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SCHOOL OF NURSING

**ESTABLISHING AN INNOVATIVE TEACHING MODEL FOR A
STUDENT EXCHANGE PROGRAMME
IN NURSING EDUCATION**

by

Xia Hai Ou

**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF**

DOCTOR OF PHILOSOPHY

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Xia Hai Ou

ABSTRACT

This research evaluated an innovative and uniquely structured nursing student exchange programme which was designed with the aim of contributing to the accomplishment of Strategic Objective One of a University in Hong Kong.

The six week programme was conducted between the School of Nursing of a University in Hong Kong and the School of Nursing of a University in Shanghai. Students from both Schools constituted two classes, one of which was held in Hong Kong and the other in Shanghai. Each class contained a mix of students from both Hong Kong and Shanghai, i.e. exchange and non-exchange students. The learning experiences arranged in the programme included theory taught in classroom lectures and in tutorials, clinical visits and social activities. The lectures were given by teachers from both Schools. The teacher from the School of Nursing in Hong Kong gave the lectures on 'Health Counselling', using English as the teaching language medium. Two teachers from the School of Nursing in Shanghai gave the lectures on 'Interpretation of Clinical Data', using Putonghua as the teaching language medium. With the use of videoconferencing, students in the classes in both sites received the lectures simultaneously. The tutorials were conducted in each of the Schools separately without the use of videoconferencing. Following initial access negotiations by the teachers, the non-exchange students organised the clinical visits to different health care settings which they attended together with their exchange student classmates. They also organised and, together with their exchange student classmates, shared in various social and cultural activities.

The objectives of the research were firstly to determine whether the objectives of the student exchange programme had been met. These programme objectives addressed the enhancement of participating students' all-round development in seven elements which were stated in the Strategic Objective One of the University in Hong Kong. The second objective was to explore the students' learning experiences gained through participating in activities organised in the programme. The third objective was to identify other benefits for the participating students gained as a result of participating in the programme; and the fourth was to explore the possibility of establishing an innovative teaching model in nursing education.

A summative programme evaluation design was adopted and triangulation was the research method. Both quantitative and qualitative approaches were implemented. The data sources derived from the Course Experience Questionnaire (CEQ), the Videoconference Participant Questionnaire (VPQ), students' assessment scores, semi-structured interviews with students and teachers and students' reflective journals. The quantitative data was managed by statistical analysis using SPSS software including descriptive and inferential statistics. The qualitative data was managed by means of content analysis. The combination of the quantitative and qualitative data approaches enabled a broader and deeper exploration and understanding of the students' learning experiences.

The results of the research showed the participating students, no matter whether they were exchange or non-exchange, or where they attended the programme, gained many positive experiences in relation to the seven elements of the University's Strategic Objective One which addressed the students' all-round development, including

enhancement of their global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism and leadership skills. The students and teachers had positive views of the effect of videoconferencing in education but also recognised the limitations of the technology in relation to its implementation in the programme. During the programme the students explored different styles of teaching and learning, observed similarities and differences in the health care services and nursing practice and in the cultures of the two cities. These experiences stimulated them to compare, critique, appreciate and learn from each other. Many students felt these experiences would be unforgettable and of value to them throughout their lives and in their future careers.

It is concluded that the innovative and uniquely designed and structured programme has established a model for teaching and learning in nursing education.

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CHAPTER ONE

INTRODUCTION

This research evaluates an innovative and uniquely structured nursing student exchange programme which was conducted between a School of Nursing of a University in Hong Kong and a School of Nursing of a University in Shanghai with the aim of contributing to the accomplishment of the first strategic objective of a University in Hong Kong. That objective is stated as follows:

To enhance the all-round development of students, particularly in the areas of global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, entrepreneurship and leadership. (The Hong Kong Polytechnic University, 2001, p.10)

This chapter presents the background and context within which the present student exchange programme was initiated, conducted and evaluated, and, in the wider context, discusses the need for and potential benefits of student exchange programmes in today's multi-cultural society. An overview of the present student exchange programme is given, which includes the programme objectives and the objectives of the research, i.e. the evaluation of the present programme. The chapter concludes with a brief discussion of the significance of the research, of the related ethical considerations and finally presents the organisation of the thesis.

1.1 BACKGROUND TO THE RESEARCH

1.1.1 The University in Hong Kong and its School of Nursing

The University in Hong Kong which initiated the present programme describes herself as a University ‘with a proud and illustrious history’ (The Hong Kong Polytechnic University, n.d., Students and Graduates). In the year 2006, she is recorded as having the largest number of students in one University in Hong Kong. Through providing quality education programmes ranging from Diploma, Bachelor degree to Masters and PhD degrees, undertaking the development and transferring of knowledge and technology by applied research and consultancy, and serving the community by involvement in professional service, the University aims to cultivate in her students not only professional competency, but also the abilities of independent thinking, good communication skills and a global outlook, so that they will be enabled to meet the challenges and opportunities of tomorrow (The Hong Kong Polytechnic University, n.d., Overview).

The University’s goal is to become the leading University in the region and to build this leadership in four strategic focus areas: “Health Enhancement; Product Design, Development and Marketing; Professional and Executive Development in Mainland China; and Urban Sustainable Development.” (The Hong Kong Polytechnic University, 2001, p.4). After the handover of the sovereignty of Hong Kong from Britain to China in 1997, The Hong Kong Special Administrative Region (HKSAR) recognised the increased need to establish a closer relationship with Mainland China. This changed political and social situation stimulated the needs and demands for exchange with Mainland China in many areas including the education in Hong Kong and Mainland China. The University in Hong Kong therefore emphasises her role in the development of Mainland China. She does not only deliver programmes

predominantly in the HKSAR but progressively extends her services to Mainland China (The Hong Kong Polytechnic University, n.d., Our Positioning).

To fulfil the above goal with a clear concept of the University's longer term strategic direction, the University's Strategic Plan for 2001/2 to 2006/7 was prepared, to guide development of the University in these two triennia. The Strategic Plan represents the vision and the commitment of the University community and envisages the strengths, weaknesses, opportunities and threats of/to the University (The Hong Kong Polytechnic University, 2001).

1.1.1.1 The Strategic Plan for 2001/2 to 2006/7

Seven strategic objectives are set out in the Strategic Plan, in order to meet the following trends:

emergence of a knowledge-based global economy which has spurred the demand for continuing and higher education; professional upgrading and life-long learning opportunities; the rapid growth of communication technologies which provide new means of delivering continuing education outside the campus; the increasing need for multi-lingual capability on the part of graduates to adapt easily to diverse cultures and working environments brought about by globalization and internationalization. (The Hong Kong Polytechnic University, 2001).

These seven strategic objectives are:

Strategic Objective 1 (*as previously stated*) To enhance the all-round development of students, particularly in the areas of global outlook, critical creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, entrepreneurship and leadership.

Strategic Objective 2 To substantially enhance our academic strength and raise the profile of research and postgraduate studies.

Strategic Objective 3 To align programmes and research with the needs of the HKSAR, the Chinese mainland and the Southeast Asian region; emphasize applied research and development that could elevate the quality of life and create wealth; and further strengthen the partnership with industry and selected institutions.

Strategic Objective 4 To develop management excellence; and to strengthen a sense of belonging, quality culture, innovation and creativity, commitment to strive for excellence, and forward-looking mentality in the entire university community.

Strategic Objective 5 To expand our student base and to become the leading provider of professional and continuing education programmes in a professional context in the HKSAR.

Strategic Objective 6 To enhance image building, marketing, alumni development, and development of external funding sources.

Strategic Objective 7 To promote the internationalization of the university. (The Hong Kong Polytechnic University, 2001, p.10).

