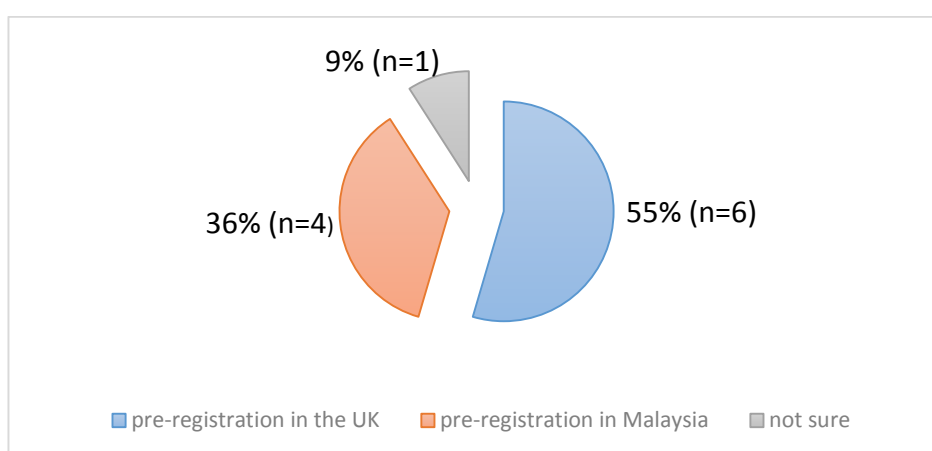


Figure 7.1 Profiles of respondents based on post-graduation plan

7.6.2 Themes Identified from the Exit Survey

A total of four themes induced from the empirical data were identified. A summary of the themes and an example of their illustrative quotes are presented in Table 7.1.

Table 7.1 Themes and sub-themes emerged from the exit survey study

No	Themes	Illustrative Quotes
1	Experiences of the twinning programmes	<i>C16: Everyone has different style of teaching, in some cases it may be affected by cultural backgrounds. By knowing and exploring more places and people, I get to know and learn different teaching style, but all in all it was an unforgettable and beneficial experience.</i>
1	Suggestions for improvement of the twinning programme	<i>C13: Exposing Year 3 students with a pharmacy attachment before the start of the academic year would be good. This can help with what's mention above (students from TU feeling intimidated as they lack of practical and clinical skills). It would also be good as</i>

		<i>the pharmacy practice between countries may differ.</i>
2	Students' self-reflections on the twinning programme	<i>C15: I think I wouldn't have joined 2+2 but probably come straight to Cardiff university so that I could be more prepared (as in knowing and understand drugs more in-depth) but I am not regretted to do 2+2 because I have met a great bunch of friends through this programme and I really enjoyed the moment we has such as studies together and preparing presentation together and all. There are always pros and cons for everything so I'm not regretted of joining this 2+2</i>
4	'Five years down the road' (that is, 5 years after graduating)	<i>C21: First year pre-reg (pre-registration) training in the UK, obtaining UK license. Going back to Malaysia to complete the compulsory service for another year. I'd expect to be in senior/managerial level within the next 5 years in any of the following: industry, hospital or community pharmacy with my advantage of having the UK and Malaysia license.</i>

Theme 1: Experiences of the Twinning Programme

The five sub-themes identified were: 'learning at two institutions', 'personal growth', 'socialising' and 'related to transition'.

Learning at Two Institutions

The opportunity to learn in two different institutions provided students with a very good academic experience. Differences in teaching and learning styles were noted due to intercultural differences:

C21: I get to experience studying pharmacy course in two different university environments (i.e Malaysia and UK) which is not a chance every student were given.

C25: I got the chance to study first 2 years in Malaysia and last 2 years in the UK throughout the degree. So I managed to experience two different learning environment in this programme.

C16: Everyone has different style of teaching, in some cases it may be affected by cultural backgrounds. By knowing and exploring more places and people, I get to know and learn different teaching style, but all in all it was an unforgettable and beneficial experience.

C16: I was able to know more people of different cultural backgrounds and learning things from different perspective.

Students agreed that Cardiff provided good training through various assessment and activities, especially final year project and extemporaneous workshops which gives them hands-on experiences. They also complimented the academics from CU who were professional, experienced, and knowledgeable:

C15: FYP (Final Year Project). It was a whole new level of learning because in the previous year we were doing mostly theory and this time we were given a chance to do practical under the supervision of an expert, it really gave me a whole new experience and I really enjoyed it.

C23: The practical hands on experience like dispensing practice and making stuff in the lab (e.g. ointments etc.). I learn more efficiently if I do something and do it myself rather than only sitting and listening or observing. I feel the combination of both is better for efficient learning.

C13: Teaching staff from CU is all very experienced and professional making it an excellent learning ground. Most staffs that are allocated for teaching are knowledgeable and have in-depth experience in specific subject area.

Furthermore, students highlighted that CU took a student-centred approach in teaching and learning as opposed to the spoon-feeding culture at TU. In line with the DREEM questionnaire (Chapter 5, Section 5.5.4) and post-arrival focus groups (Chapter 6, Section 6.6.3), TU lecturers were perceived to be teacher-centred which hindered independent learning:

C15: Lecturers here (CU) are not spoon-feeding students so they have to find out solution on their own whereas back in Malaysia, we were too used to rely on lecturers all the time.

C1: Student have to make initiative to do their work and it is student's responsibility to ask in order to make sure they understand the lectures. You are responsible for your own future.

The comment on TU lecturers' inexperience and one lecturer who ridiculed a student (issue was highlighted in Chapter 4) reappeared in the exit survey:

C23: I didn't really enjoy the lectures during TU. I have to be frank, a couple of the lecturers (TU) are not really experienced and they don't really answer our questions. They don't explain well during lectures too. And they don't explain nicely when you make mistakes. I got to say this but I have been hit on the head with a marker pen and scolded stupid before just for making mistakes. I haven't told this to any of the adults because I don't want the lecturers to get in trouble but I wish this won't happen to any of my juniors and future students, so I'm just saying it now here.

Nonetheless, C23 appreciated the small class setting at TU. Due to its small number, lecturers were able to pay more attention to individual students. But the student does not like it when CU staff split them into groups during workshop as he/ she preferred to be in the same group as his/her friend instead of being assigned to work with other classmates.

The students also shared their placement experiences. Lack of clinical knowledge and practice skills were their main concerns. These topics were discussed in post-arrival study (Chapter 6, Section 6.7.3). In the exit survey, students added:

C23: I really loved the hospital placement they arranged for us during the course, it allowed me to experience what it is really like working in a hospital and I also learned more about medication and patient care. I also love the fact that they reimburse us for food and accommodation so that our financial burden won't be that heavy and we could enjoy our placement without worrying.