The University recommends that all curricula, programmes and activities developed or organised by the departments/schools of the University should aim to achieve these objectives. However, it is recognised that it is impossible to achieve all of these through a single programme or activity. A single programme or activity would be more likely to emphasise one or two of these objectives and seek to accomplish them by designing and delivering an appropriate programme or activity. The student exchange programme which is the focus of this thesis was designed and implemented with the aim of contributing to the accomplishment of Strategic Objective One of the University's Strategic Plan.

Strategic Objective One addresses eight elements which represent the all-round development of a student, i.e. to enhance his/her global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, entrepreneurship and leadership. The University does not

only define operationally what the all-round development of a student comprises, but states the areas in which the University should make particular efforts in relation to the student's professional and personal development. As the present programme was organised for nursing students who were preparing to become qualified nurses and enter the nursing profession in the future, the element of entrepreneurship was not considered to be a relevant focus at this stage, i.e. when evaluating the present programme.

To facilitate the achievement of Strategic Objective One, five relevant strategic actions are recommended by the University. These actions include to

review and strengthen curricula, teaching and assessment methods, and ensure the inclusion of components that could help students to attain the qualities listed in the objective; establish an intensive, high-pace training and development programme to enhance the leadership skills of our students to boost their employability; provide opportunities to a substantial proportion of our full-time students for learning experience on the Chinese Mainland during their period of study at the University; implement regular student exchange programmes; and expand the Preferred Graduate Development Programme to provide more students with workplace learning experience locally, on the Chinese mainland and in overseas countries. (The Hong Kong Polytechnic University, 2001, p.11).

These actions emphasise the strengthening of the curriculum and teaching methods, developing educational programmes, especially exchange programmes, obtaining workplace learning experience and learning and practice in Mainland China. The present programme implemented these actions as the programme was conducted between Hong Kong and Shanghai, the largest city in Mainland China, offered the students opportunities to gain first hand experiences in another social, cultural and

professional context, developed new teaching methods to which the students were exposed, i.e. applied videoconferencing in teaching and learning in the present programme and strengthened the curriculum as a result of implementing the present programme.

1.1.1.2 The University's collaboration with Mainland China

The University in Hong Kong has established an extensive collaborative network with many institutions of Mainland China. Examples of this collaboration range from student exchange, joint research, joint conferences, consultancy projects and staff training. In relation to student exchange programmes, the University provides both inbound and outbound exchange programmes in various disciplines which range in length from one week to one academic year, from credit-bearing exchanges to learning tours and from attending degree study programmes to placement programmes. Almost every academic department or school in the University offers academic programmes to inbound exchange students, whilst there are twenty-four Universities or institutions in Mainland China which are available to the University's students and to which they can go for study (Academic Exchange and Collaboration Office, 2004).

1.1.1.3 University's support for student exchange programmes

Financial support To encourage outbound exchange, the University provides financial support in the form of a UGC grant from the Hong Kong Government for its students who are selected to attend an exchange programme to cover transport and accommodation fees, insurance fees and part of the living expenses. Extra financial

assistance from the Relief Fund will also be allocated to its outbound students who experience financial difficulties (Academic Exchange and Collaboration Office, 2004). The University also obtains special funding from the UGC grant to provide some financial support for the inbound students who come from Mainland China every year.

Buddy programme To facilitate inbound students to study and live well in Hong Kong, the University developed the Buddy Programme, a ‘match a friend’ scheme, in which local students are recruited as buddies of guest students at the University (Academic Exchange and Collaboration Office, 2004). The local students provide assistance to the exchange students, especially on life adjustment related matters, and organise and participate in social activities with them. It is believed that, through taking part in the Buddy Programme, the local students are, to a certain extent, exposed to a multi-cultural environment without themselves having to visit other cities in Mainland China or other countries, can improve their language skills in a lively way, and make friends with students from Mainland China and overseas.

These supports and facilities encourage the departments or schools of the University to implement student exchange programmes. With the aim of taking action to seek to fulfil the University’s Strategic Objective One, the School of Nursing of the University reviewed its own curriculum and developed a number of nursing student exchange programmes with Schools of Nursing in Mainland China.

1.1.1.4 The School of Nursing

The University was the first in Hong Kong to offer a nursing degree programme, and its School of Nursing has the largest number of nursing students registered in any of the nursing programmes in Hong Kong. The nursing programmes offered by the School include Diploma, Bachelor Degree, Masters Degree and PhD. The goal of the School is to become “the leading Nursing School offering preferred programmes and producing high calibre graduates in nursing” (The School of Nursing, 2004). The School implements the strategic actions (see P. 5) recommended by the University through developing and revising the curriculum and organising academic activities. The School has established collaborative relationships with many Schools of Nursing in Mainland China. These collaborations range from joint nursing degree programmes, joint research, joint conferences, staff training to student exchange programmes and mutual visits. The student exchange programmes at the school level include inbound and outbound exchanges. Inbound exchanges range from academic visiting, attending credit-bearing courses, to enrolling in Master and PhD programmes, whilst outbound exchanges range from academic visits to attendance at credit-bearing courses, some of which may include clinical placements.

1.1.2 The University in Shanghai and its School of Nursing

The University in Shanghai is one of the topmost national institutions of advanced learning and higher education in China and has achieved worldwide fame. She is one of the largest Universities in China offering a range of programmes at Bachelor, Masters and Doctoral degree levels in a wide range of disciplines and also, in the nursing discipline, a Diploma (Fudan University, 2006, Brief Introduction). After

officially merging with Shanghai Medical University in 2000, the University now has its own college for medical sciences.

The goal of the University is to become a leading University in the world (Fudan University, 2006, History of Fudan). The mission is that the University should be “a pillar of academy, a cradle of ideology, a cultural pioneer and economic think-tank” because the University recognises that China is in a crucial period of economic restructuring and social transition marked by astonishing progress and change. The University emphasises the development of students enrolling in each level of study programmes so that they are able to meet the needs of society in modern China and abroad.

1.1.2.1 The University’s collaboration with others

The University has established exchange and collaborative networks with many Universities and Institutions and it devotes much attention to the collaboration and exchange with HKSAR (Fudan University, 2006, Communication and Collaboration).

1.1.2.2 The School of Nursing

The School of Nursing was one of earliest schools in Mainland China to offer a Bachelor of Nursing degree programme. Currently Diploma and Masters Degree level studies are also offered. The School has more than ten teaching hospitals and community health centres for students’ clinical practice (The School of Nursing, 2006).

The aim of the School is to nurture the students to have competencies in caring for patients both in hospitals and community health services with critical thinking, clinical data analysis, problem-solving and leadership skills. Graduates are expected to demonstrate potential in personal and professional development (The School of Nursing, 2006).

The School has established partnerships with many regions of China and other countries. Partnership activities include staff training, academic visits or exchanges and joint research. The School has close relations with the three Schools of Nursing in the Universities in Hong Kong and has collaborated in similar ways and also in student exchanges (The School of Nursing, 2006).

1.1.3 The School of Nursing of the University in Hong Kong initiates the present programme with the School of Nursing in the University in Mainland China

The first collaborative agreement between the School of Nursing of the University in Hong Kong and its partners in Mainland China commenced in 1997, and was in relation to research and staff exchange. Thereafter, the School of Nursing in Hong Kong and the School of Nursing in Shanghai conducted joint research initiated by the School of Nursing in Hong Kong, staff training and student exchange, e.g. academic staff from Shanghai travelling to Hong Kong including attending the PhD programme in Hong Kong, and clinical placements for Hong Kong nursing students in teaching hospitals of the University in Shanghai. The focus of this research is the evaluation of

one of these partnership activities, i.e. a student exchange programme. This programme is described in detail in chapter 4.

This was the first group nursing student exchange programme between Hong Kong and Mainland China. Hong Kong and Mainland China have had a very different developmental history, as a result of which they have different cultures, although the territory of both belongs to China. Because there was an existing collaborative relationship between the School of Nursing of the University in Hong Kong and the School of Nursing of the University in Shanghai, and because the researcher, who is a member of staff in the School of Nursing of the University in Shanghai, enrolled in the postgraduate research degree programme in the School of Nursing of the University in Hong Kong, the School of Nursing of the University in Hong Kong chose the School of Nursing in Shanghai as a partner in the present student exchange programme.

1.1.4 Exchange programmes as an action to meet the needs of society and of development of the nursing profession

To enhance nursing students' all-around development, especially in global outlook and cultural diversity, through exchange programmes is of value in today's society and in the nursing profession. The society in which we live is in an era marked by deep and rapid change. This change brings a new international trend towards globalisation. Globalisation has been variously defined, for example, "The increasing economic, cultural, demographic, political, and environmental interdependence of different places around the world" (Harker Heights High School, n.d.). Modern

communication systems, economic conditions and technologies have created a world in which global interdependence has become a reality. More countries are interested in relations with other nations, in order to import, export and to exchange advanced technology and equipment. Common markets are increasing, not only in regard to the exchange of products but also the exchange of people and cultures; exchanges which take place not only from developing countries to developed countries but also from developed countries to developing or under-developed countries. As a result of such exchanges, many nations are considerably more multicultural than they have been in the past and their populations need to be more conscious of diversity in their national and organisational surroundings. In addition, as mentioned in Hutchings, Jackson and McEllister's report of a study tour to China of undergraduate and postgraduate business students from Australia (2002), the people must be responsive to international, economic and business forces. In short, a global-consciousness movement is well underway and has the potential to impact on every aspect of society.

The increase in immigration and travel has greatly increased the ethnic diversity of populations, and as a result nurses are providing care for patients with a wide variety of customs, beliefs and health practices. There is therefore a growing need for nurses to have multicultural experiences (Dowling & Coppens, 1996). The nursing profession should therefore increase the opportunities for discussion and exchange of ideas on global issues in health care among the nations, in order to provide culturally sensitive care. It is also important to share such information internationally so that, if restructuring their own system, the profession can utilise some of the successful experiences of nursing colleagues in other countries in developing effective and accessible systems of health care. In summary, global issues challenge the nursing

profession. Nurses must collaborate and network with nurses from other countries to address common issues and develop strategies that affect health and nursing care in a positive manner.

Nursing education plays a key role in preparing nurses to gain both multicultural experiences and competencies in providing culturally appropriate nursing care for patients. An important function of the School of Nursing therefore is to support the development of graduates who can meet those community needs and embrace ongoing change and progress. Apart from developing nursing students' professional competence and academic excellence in specific contexts, the School of Nursing should also promote the all-round development of students through the development of generic skills and attributes, for example, critical and creative thinking, social and national responsibility, life-long learning and leadership skills.

These skills and attributes can be promoted through developing and implementing a suitable curriculum, one which represents a balance between expanding fields of knowledge, changing needs and interests of students, and changing concerns and problems that face society. To respond to the increasing diversity of the society, the School of Nursing is faced with the challenge of providing a nursing education which is relevant in a global society and which will help prepare students to live and work in a world of increasingly interdependent cultures and peoples. It has long been recognised (Lindquist, 1986) that the provision of international courses and student and faculty exchange programmes are major strategies to be developed as a response to the increasing diversity of the society. The present student exchange programme is one of the actions taken to prepare nursing students to meet the needs of society and

of the nursing profession and represents a new and innovative step in nursing curriculum development.

1.1.5 The benefits brought from a nursing student exchange programme

The student exchange programme is an excellent means for a school of nursing to open the nursing classroom to the world, enable students to gain an understanding of cultural differences and issues of mutual interest that influence healthcare (Birchfield, Dvorak, Scully, Haas and Duberley, 1991). Such programmes provide the vital hands-on experience necessary for students to become involved internationally (Colling & Wilson, 1998). Bartholomew (1996) states an educational environment which reflects a global dimension will stimulate intellectual curiosity, creativity, understanding, and an increased awareness of global issues.

The potential benefits and values of international learning experiences for nursing students include that participating students can gain increased cultural sensitivity (Hutchings et al. 2002; Lindquist, 1990; Meleis, 1985); increased nursing knowledge and understanding of professional issues (Lee, 2004); an understanding of the development of a global perspective for the practice of nursing, and come to see themselves as participants in a world community (Cotroneo, Grunzweig & Hollingsworth, 1986; Gosnell, 1985; Lindquist, 1990; Rolls, Inglis & Kristy, 1997); acquire opportunities for evaluation of other health care systems, as a result of which, after completing and returning from the programme, the nursing students and or qualified nurses would have the potential to contribute to the improvement of the health care system in their own country (Goldberg & Brancato, 1998; Lindquist,

1990). Moreover, the exchange programme may enhance the students' personal and professional growth and increase their self-confidence (Haloburdo & Thompson, 1998; Rolls et al. 1997).

While it is clearly believed that participation in an exchange programme enhances the development of students' global outlook and cultural awareness, the benefits brought from an exchange programme in relation to the development of students' leadership skills, language skills, social and national responsibility, life-long learning and critical thinking has been less reported. Jung, Larin, Gemus and Birnie (1999) concluded, in a report of international clinical placements for occupational therapy and physiotherapy students, that participation in a student exchange programme facilitated the assumption of responsibility for ongoing professional development. Racette (1996) and Spitzer et al. (1996) considered that student exchange programmes had the potential to give students an intensive understanding of environmental and social problems when facing a real social situation, and to stimulate them to do something to change that situation, i.e. to be pro-active. Exchange students may not only gain an increased knowledge of the host context, but also come to rethink their own, i.e. their home context (Armstrong & Fischer, 2001; Cotroneo et al. 1986). Through participating in international placements students developed and/or enhanced their leadership skills (Duffy, Farmer, Ravert & Huittinen, 2003; Kuczkowski, DeLlissier, Maushammer, Miller & Walden, 2001; Thompson, Boore & Deeny, 2000). In international exchange programmes where the host and exchange students' first languages are different, language can be a considerable barrier to effective learning and it is therefore critical for the exchange students to have instruction and to gain proficiency in the second language, particularly when exchange students are

providing care to patients whose language is different from the students' own (Kraemer, 1998; Razack, 2002). However, none of the authors mentioned in this paragraph gave any detail about the learning experiences of the students to whom they were referring, although some of the authors described the content of the exchange programme.

These above-mentioned various elements, i.e. global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, and leadership skill will be examined in the present research which evaluates the programme designed and initiated by the School of Nursing of the University in Hong Kong, as part of their aim to fulfil the University's Strategic Objective One, in which these elements are emphasised.

1.1.6 The researcher and the present student exchange programme

The researcher is a nurse teacher in the School of Nursing of the University in Shanghai and, as noted above, is currently an exchange student enrolled in the PhD nursing study programme in the School of Nursing of the University in Hong Kong. She is thus familiar with teaching and learning in both Schools. As a result of this involvement, the researcher understands more about the educational approaches and styles of teaching and learning in nursing education in both Universities and Schools. These experiences will enhance the researcher's contribution to her own profession as a nurse teacher on her return to her home School. However, as a doctoral student conducting the present research she is aware of the risk of researcher bias in interpreting the data and the measures taken to avoid this are outlined in chapter 9.

1.1.7 The unique use of educational technology, i.e. videoconferencing

The application of videoconferencing in education encompasses a wide range of uses. The primary value of the use of videoconferencing is to provide learning opportunities to students who live at a distance from the University/School. In the present student exchange programme videoconferencing is used creatively to link two classes, one in Hong Kong and the other in Shanghai. The present research therefore not only evaluates the extent to which the University's Strategic Objective One has been met but examines the effectiveness of the use of videoconferencing in the programme.