C13: Lacking clinical and practical skills experience in TU compared to local students in CU making learning experience at the start very intimidating. Most of the local students are very competent in various fields (because of work experience) which TU students are mostly lacking of. It would be nice if students are exposed to more working experience / pharmacy practice before transferring to CU.

C15: I think the worst part of it was we were not really prepared when we first came. Students over here have really strong knowledge about drugs as most of them got summer or Saturday jobs.

Personal Growth

As the students learned to adapt to their new environment, they noticed personal development in themselves as a result of having to face challenges alone, living independently, and pushing her/his own limits:

C13: I felt like I have grown more as an individual after this experience. It was also quite an experience working with professors that are expert in their own specific field of interest.

C21: Learning from Malaysian lecturers are different from the UK lecturers although the syllabus has been totally identical. This has exposed me to different studying environments shaping me into a better person in adapting to new environments and facing challenges alone.

C15: I didn't really expect that much improvement on myself but came here and with positive competition between myself and my colleagues have given me an opportunity to explore my limit and learnt new things from them such as I stepped out of my comfort zone and tried to look for a Saturday job in a pharmacy. Even though I didn't get any in the end, but I really enjoyed the process of being called for an interview and walked to all pharmacies in Cardiff city to just hand-in my CV. I don't think I would have done so if I were in Malaysia.

This was in line with students' focus groups during Phase 1 (Chapter 4) and Phase 3 study (Chapter 6), where they expected that studying abroad would give them a chance to be independent. This came true as evidenced by their testimonials on becoming more self-reliant and culturally competent.

Socialising

Social experiences varied among students. Some students appreciated the differences in background and cultures among peers, and meeting new people which helped them in learning about UK's cultures. One student preferred to work with classmates coming from Malaysia because he/she felt closer to them, while another student felt there was a lack of time to know their classmates from the UK:

C1: Due to the 2+2 program, somehow it is hard to mix and mingle around with the local student in UK as we have our own gang. Although we will still chit chat but hard to turn into those close friends. Probably because we have different culture background especially it takes time for us to mingle into their culture besides focusing on studies. When things get better, it's time to leave.

C23: As for CU, they separated us into groups too often when doing group work. I know it's for our own good to learn to work with others besides our own friends but sometimes some assignments or work could be done a lot better if working with friends we are familiar with. But like I said it's for our own good so I won't complain much about it.

At first, Cohort 1 students did not expect to mix well with CU students (Section 6.6.2). They had faced challenges interacting with their local peers (Section 6.6.3). It was towards the end of the course, when communication and relationship improved, that they wished they had spent more time with them:

C15: I have met a great bunch of friends through this programme and I really enjoyed the moment we has such as studies together and preparing presentation together and all.

C5: [If I could do it over again] (refer to the 2+2 MPharm programme), I will make more friends with the local students.

C13: [If I could do it all over again] (refer to the 2+2 MPharm programme), I will spend more time socialising with local students and going for social on Wednesday night.

Related to Transition

Some students recognised the challenges they faced shortly after enrolment in the programme. One of these challenges is the lack of community pharmacy working experience and related knowledge as explained earlier. They were worried and felt lost initially as they could not get close to the local students but the situation improved after they had blended in. Furthermore, the transition from CU to TU was not as smooth as the

students expected. Some students explained the same during the post-arrival study (in Chapter 6); they expressed that there was generally a lack of guidance during the transition period. Some students assumed the lack of appropriate arrangement prior to transfer was due to the inexperience of the relevant parties (e.g. lecturer, administrative office) especially with this being a new initiative. Students also felt that being the first cohort of transferees in this collaboration might disadvantage them academically:

C16: The transition wasn't as smooth as I thought or expect it to be. Due to the lack of experience of doing so as my batch was the very first batch under the collaboration, not many parties know the appropriate arrangement to obtain the student visa, most importantly regarding the documents required for such visa application.

C21: As the first batch of students to this programme. A lot of things are in trial and error stage where it might affect our learning process.

Theme 2: Suggestions for Improvement of the Twinning Programme

Academically, students expressed the need for a community pharmacy placement prior to commencement of Year 3 studies at CU. This is because the practice in the UK and Malaysia is different; thus students from Malaysia would not have the same exposure as students who had started their MPharm in the UK:

C13: Exposing year 3 students with a pharmacy attachment before the start of the academic year would be good. This can help with what's mention above (students from TU feeling intimidated as they lack of practical and clinical skills). It would also be good as the pharmacy practice between countries may differ.

C15: I think probably allow students to come earlier and have some experience in pharmacy before the term starts so they could know the difference between system in Malaysia and the UK. I know we have learnt all about in our year 1 and 2 but learning it through lectures and having it by real are two different experiences. I remembered I understand how it works in UK when I was in year 1 and 2 but when I had my first placement in the UK, it was so different from what I have thought of as in the dispensary work they are doing, counselling and CDs dispensing. All these experiences you couldn't get in Malaysia community pharmacy.

Students suggested CU staff arrange longer periods of hospital and community pharmacy placements. They also hoped that the school would only recruit community pharmacists who are willing to teach them during their placements:

C23: For placements, especially community placement, make sure the branch has the initiative to teach students rather than just ignoring us and not letting us touch anything when we offer to help. Letting us stand around like spare parts will not do. Can't learn much like that.

Lack of food variety in CU refectory and computer printing availability are recurring issues (highlighted by students in post-arrival study, Chapter 6). Participants were disappointed and wished that management would consider improving the cafeteria service by having a wider choice of food and installing a printer in Redwood building.

Theme 3: Students' Self-Reflections on the Twinning Programme

When students were asked what they would do differently if they could do it over again, most had mentioned improving their academic performance which they felt was not satisfactory. Students wished that they had worked harder and were more engaged academically and socially during their time in Cardiff. There were also students who considered completing their entire four years of pharmacy education in the UK:

C8: might just go straight to Cardiff to study for 4 years.

C15: I think I wouldn't have joined 2+2 but probably come straight to Cardiff university so that I could be more prepared (as in knowing and understand drugs more in-depth) but I am not regretted to do 2+2 because I have met a great bunch of friends through this programme and I really enjoyed the moment we has such as studies together and preparing presentation together and all. There are always pros and cons for everything so I'm not regretted of joining this 2+2

Theme 4: Five Years down the Road

Most students believed that they would stay in the pharmacy profession, be it in the hospital, community, or the corporate world. One student plans to further his/ her study.

Logistically, some students aimed to register as a pharmacist in the UK, others in Malaysia, while a few aimed to obtain a pharmacy license in both countries:

C4: Looking to be fully registered in Malaysia as a pharmacist and looking at options abroad. May be interested in a pharmaceutical company later on and also the possibility of an own retail pharmacy. Fighting for dispensing rights as long as it has no say in Malaysia so that Pharmacy will have value as a profession.

C21: First year pre-reg (pre-registration) training in the UK, obtaining UK license. Going back to Malaysia to complete the compulsory service for another year. I'd expect to be in senior/managerial level within the next 5 years in any of the following: industry, hospital or community pharmacy with my advantage of having the UK and Malaysia license.

7.7 Discussion

Student transition is a complex issue. This is more so for TNE students who faced increased responsibility and academic pressure as they need to adjust to a variety of cultural and social changes in a short amount of time. During the transition process, students assimilated many aspects of the British culture, academically and socially. It was not easy as the current twinning students had only two years in the UK to complete their degree. In comparison, their international peers had four years to make the adjustment. By the end of the programme, it is delightful to learn that for most students, the best part of the learning experience was pursuing education in two institutions in two different countries.

7.7.1 Development of Cultural Competency

This phase of the current study demonstrated students' ability to reflect on their own culture. Students understood the different styles of teaching were due to different backgrounds of the lecturers. They were also glad that they had the opportunity to experience and learn from various cultures. To this effect, Ullrich (2012) believed this openness to different approaches could make them better problem-solvers and team players.

Phase 3 (Chapter 6) revealed the benefits gained by transnational students who studied abroad: better self-reliance (more independent) and culturally competent, be it in communication or learning approaches. Studying abroad also increased students' self-confidence (Hansel, 1988). These traits were observed in the current researched students as transition issues described by them when compared to earlier encounters were in terms of 'when we first came' or 'at the start'. Furthermore, students' experienced personal growth as a result of their efforts to adjust to the local environment and the need to cope with new challenges, especially when there were no more 'spoon-feeding' and they have to be responsible for their own learning. Thus, the twinning programme offered by TU and CU has inevitably contributed to the core of holistic student development, a goal of almost every university (Braskamp et al., 2009).

7.7.2 Suggestions to the Schools

Suggestions given by students revolved around the experiential placement. In the twinning curriculum, community pharmacy placement is offered in Year 1 and Year 2 of study, as at CU, but this is obviously undertaken in Malaysia. Due to the students' perceived weak clinical knowledge in comparison to local UK students, the suggestion was made to provide a UK-based community placement before term starts at CU. It is relevant to note the same suggestions were seen from the post-arrival study (Chapter 6). As a result, CU has taken on board the suggestions where an additional placement were provided for Cohort 3 transferees.

As discussed in Section 6.7.3, insufficient training perceived by students was due to the differences in pharmacy practice between Malaysia and the UK. In terms of familiarity with the practice in the UK, training could be provided so that students understand better the standard operating procedures of the different services. However, training to improve clinical knowledge of drugs is more subjective. It is believed that constant application of the knowledge could have enhance TU students' clinical know-how when they have frequent exposure to various services provided in UK's community pharmacy.

7.7.3 Students' Reflections

Some students expressed their wish to join the MPharm programme in CU starting in year one if they were to do it all over again. Results of this study showed that some students

preferred the education provided by CU rather than TU. This is in line with the findings in Chapter 4 and Chapter 5 where some students did not enjoy the teaching and learning activities in TU. Academically, students perceived they would be better prepared for the pharmacy professions if CU alone provided the education. Furthermore, although the reasons for not getting a good grade were not explored, a few students felt that they could have done better if given the chance. They wished they had studied harder to get a better grade.

Forming and maintaining friendships, taking the initiative in conversing with native-speaking students are all essential for social adjustment (Myles and Cheng, 2003). As the researched students travelled together from Malaysia to the UK, they experienced the challenges of a multicultural situation together. It was perhaps the existing bond between them that makes them hard to mix with local students initially. However, when they have start to build new social networks outside their circle (Lacina, 2002), a closer relationship with their local classmates were fostered. By the end of the programme, they wished they had attended more social events together with their local classmates. The fact that they prefer to start year one of the MPharm programme at CU also seems to imply this.

7.7.4 Five Years down the Road

Most students planned to stay in the pharmacy profession after graduation and saw themselves working as pharmacists in hospitals, the community, industry, or in the corporate world in the next five years. This is unsurprising as it has been observed that a high percentage of pharmacy graduates continue a career in pharmacy (Prescott et al., 2014) due to the various types of pharmacists' job available after graduation, for example, attachment with the hospital, community, primary care, industrial, regulatory, and academic sectors. However, one third of the pharmacy students in Wilson and colleagues' (2006a) study mentioned that pharmacy was not their first and only choice of career. In relation to Malaysian students' pharmacy career, a large proportion of public university pharmacy graduates would continue working with the Ministry of Health after completion of compulsory service, while most privately funded graduates would enter the private sector (Hasan et al., 2010). While the intended career choices of pharmacy students need to be confirmed in graduates, the current results show a trend that all Cohort 1 students in the 2+2 MPharm pharmacy programme would still pursue a career in pharmacy after their pre-registration as a trainee pharmacist.

Postgraduate study was identified as a choice for one student. The interest of pursuing a higher academic qualification was sparked by her/his research supervisor during the final year project. It is undeniable that FYPs are important components of honours degrees as they provide students with an opportunity to learn and develop practical and/or analytical skills. In a national scale study, it was found that students clearly engaged with the FYP and feedback from key staff members indicated good performance by students (Langley et al., 2007). The interest displayed by students showed that the practical experience in the final year was pleasant. Literature showed that supervisory capability has an impact on FYP (Wilson et al., 2006b). Both students and staff also agree that good grades obtained in research project modules could enhance the overall final grade. In this case, students perceived the FYP module as a particularly valuable opportunity for them to obtain a good results (Vosper, 2009).

7.8 Limitations

The response rate is one of the limitations of this phase of the study. At the time of research, most students were having their holiday and might not have a chance to check their email. However, the researcher has encouraged students who responded initially to inform their classmates so to maximise the number of participants. On reflection, use of SurveyMokey® (an online survey software) could have given a better response rate as it provided a quicker administration speed when compared to Microsoft (MS) Word. Not only it removes the need for downloading the MS Word document, it provides a very convenient platform for respondents to respond immediately anytime and anywhere using their mobile phones. Future work of a similar nature would be undertaken in this way to determine whether this would be a more suitable approach.