Videoconferencing facilities are available in the School of Nursing of the University in Hong Kong and are used in conferences conducted between Hong Kong and overseas. They are mostly applied for student's oral examinations in situations in which the members of the Examination Board are overseas and cannot come to Hong Kong in person. In the University in Shanghai, videoconferencing is available and used in any conference taking place between two campuses of the University and with other universities.

1.2 THE STRUCTURE OF THE STUDENT EXCHANGE PROGRAMME

The present student exchange programme was conducted between two Schools of Nursing of two Universities, one in Hong Kong and the other in Shanghai. Students from both places constituted two classes, one of which was held in Hong Kong and the other in Shanghai. Each class contained students from Hong Kong and from

Shanghai, i.e. exchange and non-exchange students. Figure 1-1 indicates the structure of the exchange, i.e. there were four groups of students: the group which consisted of the students from the University in Hong Kong and attended the programme in Hong Kong; the group which consisted of the students from the University in Hong Kong but attended the programme in Shanghai; the group which consisted of the students from the University in Shanghai and attended the programme in Shanghai; and the group which consisted of the students from the University in Shanghai but attended the programme in Hong Kong. The programme structure is described in detail in chapter 4.

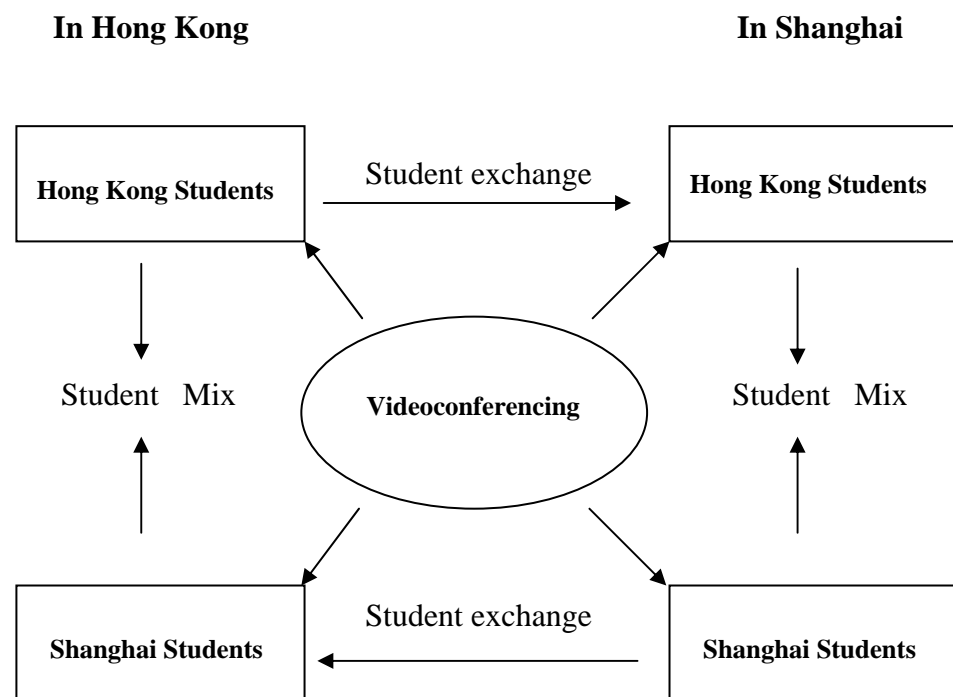


Figure 1-1 Organisation of the Students in the Present Programme

1.3 OBJECTIVES OF THE RESEARCH

The present research examines the value of the programme in relation to fulfilling the University's Strategic Objective One and the present research evaluates whether the programme objectives have been met and explores the possibility of establishing a teaching model for nursing student exchange programmes in nurse education. The programme objectives and research objectives are thus described as follows.

1.3.1 Objectives of the present exchange programme

- To improve the development of global outlook in nursing students;
- To enhance critical thinking skills of the nursing students;
- To promote social and national responsibility expressed by nursing students;
- To promote students' cultural appreciation;
- To enhance life-long learning in nursing students;
- To improve the language skills of students from both locations;
- To enhance students' leadership skills; and
- To explore the learning experiences of nursing students from two Universities with particular relevance to the teaching medium, i.e. videoconferencing.

1.3.2. Objectives of the research

- To determine whether the objectives of the student exchange programme have been met;
- To explore the students' learning experiences gained through participating in activities organised in the programme;
- To identify other benefits for the participating students gained as a result of participating in the programme; and

- To explore the possibility of establishing an innovative teaching model in nursing education.

1.4 DEFINITION OF TERMS

There are a number of operational definitions that will assist the reader in their understanding of the text that follows.

- ‘Videoconferencing’ is the “communication across long distances with video and audio contact that may also include graphics and data exchange. Digital video transmission systems typically consist of camera, codec, network access equipment, network, and audio system.” (Oregon Health & Science University, n.d.).
- ‘The programme’ or ‘the present student exchange programme’ is a nursing student exchange programme conducted between the School of Nursing in Hong Kong and the School of Nursing in Shanghai in which a class of participating students from each of the two Schools was divided into two parts. One part, or group of students exchanged to the other location and the other group remained in their local School. In relation to the programme therefore, there were two classes of participating students, one based in the School of Nursing in Hong Kong and the other in the School of Nursing in Shanghai. Each class consisted of two parts, i.e. groups of students, one group from the School in Hong Kong and the other group from the School in Shanghai. Videoconferencing was used as the teaching medium to link these two classes,

one in Hong Kong and the other in Shanghai and the lectures were conducted concurrently between these two locations.

- ‘Exchange student’ is defined as the student who attended the present programme in the other location, i.e. the Hong Kong student who attended the present programme in Shanghai or the Shanghai student who attended the present programme in Hong Kong.
- ‘Non-exchange student’ is defined as the student who attended the present programme in their home School, i.e. the Shanghai student who attended the present programme in Shanghai or the Hong Kong student who attended the present programme in Hong Kong.
- ‘Host School’ is defined as the School of Nursing which accepted the nursing students from the other location and is the name used by the exchange students, i.e. the Hong Kong students who attended the present programme in Shanghai named the School of Nursing in Shanghai as the host School and the Shanghai students who attended the present programme in Hong Kong named the School of Nursing in Hong Kong as the host School.
- ‘Home School’ is defined as the School of Nursing in which the students who participated in the exchange programme were registered, i.e. it was their normal location, thus the Shanghai students who attended the present programme in Shanghai would name the School of Nursing in Shanghai as the home School and the Hong Kong students who attended the present

programme in Hong Kong would name the School of Nursing in Hong Kong as the home School.

1.5 SIGNIFICANCE OF THE RESEARCH

The objectives of this research are stated in section 1.3.2. It is intended that the results of the present research will provide empirical evidence which will contribute to the improvement of nursing education in the under-noted aspects:

1.5.1 Students' learning

The results of the present research provide empirical evidence of participating nursing students' learning experiences in mixed social, academic and cultural environments. This evidence can inform as to how these students learned in this learning environment and whether this specific learning environment can motivate and improve students' learning. Students' learning experiences in the present programme provide information about what they perceived as the value of the student exchange programme to their nursing education. Such information could help other students who did not attend the present programme to make a decision about whether they should attend such a type of exchange programme. The students' views about the use of videoconferencing will add to the existing body of evidence of the value of this teaching medium in nursing education.