In addition, as discussed in the previous chapter, in all qualitative research, the biggest issues researchers faced is the way in which their knowledge and identity affects the collection of qualitative data (Reed, 1995). Therefore, a reflexive process as described in Chapter 3 was used.

7.9 Chapter Conclusions

This phase of the current study aims to explore final year students' wider perceptions towards the collaborative MPharm programme. The data collected showed that students

were largely satisfied with the education they received in this twinning programme. The majority of graduates were satisfied with their undergraduate programme, the professional preparation, faculty and their overall experience at CU. The results findings also benefited the existing students in the TU-CU collaboration. As the school noted specific areas of concerns (such as lack of placements) and anticipated that improvements can be achieved based on feedback provided by graduates. The next chapter is the final discussion of the empirical findings; it will bring together the findings from chapters 4-7, and discuss the research implications.

Chapter 8 Discussion

8.1 Introduction

This final chapter presents the conclusions of the empirical research described in the thesis. It begins with the researcher's reflection upon completion of the research project. The aims and objectives of the research as outlined in Chapter 1 (section 1.4) were achieved and this chapter goes onto review these in more detail. It concludes with the strengths and limitations of the thesis, recommendations to schools and suggestions for further research.

8.2 Reflections

The research began in 2011 in order to gain an understanding of the staff and students' views about their teaching and learning experiences in the new 2+2 MPharm pharmacy twinning programme. As the programme was new to both TU and CU, the first intake commencing in January 2011, it was hoped that important issues involved in setting up a collaborative programme can be identified from this research. Unfortunately, the 2+2 MPharm was terminated in 2013. The main factor was the divergence of the requirements of the regulators meaning it was no longer possible to have a common first two years of the programme.

The TU-CU MPharm programme enrolled a total four cohorts of students and produced three cohorts of MPharm graduates as of December 2016. At the time of writing, there is one cohort of students in their Year 4 study (i.e. Cohort 4) at CU who are expected to graduate in July 2017. Given that there is still one cohort of MPharm students, the research is still beneficial to these students who are at CU as well as to other academics considering setting up new twinning international collaborative programmes.

Raising awareness of the issues through a summary report (Appendix 5.3) to the School's Learning and Teaching Committee at both Taylor's and Cardiff was an important outcome of this study. Presentation of DREEM results (Appendix 5.3) and students transfer experiences (refer to: <https://prezi.com/yuelxuk65t8/students-expectations-and-experiences-of-transfer/>) in TU's school meetings hopefully would encourage staff

within the school to think about their current teaching approach, how beneficial or detrimental their approach is to students, and whether there are ways they could improve or enhance their teaching.

Undeniably, the skill of the researcher in the study makes a difference in the quality and amount of data collected from the interviews and focus groups. It was a big challenge considering the researcher in this project has no prior experience in conducting qualitative research. To overcome this, practice interview sessions were carried out with the researcher's supervisor before actual data collection. Nevertheless, the researcher struggled to be natural and neutral especially in the early phase of interview data collection. It was a daunting experience at first when she advised the participants to treat the interviews as a normal conversation between colleagues. She has to refrain from being too conversational so as to avoid offering her opinions and thus introducing bias into the data collected. Similarly, in the focus groups, while students gave their feedback, the researcher reminded herself to be careful not to 'react' to the students as this would invite a bias response. A topic guide was therefore useful to direct questions of interest.

At first, the researcher read from the topic guide. Later, it was used as a physical reminder for the researcher to remain focused. Despite the inexperience of the researcher in the initial phase of data collection, she did not identify any significant changes in behaviour either from observation of the respondents or from reading the transcripts, suggesting an open and natural process. However, it is not possible to eliminate all sources of bias from a qualitative study and it is therefore important to recognise and be aware of probable influences on the data.

Similarly, it was challenging when analysing the large volume of data as it is not only daunting to connect and make sense of the information but also to maintain the researcher's neutrality throughout the analysis. However, the daunting process was eased by the guidance provided by the supervisory team. A substantial amount of developed codes and themes were first sent to the supervisory team for validation and consistency check before more data was analysed. No bias of data analysis was observed during the review process. The researcher did not integrate the data at all stages of the research (Johnson et al., 2007) nor report and discuss the data completely separately (Plano Clark et al., 2014). Relevant findings were linked and explained in the discussion section of each phase of the study. Interpretation and reporting occurs through narrative and joint

display of data (Fetters et al., 2013) in the final chapter.

At this stage of thesis writing, the researcher would not say that she has mastered the skill of qualitative data analysis but the process of undertaking qualitative research has been enlightening. The researcher has developed a greater understanding of qualitative data analysis and this helped create awareness of the impact the researcher could have to the research during analysis.

On reflection, by undertaking this study, the researcher considers that she has achieved the objectives while gaining some additional benefits viz. professional development. In particular, her own knowledge and understanding of the students and staff in TNE has greatly expanded. This has made the researcher much more aware of the students' needs and concerns, and this applies not just for TNE students but also students in HE in general.

8.3 Review of Methodology

A background research through literature review (after the central research question has been identified and before conducting any actual study) helped researchers gain a broad understanding of work previously conducted on the topic and enabled the researcher to position her own research by building on prior knowledge. Guided by the literature review, the design of a longitudinal mixed method research could then provide options to explore the stakeholders - staff and students' personal views, expectations and experiences of the MPharm programme - in various stages.

Upon reflection, the mixed method approach, which uses triangulation, complemented and supplemented each other. It also allowed a more complete and synergistic utilisation of data in making conclusion. The rationale for using staff interviews was discussed in section 3.3.1. Interviews enabled the researcher to delve deeply into the opinions and perceptions of the staff. The one-to-one approach also created a safe environment to discuss sensitive topics. Most staff disclosed much valuable information that they would not normally reveal in their daily work routine.

On the other hand, focus groups created an environment for students to share and discuss their perceptions about the schools with their peers. The dynamics of group interaction highlighted the opinions of students and generated information that was not obtainable

with interviewing. Although not every group displayed the same dynamics with some participants playing a quieter role in the group, the focus group schedule allowed the researcher to obtain data within the designed scope. The quieter member could be simply shy to speak up in a group; however, the researcher did not observe any participant who felt uncomfortable with each other. Also, it was observed that Cohort 2 was more lively than Cohort 1 students at time point 5 (post-arrival) research which could be due to the close relationship enjoyed among Cohort 2 students.

The researcher acting as the moderator controlled the focus group sessions. A moderator can greatly affect the outcome of focus groups discussion (Lewis, 2000) resulting in moderator bias. Despite the lack of experience, the researcher managed to observe the distinct advantage group interactions have in each focus group. However, the researcher acknowledged that it is one key challenge that could be improved through reflections and discussion with supervisors. To develop the confidence in conducting focus groups, each audio recording was reviewed as soon as the focus group was conducted to allow reflections before the next focus group.

The use of follow-up and exit surveys using open-ended questions were deemed appropriate. Without overly burdening the students, the follow-up surveys used in different stages of the research provided a quicker means of data collection. This also applies to exit surveys used with students who were waiting for their final year results. However, on reflection, use of SurveyMonkey[®] would be more efficient and attract more responses as it allowed potential respondents to reply easily online at their convenience. Exit surveys distributed at a later stage might draw lesser responses as the surveys coincided with long semester breaks where students could be travelling with family after graduation. The timing of issuing invitations to participate in the exit survey has been carefully considered to attract the most responses.

The only quantitative method i.e. the DREEM questionnaire provided numerical data that helped explain the phenomena of learning environment issues. As described in section 3.1, it was relatively quick in data collection and analysis. In studying a large numbers of students, it was a useful measurement. However, when the measurements generated by the DREEM questionnaire did not adequately answer the questions of “how” and “why”, qualitative approaches (i.e. focus groups) were used to supplement the results.

The longitudinal research design had effectively collected information concerning Cohort 1 students' progress from year one to their final year. Convergence of various sources of information from staff and CU students using qualitative and quantitative data at different stages of the research added rigour and credibility to the study. This in turn highlighted the benefits of triangulation.

Section 3.4.4 explained the use of inductive thematic analysis in interpreting the qualitative data collected in this research study. Thematic analysis is considered the most appropriate method of analysis for this study as the interpretation of data requires some explanations (Boyatzis, 1998). Using thematic analysis, the researcher was able to detect and identify factors or variables that influenced issues raised by the participants. By approaching the data with an open mind, the researcher let the data speak for itself. Supervisors' help in reviewing the codes and emerging themes added credibility to the analysis process.

8.4 Review of Research Objectives

The research objectives of the thesis were met through the research described in the previous chapters. Key findings relating to these objectives are presented below.

In relation to the first research objective (refer to Chapter 4) which is to explore the reasons for students choosing TU and the 2+2 MPharm pharmacy programme, the following findings were made:

1. Students' decisions to study at TU were drawn by the local reputation of TU and the international profile of CU. Before joining the programme, they evaluated each offering in the market against their personal needs: cost, previous experiences, geographical location and environment. (refer to Section 4.7.2, Theme 1)
2. Students' decision to join pharmacy was strongly influenced by the adequacy of information to evaluate their career prospects. Students were well aware of what the job could bring them and together with the marketing information, they were able to make informed decisions. (refer to Section 4.7.2, Theme 2)

This study reflected intrinsic (related to the individual; i.e. job satisfaction and interest in

science) and extrinsic (factors beyond individual control; i.e. job security, high income and professional status) motivations driving TU students' choice of pharmacy courses as suggested by Bowles and colleagues (Bowles, et. al. 2011) (Section 2.52.). As the reasons to join the pharmacy programme are consistent with most studies (Roller, 2004, Willis et al., 2006, Capstick et al., 2007, Keshishian, 2010, Sharif and Sharif, 2014), it provided the recruiters useful information to enhance enrolment as suggested in section 4.8.2. This phase of the study and the exit survey (Chapter 7) revealed that students' initial motivations to study pharmacy influenced their choice of education and career. While it was not known whether students would eventually pursue a career as a pharmacist, future research could provide important information to establish a more complete picture of this cohort of students' career destinations.

Research objective 2 and 3 considered the expectations and experiences of staff and students in relation to the collaborative programme (refer to Chapter 4). The research uncovered the following key points in relation to these objectives:

1. There was a disconnect between student expectations and their actual experiences in the areas of academic profiles, curriculum overload, timetables, and facilities. (refer to Section 4.8.2)
2. Both CU and TU staff had realistic expectations as they were well-informed by their individual institutions about their job scope. (refer to Section 4.8.1)
3. Both CU and TU staff had complex experiences of the pharmacy programme. In general, TU academics perceived the programme as well run but TU laboratory staff felt otherwise as they were frustrated with communication from the academics. For CU staff, they were concerned about ensuring quality and the standard of programme delivery at both institutions. (refer to Section 4.8.1)
4. Both CU and TU staff recognised the benefits of the twinning programme, which contributed to their cultural, social, personal, and professional development. (refer to Section 4.7.3, Theme 2)
5. Recommendations have been made to address potential challenges faced in the beginning stage of the collaboration by the school delivering TNE. (refer to Section 4.10)

Literature review informed that the outcomes of any activities should account for stakeholders' views. In the context of higher education, Kettunen (2015) encouraged the participation of stakeholders (i.e. students and staff) in quality assurance activities. As little is known about the students and staff within the current research phenomenon due to the predominantly Australian context of research, the present longitudinal study has contributed to the increasing body of knowledge on TNE by adding value and understanding across sectors on higher education. It revealed the need for staff training before the undertaking of TNE teaching role where this training shall promote knowledge of the programme, familiarity with the curriculum, awareness of intercultural differences, and the ability to teach in such an environment. On the other hand, the opinions given by students were useful as they drew attention to the aspects and qualities that need to be reviewed and improved, respectively. Overall, both stakeholders have provided useful information for the continuous improvement of the collaborative MPharm programme.