1.5.2 Teachers' teaching

The results of the present research offer evidence of the participating teachers' experiences of teaching a group of students with different cultural and academic backgrounds. As a result of their experience, it is hoped that these teachers will have more confidence when teaching exchange students and in teaching and facilitating the students to develop and/or enhance both professional and cultural competencies within or outside the classroom. The results will also provide evidence of how teachers can strengthen their teaching by sharing teaching resources through the effective use of the teaching medium of videoconferencing.

1.5.3 School development

The results of the present research indicate the potential to share educational expertise, maximise teaching resources, and to strengthen participating Schools' curricula by sharing students' learning experiences in the present programme with a view to improving the design of future student exchange programmes.

1.6 ETHICAL CONSIDERATIONS

Ethical issues should always be considered when undertaking data collection and data analysis. Because the present research required the researcher to observe and interact with the students and teachers who were participants in the present programme, it is understandable that certain ethical issues might arise. Miles and Huberman (1994) discussed several issues of relevance to this research and which the researcher should consider when designing the research and analysing the data. These include obtaining informed consent; avoiding any possible harm and/or risk for participants and

ensuring their confidentiality; and ensuring the honesty and trustworthiness of the research. These authors caution researchers to be aware of these and other issues before, during, and after the research has been conducted.

Following the gaining of ethical approval for the research, necessary only from the University in Hong Kong, the students from both Schools of Nursing who were eligible to take part in the present programme were approached. After the purpose and procedures of the present research were described and explained, they were invited to participate. The students were informed that their participation was voluntary and that they were free not to participate or to terminate their part in the present research at any time, without consequence.

Willing participants signed a consent form which explained the present research's purpose and procedures. Complete confidentiality was assured. No student's name appeared on the tapes or on any written reports of the present research. All sensitive data have been kept in a locked drawer, access to which was limited to the researcher only. To maintain anonymity, an identifying and exclusive code was assigned for each student and used for identification instead of their name. Their personal information was recorded on a form which was kept separately. An example of the type of code used is 2PS11, of which 2 indicated that the student was in year two study; P indicated that the student was from the University in Hong Kong; S indicated that the student attended the present programme in Shanghai; and 11 was the number allocated to that particular student within the group of Hong Kong exchange students.

No risk or harm was anticipated from participation in the present research. Rather, it was anticipated that the students who participated in the present programme would gain in personal and professional development. In addition, it was expected that students would gain a sense of well-being from taking part in the various activities of the present programme together with students from a different part of China.

1.7 ORGANISATION OF THE THESIS

The thesis is divided into 9 chapters. Chapter 1 states the background and context of the present research, outlines the intervention, i.e. the present student exchange programme, addresses the objectives of the present programme and of the present research, and clarifies the significance of the present research. What follows in chapter 2 is a review of the relevant literature, which includes analysis of reports of different types of student exchange programmes, teaching models used in student exchange programmes and how such programmes can be evaluated. Chapter 3 reviews the history of the development of videoconferencing, the application of videoconferencing including its advantages and disadvantages, the equipment required, and the educational effectiveness of the medium. Chapter 4 delineates the research design and method. Triangulation is described, as are the four research instruments, i.e. questionnaires, interviews, students' reflective journals and assessment scores. The research sample is also described and the chapter concludes with a description of the data analysis procedures and a discussion of the methods used to establish reliability and validity of data analysis. Chapter 5 presents the main study and includes a detailed description of the implementation of the student exchange programme and the procedures for the data collection. Chapter 6 presents

the results from the quantitative data, i.e. the results of the analysis of the questionnaires and the students' assessment scores. Chapter 7 presents the results from the analysis of the qualitative data, i.e. the interviews with students and teachers and students' reflective journals. The main content of this chapter is the description of students' learning experiences in the present programme. Chapter 8 discusses and interprets the findings from both quantitative and qualitative data in relation to the relevant literature. The research methods applied in the present research are also critiqued. Finally, in chapter 9, a summary of the results and an integrative review of the major findings of both the quantitative and the qualitative data of the present research are presented. The conclusions of the present research, the limitations and recommendations are also included.

CHAPTER TWO

REVIEW OF LITERATURE (PART I)

NURSING STUDENT EXCHANGE PROGRAMME

INTRODUCTION

The purpose of the present research is to explore student learning experiences in an innovative and uniquely structured nursing student exchange programme and to evaluate this type of educational programme which also made use of videoconferencing to link two classes, one in Hong Kong and one in Shanghai. Two themes are focused on in this literature review. These are nursing student exchange programmes and the implementation of videoconferencing. The latter will be presented in chapter 3. The literature about nursing student exchange programmes is presented in three parts: the characteristics of the various programmes, the models for student exchange programmes and how the student exchange programmes were evaluated. By reviewing the literature, the different types of student exchange programme and the models employed could be compared with the present programme and by reviewing the different types of evaluation, the method of evaluation for the present programme could be explored.

2.1 THE LITERATURE SEARCH STRATEGY

The literature review began with an electronic search of databases. The databases, such as the computerised index of Nursing and Allied Health Literature and Education

were accessed, e.g. HBSCO, BNI, ERIC, IngentaConnect, Journals@Ovid, Synergy, CINAHL, MEDLINE, and GOOGLE. Initially, the time period for the search was not limited in order to obtain a broad overview of student exchange programmes.

The key search terms included: exchange programme, exchange for education, international student exchange, student exchange programme; teaching model, model of exchange programme; education programme, programme evaluation, nursing education programme evaluation, and exchange programme evaluation. Different combinations of these key terms were used to focus the search.

Manual searches of journals and textbooks were also conducted as some databases included only relatively recent years of journals and the journals or papers did not provide definition of and information on development of key concepts used in this research, e.g. student exchange, exchange programme, evaluation and programme evaluation.

Regarding the student exchange programmes, the search was then limited to nursing student exchange programmes and to the years from 1990 to 2004. This yielded 52 citations, within which, for some, only the abstract was available, but, for most, the full text was accessed. A final selection was made through reading the full article to identify publications that were most relevant to the focus of the research. Both research articles and descriptive reports were included in this literature review as the latter not only provided valuable contextual background but also gave a detailed description of the programme. However, the articles which gave no description or gave only a summary of a student exchange programme were excluded from further

review. The criteria for inclusion in the literature review of student exchange programmes therefore included:

- the article was published in English;
- the student exchange programme was conducted in the nursing discipline between 1990 and 2004;
- the participants in these programmes were all nursing students who were registered in a nursing education programme in their home University;
- these students went abroad for study as a group, i.e. not singly; and
- the exchange pattern was either unilateral (the School which initiated the programme sent their students to another School but did not receive students from that other School) or bilateral (the School sent their students to another School and received students from that other School).

2.2 CHARACTERISTICS OF THE VARIOUS NURSING STUDENT EXCHANGE PROGRAMMES

No detailed definition of a student exchange programme was found in the reports on student exchange programmes, although Harari, in discussing internationalisation of the curriculum in higher education (1992, p. 69), gave a broad definition, i.e. “the international movement of scholars and students”. However, based on the description of student exchange programmes in the literature and on the nature of the evidence reported, these programmes can be defined as educational activities that encourage the flow of students across international and cultural boundaries. This is the definition adopted for this research as it was found to be relevant regardless of how many countries were involved in the programme, how long the programme was, how the

programme was implemented, and the discipline and/or study level of the student when she/he attended the programme.