Research objective 4 aimed to examine and compare the learning environments in the pharmacy schools at CU and TU. Some differences between the students at the two sites were identified through the use of the DREEM questionnaire, but also many similarities – key findings are noted below (refer to Chapter 5):

1. Students at TU and CU perceived an overall positive learning environment in their respective schools. CU responded more positively than TU students on most items in the DREEM subscale. (refer to 5.4.4)
2. The perceptions of the teachers and the atmosphere created the most frustration in TU students' overall experiences. (refer to 5.4.4)
3. There were significant differences between students' perceptions of the teachers at TU and CU. Students found some TU lecturers to be authoritarian, disrespectful of students and unable to control their temper. (refer to 5.4.6, Students' Perceptions of Teachers)
4. The atmosphere at TU and CU was generally perceived as comparable with the exception of a few areas at TU e.g. disappointing experience and stress in study. (refer to 5.4.6, Students' Perceptions of Atmosphere)
5. DREEM findings revealed a few specific areas to be improved, especially academic staffing. Recommendations were made to the schools and action have been taken to rectify the issues identified. (refer to 5.7)

The importance of the students' learning environment and the impact on their academic progress and achievements were discussed in section 2.4.2. The current study found the usefulness of the combined application of the DREEM questionnaire with qualitative interviews as suggested by Whittle and colleagues (2007). DREEM alone has successfully captured the numerical denotation of students' perceived learning environment between CU and TU. It provided confirmation on certain areas to be improved and highlighted areas for further investigation. The qualitative analysis (Chapter 6) identified specific areas that require remediation. This DREEM finding was the first study to date that focused on the comparison of two different learning environments between Malaysia and UK pharmacy schools. The study would benefit stakeholders who are running similar programmes as they could utilise a similar mixed methods approach in understanding how their students perceived their learning environment.

The research also sought to explore the expectations and experiences of transferring students studying the transnational 2+2 MPharm pharmacy programme. The following key findings were revealed (refer to Chapter 6):

1. Students were generally not satisfied with the "connection" experiences especially at the point of transfer (one month before transfer). (refer to 6.6.3 Theme 7)
2. Students had high expectations of the academic staff. They expected TU materials and teaching to be delivered at the same standards as in CU. They also expected the academic staff to be well qualified, experienced and capable in their teaching roles. (refer to 6.7.1)
3. There were different teaching approaches used in both institutions. Generally, students perceived lecturers in CU to be more engaging. (refer to 6.7.3)
4. Students preferred the student-centred approach used in CU which had trained them to become independent learners. They disliked the 'spoon-feeding' approach used by TU lecturers. (refer to 6.7.3)
5. TU students recognised their lack of skills in areas related to pharmacy practices such as prescription screening. They appreciated the placement arranged when they transferred to CU. As a result, the students grew more confident of their skills over time. (refer to 6.7.3)
6. The research revealed the need of communication between partners in TNE in coordinating student transfers and guaranteeing an integrated approach to the

delivery, teaching and management of programmes. It is also essential to constantly communicate with students to ensure their needs and concerns are addressed. This would help alleviate their anxiety of transfer. (refer to 6.10)

In line with the Australian-based transnational education exploration (refer section 2.4.1 and 2.5.2), the current project showed that experiences of transnational students revolve around cultural differences (i.e. learning styles, culture shock, language, and social interaction). The Confucian-heritage learning style adopted by Asian students prompted the change of teacher-student interaction in class. However, gaining awareness of learner's readiness for learner autonomy is equally as important as teacher readiness for promoting learner autonomy. While teacher and student readiness for learner autonomy has been widely discussed outside the pharmacy course (Chan, 2001, Macaskill & Taylor, 2010, Farahani, 2014), this research highlighted a number of new avenues that could be explored in future studies. The current research also established that transnational students in a twinning programme experienced less than pleasant academic and social adjustment, suggesting a greater role of home and host institution in preparing the students for a quicker and less painful adjustment.

Lastly, research objective 6 is to investigate graduate students' overall experiences of the 2+2 MPharm pharmacy programme through a qualitative survey and the principal findings were (refer to Chapter 7):

1. Students could discern the obstacles to learning and prefer the student-centred approach at CU. (refer to 7.6.2 Theme 1)
2. The research findings recognised students' personal growth and development of intercultural competence through transnational education. (refer to 7.7.1)
3. The results findings benefited the existing students in the TU-CU collaboration as the schools noted specific areas of concerns (such as lack of placements) and actions were taken in order to improve student placement experience. (refer to 7.6.2 Theme 2)

Discussions in the literature showed an indispensable relationship between education quality, students' expectations and experiences, and student satisfaction. In line with Gibson's (2010) research (refer section 2.5.1, Table 2.2), this part of the study has identified items that served as major predictors of student satisfaction, which were

academic staff/ teaching, classes, counselling support, skills developed, preparation for the future, school services, social integration, and student centeredness. The above were obtained from students' written comments in the exit survey. It gave an understanding of how the learning experience encouraged or frustrated them. It also further confirmed the benefits of successful adaptation (Byrnes, 1966, Adler, 1975, Anderson, 1994, Furnham, 2004) brought about by studying overseas in cultivating personal growth and development. Students became more self-reliant, independent and culturally competent as documented in the exit survey.

8.5 Limitations of the Thesis

The present study had several limitations. First of all, attrition is a major common methodological problem in longitudinal studies (Murray et al., 2009). As the same set of sample (i.e. Cohort 1) is repeatedly used, variation from one period to another could have caused missing data (due to refusals to be evaluated, students dropping-out, and so forth). When it is impossible to know if attrition itself causes bias (Deng et al., 2013), the strategy used for reducing attrition in this thesis, particularly for focus group study, was the collection of follow-up data (Graham, 2009) using questionnaires. The objective is to compile data of those students who at the initial research stage were either left out or declined participation. Frequent contacts between the researcher and students have shown to improve retention. In this case, emails proved useful in keeping up with how students were doing at CU after the transfer. Actual number of student participants were listed in Appendix 7.6.

Longitudinal research allowed the collection of an accurate picture of social dynamics (Mingione, 1999). However, students' perceptions can be influenced by the experiences they had over time. This is due to students being requested to recall their expectations at the same time they were asked about their views or experiences with the programme. Any negative experiences, for example, might translate into less than desirable perceptions of the course. This is known as hindsight bias (Hawkins and Hastie, 1990, Appleton-Knapp, 2002). To reduce it, researcher tried to ask respondents to explain and give reasons to their responses.

As students recruited for this study had not yet graduated at the time of data collection, they might not have been entirely honest in their responses during the focus group stage.

They could have been cautious because they were afraid of negative repercussions since the staff they were evaluating happened to be their class lecturers. Although assurances of anonymity and confidentiality were given, it is possible that students and staff may have still filtered their comments to a certain extent. However, critical responses provided by students suggested this was not a significant issue.

In addition, the DREEM study (Chapter 5) highlighted two concerns. Firstly, the internal consistency of the five-scale is quite variable. Secondly, the construct validity is not well supported. The psychometric properties of the DREEM questionnaire clearly need to be further investigated. Finally, it is important to note that the researcher is part of the faculty at TU and the phenomenon of “reflexivity” may have occurred, that is, the researcher’s own assumptions and behaviour might have impacted the inquiry (Sullivan, 2002). Nonetheless, the researcher tried to reflect upon ways in which bias might creep into the qualitative and quantitative analysis, and acknowledged that her own background and beliefs had the potential to influence the research process.