Many disciplines were found to have student exchange programmes. The main disciplines were Business, Agriculture, Science, Health Care, Law, Economics, Social Science, Language and Arts (Hutchings et al. 2002; Wierstra, Kanselaar, Van der Linden & Lodewijks, 1999). Nursing was not the first discipline to be involved in international exchange. Exchange programmes in the discipline of nursing were not present until the 1970s (Fenton, 1994), around which time there was a growing recognition of the multicultural nature of society. Nursing education aims to prepare the nurse to provide care for individuals and families and because nurses are increasingly required to care for individuals and families with cultural and religious values which are different from their own, increased attention has been given to international and trans-cultural learning in nursing education. More and more schools of nursing in different countries now include in their curriculum opportunities for students to study abroad (Duffy, Harju, Huittinen & Trayner, 1999). Alongside the increase in student exchange programmes in nursing (Colling & Wilson, 1998; Duffy et al. 1999; Fenton, 1994; Ketefian & Redman, 1997), the literature regarding nursing student exchange programmes has also increased. However, no group student exchange programme in nursing had been conducted between Hong Kong and Mainland China prior to the present programme.

A total of 16 citations which fitted the criteria for inclusion in the literature review described above were identified and reviewed. These showed that nursing student

exchange programmes vary in goal, pattern and focus. An overview of these sixteen student exchange programmes is presented in Table 2-1.

In order to present the literature review systematically and critically, the discussion in this section begins with presentation of the evidence from the literature and then compares this with the present nursing student exchange programme. The review is presented in several parts. These are, in relation to nursing student exchange programmes:

- the goals;
- the location and length;
- the pattern of exchange;
- student sample, including eligibility requirements;
- focus/foci of the subject/subjects;
- teaching and learning;
- teachers' responsibility; and
- benefits and/or experiences derived from participation.

Table 2-1***Overview of the Characteristics of Nursing Student Exchange Programmes Conducted between 1990 and 2004***

Author(s)	Year	Length	Location	Patten of exchange	Student sample*	Subject	Goals/ Objectives	Activities	Outcome(s)
Frisch	1990	6 weeks	U.S. and Mexico	Bilateral	6 final year BSN students from U.S.	Community Health Nursing	To examine and compare cognitive development between exchange and non-exchange students	Lectures, clinical placements	Exchange students demonstrated more cognitive growth
Birchfield et al.	1991	2 weeks	U.S. and UK	Bilateral	10-including BSN or Master	Development and Structure of Health Service	To increase understanding of health care systems	Clinical placements	Comparison and contrast of health care systems and policies
Haebich & Wright	1995	4 weeks	From Australia to Fiji, to Indonesia	Unilateral	third year BSN	Primary Health Care	To gain knowledge and skills in community health care	Workshops, observation	Knowledge and skills of community health care practice
Zorn et al.	1995	12 weeks	From U.S. to UK	Unilateral	8 senior BSN	Management of Nursing Care	To examine and compare cognitive development between exchange and non-exchange students	Experiences in acute care settings and communities	Exchange students demonstrated more cognitive growth
Bartholomew	1996	9 days	Russia and UK	Bilateral	6 from UK and 10 from Russia	No subject-an academic visit only	To maintain an existing link between two nursing schools	Hospital visits	Knowledge of education, resources, nursing practice and professional development

*Note: Some of authors did not indicate the study year of the students who participated in the exchange programme and some did not indicate the number of student who participated in the exchange programme.

Cont'd

Author	Year	Length	Location	Pattern of exchange	Student ample	Subject	Goal/Objectives	Activities	Outcome(s)
Rolls et al.	1997	4 weeks	From Australia to Thailand	Unilateral	5 final year BSN	Primary Health Care, Community Health Nursing	To gain understanding of the complex forces influencing health and health care services	Visits to different clinical settings and assessments of communities in rural villages	Change of awareness of health care and health need, and attitude toward and acceptance of another culture, and increase of self-confidence.
Colling & Wilson	1998	2 weeks	U.S. and UK	Bilateral	More than 100-including BSN and MSN	U.S./UK comparative health care studies	To promote critical analysis of health care issues and nursing practice	Observations, seminars, visits and placements	Knowledge of health care issues and cultural differences
Cummings	1998	4 weeks	From U.S. to Barbados	Unilateral	9 per year, senior BSN	Nursing in Barbados	To study culture and health care	Clinical observations and practice	Knowledge of similarities and differences in nursing skill practices and procedures
Goldberg & Brancato	1998	10 days	U.S. and UK	Bilateral	15-including junior and senior BSN	Examine and compare Nursing and Health Care Delivery	To examine and critique nursing and health care delivery	Lectures, clinical observations and visits	Criticism of diverse cultural issues, appreciation of health care worldwide view
Haloburdo & Thompson	1998	2 weeks	From U.S. to Dominica, to Nicaragua, to Netherlands	Unilateral	BSN. 5 to Dominica, 4 to Nicaragua, 5 to Netherlands	Community Health Nursing	To analyse similarities and differences in learning outcomes of students who went to different countries	Classes taught and clinical placements/visits	Personal and professional development, empirical knowledge, and learning experience

Cont'd

Author	Year	Length	Location	Pattern of exchange	Student ample	Subject	Goal/Objectives	Activities	Outcome(s)
Stevens	1998	10 days	From U.S. to Nicaragua	Unilateral	13-including BSN and MSN	No subject-an academic visit only	To practise trans-cultural nursing	Visits to hospital and community nursing practices	Comparison of hospital and community nursing, recognition of language barrier
Duffy et al.	1999	8 weeks	U.S. and Finland	Bilateral	4 final year BSN	Community / Public Health Nursing	Exposure to and knowledge of other cultures and develop English language skills	Lectures and clinical placements	Knowledge of community health nursing and policy
Scholes & Moore	2000	3 months	UK and the Netherlands, Spain	Bilateral	third year Diplomates 3 to Netherlands and 9 to Spain	Nursing Care System	To enable participants to become culturally sensitive carers	Clinical placements	Comparison of culturally sensitive care in different countries and learning from comparison
Thompson et al.	2000	3 months	14 European countries	Unilateral	89-including third year BSN and MSN	No subject-a clinical placement only	To increase international experience	Clinical experiences	Development of professional career knowledge, world and cultural view, and intellectual development
Ndiwane	2001	10 weeks	From U.S. to Finland	Unilateral	6 junior BSN	Community Health Subject	To improve language skill, health assessment skill	Community assessments, visits	Improvement of cultural learning, cultural encounters and clinical skills
Koskinen & Tossavainen	2004	3 months	From Finland to UK	Unilateral		No subject-an academic visit only	To increase international experience	Clinical and community visits and practices	Transition from one culture to another, adjustment to the difference and gaining intercultural sensitivity.

2.2.1 Goals of nursing student exchange programmes

The goals of the student exchange programmes were determined by the goals and missions of the institutions which offered the nursing education programme. Goodwin and Nacht (1988), in describing the patterns of American overseas education, stated that the goals of student exchange programmes can range from being a 'grand tour' to exploring specific ways to improve international relations and build on existing partnerships. All but one (Haebich & Wright, 1995) of the 16 programmes reviewed stated their specific goals and it was seen that they shared some common goal statements, for example 'the enhancement of students' all-round development', 'helping students gain insight into their own societies and those of other countries', 'enabling students to learn new skills and improve their language skills', the latter even in circumstances where their mother tongue is the same. Colling and Wilson (1998) made this point when describing an exchange programme between British and American student nurses.

An example of one of the broad statements of the goals of a student exchange programme indicated the intended value of the programme to the participating students to be that students should gain international experience (Bartholomew, 1996). To state such a broad goal enabled each student to join in the activities of the programme more flexibly and individually, e.g. to have an element of choice, but conversely could make it more difficult to manage the programme. For example, how should activities be organised if students had different interests and what should be done to occupy a student if she/he did not wish to join in some of the arranged

activities? Such flexibility could also make the evaluation of the programme more complex.

Where more specific goals were stated, these could be divided into several types.

2.2.1.1 Students' cognitive development

In programmes where students' cognitive growth was a stated goal (Frisch, 1990; Zorn, Ponick & Peck, 1995), the impact of participation in an international study programme on the cognitive development of nursing students was analysed using 'The Measure of Epistemological Reflection (MER)', an instrument with high inter-rater agreement and internal consistency (Frisch, 1990; Zorn et al. 1995), to compare the difference in cognitive growth between exchange and non-exchange students. Although the results of these studies indicated that the students participating in the programmes demonstrated significantly more cognitive growth than those who did not participate in these exchange programmes, the authors failed to claim why students' cognitive development was one of the important aspects to be measured in a student exchange programme.

2.2.1.2 Gaining an understanding of health care systems and health care services in a cross-cultural context

In programmes with this goal (Birchfield et al. 1991; Cummings, 1998; Duffy et al. 1999; Rolls et al. 1997), the students visited different types of health care settings or agencies, e.g. community health care centres, hospitals, polyclinics and also people's

homes, and had instruction from the teachers of the Host University or staff of the local health care organisation, e.g. lectures, workshops and seminars. Such direct observations and instructions enabled them to gain an understanding of the reality of nursing in countries with quite different cultures from their own.

As part of fulfilling the goal of understanding health care systems in different countries, some programmes particularly emphasised the need for students to learn about public health and the community or rural health care delivery systems and status (Duffy et al. 1999; Ndiwane, 2001; Stevens, 1998). The reason for this emphasis was because it was felt that these areas were likely better to reflect the country's culture, including the social culture. In these programmes, the students worked with local nurses in the community health setting and visited local patients in their homes. It was hoped that these experiences would help students to learn about the use of community assessment tools with different cultures, to reflect the knowledge acquired in their further nursing career and to become culturally sensitive professionals (Colling & Wilson, 1998; Duffy et al. 1999; Scholes & Moore, 2000). However, the resources, including both financial and availability of settings for clinical practice, should be considered and permission would require to be gained for the exchange students to practise in the foreign country.

Students in an exchange programme evaluated by Goldberg and Brancato (1998) were required to examine, compare and critique the nursing and health care delivery systems between the home and host countries and, in order to do this, they were encouraged to become actively involved in activities and not just to learn in the classroom. On their return, they shared these experiences with classmates who had

not attended the programme. However, students who undertook this programme required to have knowledge about their home country's health care and nursing delivery systems. This may be difficult for nursing students who have had no clinical experience prior to attending the exchange programme, i.e. junior students or for students who, like Chinese nursing students, have their clinical practice only in the final year of their study.

2.2.1.3 Exploration of the meaning of an international experience

In programmes with this stated goal, students were sent to different countries - either a developed or a developing country. This kind of exchange programme aimed to analyse the similarities and differences in learning outcomes among students who had travelled to developed countries versus those who had travelled to developing countries and those who had or had not participated in direct patient care during their visit. For example, Haloburdo and Thompson (1998) conducted a study to examine and compare the learning outcomes of students who came from the U.S. and went to Dominica, Nicaragua, or the Netherlands where the students had different learning activities. However, the literature failed to state whether any assessment was made of students' academic ability or their understandings of health care or nursing in other countries prior to their experience in the programme. This was a major flaw in the design of such programmes.

The above three types of goals of student exchange programmes showed there were theoretical and experiential foci in student exchange programmes. However, no single programme included both theoretical learning and clinical practice experiences

in the host country. Teaching of theory either took place in the home University or the home University's teacher taught this theory in the host University, i.e. the exchange students did not study theory together with local students. However, in some programmes, exchange students experienced clinical practice together with local students.

The present student exchange programme represented one action of relevance to Strategic Objective One of a University in Hong Kong. The goal of the programme was set based on this strategic objective, i.e. "To enhance the all-round development of students" which was described in eight aspects (The Hong Kong Polytechnic University, 2001, p. 10). The activities arranged in the programme were organised according to the goals and objectives of the programme and included theoretical teaching, clinical visiting and social cultural activities.

While the goals of the various programmes determined the scope and pattern of each programme, many factors influenced the goal setting, such as for example, available resources, the initiator or recipient of the programme, the relationship with the partner institution/country/school and so forth. These differences among the programmes regarding the scope and pattern are discussed as follows.

2.2.2 The location of the exchange programme

The location of the student exchange programme was indicated in all but one of the articles reviewed, i.e. that of Thompson et al. (2000). Some nursing schools had organised exchange programmes in several countries and/or in alternate programme

sites over various years (Haloburdo & Thompson, 1998; Scholes & Moore, 2000); thus the total number of countries in which student exchange programmes took place exceeded the number of citations included in this review, i.e. 16.

Eight reports concerned students who went to the United Kingdom from other countries (Bartholomew, 1996; Birchfield et al. 1991; Colling & Wilson, 1998; Goldberg & Brancato, 1998; Koskinen & Tossavainen, 2004; Scholes & Moore, 2000; Zorn et al. 1995). This was the most common recipient site of student exchange programmes. Five reported students going to the United States from other countries (Birchfield et al. 1991; Colling & Wilson, 1998; Duffy et al. 1999; Frisch, 1990; Goldberg & Brancato, 1998;), and nursing schools in Finland, the Netherlands and Nicaragua each received students from two different exchange programmes. The others were located in Mexico, Russia, Thailand, Dominica, Barbados, Spain, Fiji, and Indonesia respectively. Of those, some countries only received exchange students from other countries, i.e. Thailand, Dominica, Barbados, Fiji and Indonesia, while some not only received exchange students from other countries but sent students overseas, i.e. Mexico, Russia, and Spain. Overall, most of the nursing student exchange programmes were conducted from Europe, with only two countries in Asia being involved in student exchange programmes. There was no evidence in the literature reviewed of China being either the initiator or recipient of a group student exchange programme, thus reinforcing the innovative nature of the present student exchange programme.

The location of the programme was also determined by the relationship between the schools which had inbound students and outbound students. A number of nursing

student exchange programmes were conducted between the schools which already had an established academic relationship (Bartholomew, 1996; Birchfield et al. 1991; Cummings, 1998; Duffy et al. 1999; Koskinen & Tossavainen, 2004; Ndiwane, 2001; Scholes & Moore, 2000). For example, the Northern College in Salford, England and the Medical College Number 1, in St. Petersburg in Russia, which were partners in the exchange programme in Bartholomew's report (1996), had existing links prior to commencement of the programme and the aim of the nine day visit of academic staff and students from the UK to Russia was to maintain the relationship and to offer help with the development of the nursing curriculum of the college in Russia.

Another factor which determined the location of the exchange programme was whether the culture was different in the two countries. Exchange programmes which shared the common goal of enabling the students to gain an understanding of cultural diversity and increased cultural sensitivity located their exchange programme in a country which had a different culture from their own. For example, Rolls et al. (1997) reported on an Australian programme which had an exchange with Thailand, and Duffy et al. (1999) described a programme in which students went from the United States to Finland. Similarly, if the goal of the programme was to evaluate the impact of an international experience gained in either a developed or a developing country, then students went to one or the other, not both (Thompson et al. 2000). In Goldberg and Brancato's study (1998), as the purpose of the programme was to examine and critique the health care system in a foreign country, the main reason for choosing the particular site was because of the cultural diversity rather than the economic position of the country.

The present student exchange programme was conducted between Hong Kong and Shanghai, both of which belong to China. Therefore, the exchange did not occur across an international boundary, but it was across considerable physical distance and across very different cultures, the latter due to the very different historical development of Hong Kong and Mainland China. Therefore, the programme adds a further dimension to the definition of student exchange programmes.