8.6 Strengths of the Thesis

Despite these limitations, the study has nevertheless revealed some interesting findings in terms of TNE. It has discovered how staff perceived benefits and challenges viz. their experiences in a new collaborative pharmacy twinning programme. It also helped the schools recognise the negative aspects in a variety of students' TNE experiences. Most importantly, it provided the basis for future research.

The major strength of the thesis was the well-designed longitudinal study, which allowed repeated examinations of Cohort 1 students at multiple points in time thus providing an understanding of the changes in this group of students over time. The collection of relevant retrospective information also helped to provide background information about the students. For example, when students’ choice of pharmacy programme and universities were explored, this methodology showed how students’ understanding of the universities and pharmacy profession affected their choices.

Another strength of the thesis was the use of triangulation approach (Denzin and Lincoln, 2011). Using either a quantitative or qualitative research, data are partial in some respect. The mixed methods provided a bigger picture of the students’ experiences. When

analysing the data as a whole, quantitative data from DREEM helped the research by offering a bigger set of observations and giving a statistical overview of students' perceived learning environment; while focus groups provided a more close-up view and valuable insights in the form of in-depth exploration and illustrating students thoughts at different phases. Focus groups with students also clarified, described and validated DREEM results.

Finally, the research findings are generalisable (Babbie, 2007, Gustavson et al., 2012), meaning that the results may be applicable to a wider population. Most qualitative research studies are meant to study a specific issue or phenomenon in a certain population (in this case the TU-CU student and staff population), thus generalisability of qualitative research findings is usually not an expected attribute (Leung, 2015). However, findings in this research project may be generalisable towards similar contexts, e.g. students from Malaysia going to the UK or staff coming to teach in Southeast Asia. Also, with the accurate, detailed, and complete description of the context and participants in this research, it could assist readers to apply the results of the current research to a similar situation. This is also known as the transferability of the findings which allows readers to make associations between elements of the research with their own experience (Leininger, 1994, Murphy et. al., 2013). For example, the research showed that students were not provided adequate guidance at the point of transfer. Thus, institutions running similar programme could ensure that they look after their students' needs at the time of transfer.

8.7 Suggestions for Future Research

If the TU-CU twinning programme have been continued, follow-up studies on the following would potentially enhance the universities' understanding of students' expectations and experiences:

1. Quantifying final-year students' feedback at TU to determine their satisfaction with the 2+2 MPharm pharmacy programme.
2. Comparing preparedness of students for placement between CU and TU-CU students.
3. Assessing CU students experiences with their peers from TU.
4. Exploring the CU and TU-CU students' experiences in "post-degree" phase and their aspirations.

5. Assessing student' preparedness in terms of knowledge and skills for transfer prior to their move overseas.
6. Assessing staff overall experiences in the CU-TU collaborative pharmacy programme.
7. Assessing employers' views on students' graduate readiness to work.
8. Assessing the graduates' employability.

In addition, based on the experience and outcome of this research project, future research projects can explore the following areas of interest:

1. Assessing Year 1 pharmacy students' expectations at TU.
2. Comparing students' perceptions of their education environment using DREEM questionnaire within the Medical and Health Sciences division (i.e. Pharmacy programme, Bioscience programme and Medicine programme) at TU.
3. Comparing pharmacy students' perceptions of their education environment using DREEM questionnaire within private universities in Malaysia.

8.8 Recommendations and Contributions

The study has provided insights into factors affecting TNE students' perceptions. The findings found that academic staff and learning atmosphere influenced students' self-perceptions and academic experiences. Throughout the 4-year study, various issues were identified and actions were taken to address them. Table 8.1 provides a summary of recommendations including actions taken or issues that have been addressed. In the larger context, the findings indicated that academic staff and student "connection" experiences are most lacking. Strategies to improve these areas are discussed below.

(1) Academic Training

The research brought attention to the importance of induction programmes for staff at both host and home institutions who are involved in teaching the TNE programme. All teaching staff in the transnational programme should be provided with appropriate training and development to ensure they can support students in this unique learning environment (Dunn and Wallace, 2006, National Union of Students, 2014). In particular, they should be aware of the cultural and social adjustments required of them and their

students. All these are consistent with current literature (as discussed in Section 2.3) where more immersive training was suggested for those involved in TNE teaching.

In the TU-CU collaborative programme, involvement of local lecturers in the planning of teaching materials and methods for each course would optimise learning outcomes. Collaborative curriculum design could also increase TU staff familiarity with the subject and increase their sense of ownership. Furthermore, academic visits from the offshore campus to home campus (and vice versa) would greatly enhance academics' personal relationships, which could lead to fruitful communication and facilitate mutual understanding (Heffernan and Poole, 2005, Pyvis and Chapman, 2007, Dobos, 2011). This is particularly important where virtual communication could not achieve the desired outcome, for example, demonstration of laboratory experiment.

Table 8.1 Summary of Recommendations

Specific Recommendations	Actions
Provide orientation to set students expectations prior to course commencement. (refer to Section 4.7.2, Theme 3 and Theme 4)	Orientation programme with workshops to inform first year students about matters related to transition to university life
To remind students the examination rules and regulations prior to assessments. (refer Section 5.4.6, Students' Perception of Atmosphere)	At TU, the importance of academic integrity was reinforced; invigilators were reminded to be vigilant during students' exam
To use examples of relevant local context in teaching to enhance students' understanding. (refer Section 5.4.6, Students' Perception of Learning)	Individual staff at TU to put in effort and be familiar with the teaching materials
To enhance students social network (refer to Section 6.6.2, Theme 3 Social expectations)	Skype meeting was set up between TU and CU students' society
To promote student participation in various activities at TU. (refer to Section 5.4.6, Students' Perception of Atmosphere)	Students participated in public health promotion events, sports carnival and inter-school pharmacy quiz competitions during their study at TU
A "student transfer handbook" to provide guidelines to Malaysian transfer students. (refer to section 6.9)	All transferees were provided a copy of the handbook one month before the transfer
To make arrangements for a community pharmacy placement before the start of the semester. (refer to Section 6.6.3, Theme 7, Recommendations)	A 2-days community pharmacy placement were arranged for transferee in the beginning of the semester
To provide a pre-departure briefing for the transfer students. (refer to Section 6.6.3, Theme 7, Recommendations)	Students were better informed about the UK pre-departure briefing timetable and were encouraged to attend
Provide an interim report for the Teaching and Learning Committee in both Taylor's and Cardiff on the findings of DREEM and pre- and post-transfer study. (refer to section 6.9)	Executive report were distributed to all committee members. A presentation on DREEM and pre- and post-transfer study findings were conducted at TU.
Other Recommendations	
<ol style="list-style-type: none"> 1. Ensure staff involved in TNE understand the purpose of the programme and their responsibility to students. Promote the dialogue and interaction between teaching staff and their students. (refer to Section 4.8.3) 2. Establish strong communication channels with clear protocols between staff in host and home institutions. When frequent communication is maintained, teaching situation can be monitored while concerns and issues can be addressed promptly. (refer to Section 4.7.3, Theme 5) 3. Promote greater involvement of host institution staff in the development of teaching and learning materials in order to provide tailored TNE training for students. (refer to Section 4.7.3, Theme 8) 4. Promote exchange of staff between countries in order to promote face-to-face engagement, team spirit and transfer of ideas. (refer to Section 4.8.1) 5. Develop online self-help resources to help students with common concerns and prepare them for the transfer. (refer to Section 6.6.3, Theme 7, Recommendations) 	

In addition, academics in a twining programme should be aware that Malaysian students come from more traditional school systems in which rote-learning is prevalent (Nalliah and Thiyagarajah, 1999). Students may be seen as quiet and reluctant to openly express their opinions (or contradict their lecturers) because of their respect for their elders. This does not necessarily mean students are passive and lack the ability to think critically. If teaching staff are aware of their international students' profiles, they could then explain the benefits of raising issues in class.

Influential and opinionated groups in class at CU can also limit TU students' participation and marginalise their contribution. Students could be disheartened when they were characterised as members of 'weaker groups'. This could be overcome if academic staff help form groups that recognise each student's unique talents. When students feel their presence adds value to their team, they would likely participate more fully and readily. Academics can assist students by providing a safe learning environment where they are free to argue for or against issues and problems without fear (Goh, 2006).

(2) Strengthening "Connection" Phase

Preparation of students for intercultural experiences is essential in TNE (Shaheen, 2004). Briefings can be used to provide vital information to help students settle in after arriving at CU (Cardiff University, 2016). Briefings can be conducted one semester ahead or as early as possible to inform students on important requirements and additional preparations. In particular, the study revealed the need for specific information about help, advice, and counselling for TNE students on cultural issues especially bullying, racism and discrimination. Additional sessions can be conducted nearer to transfer to remind students on essential information.

It has also been pointed out that communication between the TNE partners is critical in ensuring proper coordination and a smooth transfer. Constant communication with students is also important to ensure their needs and concerns are addressed. This is likely to reduce students' anxiety of transfer.

Lecturers and host institutions are responsible for ‘smoothing-out’ transitions and adaptations (Kandiko and Mawer, 2013). Lecturers should equip students with intercultural knowledge and adjust their teaching to help students achieve outcomes in their study programmes. Issues with racism, bullying or discrimination should be made aware so that students know where to find help if they encounter any of these. To this end, training and development of all teaching staff in the transnational programme would benefit students as advocated in Section 2.3 and this research project.

In the TU-CU programme, there was a lack of involvement of senior students in counselling prospective students as the current “buddy system” was largely ineffective. Strategies to improve the “buddy system” should be developed to ensure it is a success as it can be a useful aid in the transfer process. A greater involvement of senior Malaysian students at CU would be helpful to guide and ease some of the transition issues.

On arrival at CU, a warm and welcoming environment is important for international students who are far away from home in a foreign setting. An orientation including details of their programme, the university and the UK in general could help international students handle their day-to-day functions.

8.9 Conclusions

Over the last 20 years, the higher education landscape in Malaysia, and in particular TNE, has continued to expand, innovate, and flourish. In the existing literature body related to TNE, the review finds that learning and teaching are not featured as prominently when compared to areas such as globalisation, trade, quality, and regulation.

The data generated by this study offer some new insights into the academic experiences of TNE students. Drawing together perceptions of students and staff, the findings present a range of messages related to their educational experiences and satisfaction which hopefully, can provide a much-needed contribution to the global understanding in this area. As intended, the research has highlighted a few issues that warrant further investigation and improvement.

The findings revealed that academic experiences was the key area for discussion and evaluation. The research suggests an overall comparable TU and CU learning

environment with frustrations expressed on specific operational issues involved in delivering TNE, particularly the academic staff and preparation for transfer. However, it should not be a surprise that issues and frustrations were uncovered given that this is a new collaboration. Most of these gaps can be addressed by careful planning by TU. Recognising the degree-awarding university has ultimate responsibility for academic standards and the quality of learning opportunities, regardless of where these opportunities are delivered and who provides them, home institution i.e. CU should aid TU to improve the collaboration.

The desire for students to join the programme based on the reputation of a highly ranked home institution was evident. It is also apparent that the programme's attributes are most important to students' overall satisfaction. These attributes include the quality of teaching, lecturers' availability, the quality of facilities and services such as advice and IT support, the responsiveness of academics, and the degree of 'student-centeredness'. On the other hand, most staff have well-defined expectations and know their roles in the collaborative programme. Communication issues between TU and CU can be detrimental to students' success and satisfaction.

There is no one-time solution to all issues, as new issues are likely to arise and will have to be addressed by the universities. It is the commitment from the institutions to create a successful academic and social life that would ultimately be the key factor in building confidence in current and prospective students.

Although much can be learnt from the study of the TU-CU twining programme delivery and its potential enhancements, unfortunately the module has been discontinued. In fact, at the time of writing, pharmacy twining programmes with the UK are no longer offered by any institution in Malaysia. Therefore, it is hard to predict how TNE will grow or evolve viz. pharmacy education. Nevertheless, it is observed that branch campuses of overseas pharmacy schools are becoming more common in Malaysia. Regardless of which type of TNE education format is prevalent, transparency of information between home and host universities in terms of the delivered programme is crucial. A shared responsibility is the key for success.

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Annex (Publications)

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Appendices

Appendix 1.1 – Student Cohorts Admission, Graduation and Attrition between 2011 and 2013

Intake	Programme	Jan 2011 Cohort 1	Sep 2011 Cohort 2	Sep 2012 Cohort 3	Sep 2013 Cohort 4
Entry	BPharm	6	20	74	20
	MPharm	20	22	9	8
Graduation	BPharm	4	18	70	On-going
	MPharm	19	21	7	
Attrition	BPharm	2	2	4	5
	MPharm	1	1	2	1