2.2.3 The length of the exchange programme

The length of the student exchange programme was described in all 16 articles, and ranged from 10 days to 3 months. Six programmes were 2 weeks or less in length (Bartholomew, 1996; Birchfield et al. 1991; Colling & Wilson, 1998; Goldberg & Brancato, 1998; Haloburdo & Thompson, 1998; Stevens, 1998), three were 4 weeks (Cummings, 1998; Haebich & Wright, 1995; Rolls et al. 1997), and four were 3 months (Koskinen & Tossavainen, 2004; Scholes & Moore, 2000; Thompson et al. 2000; Zorn et al. 1995). The duration of the remaining programmes was 6 weeks (Frisch, 1990), 8 weeks (Duffy et al. 1999) and 10 weeks (Ndiwane, 2001) respectively. Most of them took place in the summer semester.

The type of activities in the programme was a factor in determining the length, with those in which students had clinical practice or placement lasting longer (Koskinen & Tossavainen, 2004; Scholes & Moore, 2000; Thompson et al. 2000) than those which comprised visits, e.g. observation with no opportunity to practise (Colling & Wilson, 1998; Goldberg & Brancato, 1998; Haloburdo & Thompson, 1998; Stevens, 1998), or comparison of health care facilities. Where the exchange programme was a formal

element within their course curriculum in their home University, and not an optional extra, then it tended to be longer (Frisch, 1990; Zorn et al. 1995). Providing students undertaking an optional programme had completed the compulsory elements of their course, they might be encouraged to spend a longer period on the exchange programme, for example having clinical placements (Duffy et al. 1999).

Another factor which determined the length of the programme was the cost to the student, e.g. the cost of accommodation (Duffy et al. 1999; Frisch, 1990). Of the 16 programmes reviewed, most required the exchange students to be self financing. It is difficult for a student to attend a lengthy exchange programme without some financial support, e.g. a scholarship. This is so even for students who come from developed countries and may have a better financial background (Duffy et al. 1999).

The length of the present exchange programme was 6 weeks, and students undertook two complete subjects which were a formal part of their Nursing Degree curriculum. Both the Hong Kong students who travelled to Shanghai and the Shanghai students who travelled to Hong Kong received financial assistance in the form of a UGC grant from the Hong Kong Government to cover some of their expenses, i.e. the travelling and accommodation costs.

2.2.4 The pattern of exchange

Nine programmes were unilateral exchange programmes (Cummings, 1998; Haebich & Wright, 1995; Haloburdo & Thompson, 1998; Koskinen & Tossavainen, 2004; Ndiwane, 2001; Rolls et al. 1997; Stevens, 1998; Thompson et al. 2000; Zorn et al.

1995) while 7 were bilateral (Bartholomew, 1996; Birchfield et al. 1991; Colling & Wilson, 1998; Duffy et al. 1999; Frisch, 1990; Goldberg & Brancato, 1998; Scholes & Moore, 2000).

Differences in the purpose and activities of the programme between two sites of exchange were common in bilateral exchange programmes. Frisch (1990) described one bilateral exchange programme in which the pattern and goals were as follows. Six U.S. students studied in Mexico for 6 weeks of a 16-week semester during which they were studying a subject in Community Health Nursing in their own University but went to Mexico to complete 6 weeks of clinical practice related to that subject. For example, they had access to rural clinics, made home visits with local nurses, and conducted health teaching projects with local school children. Their classmates who remained at home had similar types of clinical practice, as this was the normal arrangement for this subject. The goals were firstly to enhance the students' cognitive development and secondly to enable them to experience a different culture from their own. In contrast, the Mexican students, the number of whom and their level of the study was not mentioned in the article, had only a short visit to the school in the U.S., for which no specific goal was stated. In the bilateral exchange programme reported by Bartholomew (1996) in which 6 students and two teachers went from the UK to Russia, the goals of the programme were to maintain the already existing link and for the UK students and teachers to offer help with the development of the Russian College's curriculum. Ten students and one teacher from the Russian College came to study in the UK for four weeks, which included educational and clinical nursing experiences. In contrast, Colling and Wilson (1998) described a bilateral exchange programme which was conducted between two Universities in developed countries, as

a 'reciprocal academic exchange'. In this programme, a common set of subject objectives was used by the students from both Universities, and documents of agreement were prepared and signed which formalised the scope of the programme. The subject objectives required the students to compare health care studies in their respective Universities and compare the related learning experiences.

Another characteristic of the bilateral exchange programmes was that no exchange appeared to occur concurrently. Apart from programmes where the time of exchange between the two sites was not identified (Birchfield et al. 1991; Scholes & Moore, 2000), all were conducted either sequentially, i.e. the pattern was that students from one University and country travelled to the host University and country, and on completion of their experience, the students from that University and country travelled to the other University and country, or did so after a short time lapse (Bartholomew, 1996; Colling & Wilson, 1998; Duffy et al. 1999; Frisch, 1990; Goldberg & Brancato, 1998). Goldberg and Brancato (1998) reported an exchange in which American students visited the UK and on completion of their exchange and their return to the U.S., the students from the UK travelled with them, to commence their own period in America. In the UK/Russia bilateral exchange programme above mentioned (Bartholomew, 1996) the exchange occurred three months apart. Initially, teachers and students from the UK visited Russia. While there, the plan for teachers and students from Russia to visit the UK was made. The three month time lapse was necessary so that both sides could plan and organise the programme for the return visit.

The present student exchange programme was reciprocal in that it was bilateral and, although the School in Hong Kong had more experience of international linking, there was no assumption that it was stronger in relation to the teaching and learning of nursing than the School in Shanghai. Both Schools not only shared common goals and objectives for the programme but also conducted the programme concurrently.

2.2.5 Student sample and influences on enrolment in an exchange programme

All but one (Haebich & Wright, 1995) of the 16 reports identified the number of exchange students in the respective programmes. This number varied and ranged from 3 to 13. In each programme, the students were organised as a group to study abroad. The factors that influenced the selection of students varied and are discussed below.

All of the schools which organised an exchange programme opened the opportunity to take part to all students who met the criteria set for the programme, for example they were at the appropriate stage of their nursing education. However, the available student pool varied in number and in the students' year of study in the different Schools, as did the quota of students for which the exchange programme was designed. Even when the pool of eligible students was quite large, the number of students choosing to take part in the exchange programme did not always fill the available places on the programme (Duffy et al. 1999; Frisch, 1990; Zorn et al. 1995). In Zorn and her colleagues' programme (1995), only 8 of 95 potential students attended the exchange programme. These authors stated the reasons why such a small number of students chose to take part were "because of interest, financial restrictions, and family and employment commitments".

Factors which influenced the number of students who participated in an exchange programme included financial costs (Duffy et al. 1999; Frisch, 1990; Zorn et al. 1995), interest in the focus of the programme, family and time commitments, subject credits offered, knowledge of the language used in the host country, arrangements for accommodation and whether or not clinical placements were provided (Duffy et al. 1999; Frisch, 1990; Zorn et al. 1995). In most programmes, the students were responsible for their transport and accommodation costs and so some students were unable to participate in these programmes because they would have had difficulty in meeting these costs. These students therefore preferred to study in their home campus, instead of studying abroad.

If it was a credit-bearing subject which was offered in the exchange programme and there were no disincentives in relation to the overall length of their nursing education, students would feel encouraged to participate (Duffy et al. 1999). If it was one of the elective subjects in the curriculum which was offered in the exchange programme and a student preferred to take a different elective subject, she or he was likely to remain at their home University, instead of going overseas.

If the country to which the exchange students travelled used a language different to their own, some schools required the exchange students to take a language course before embarking on the exchange programme. This may have discouraged some students from participating (Frisch, 1990).

Exchange programme organisers require to consider and balance all the above factors, in order that as many students as possible can benefit from participating in student exchange programmes. Thompson et al (2000) considered it was better if the exchange student group size was large as, when studying abroad, the students would have more peer support, which could help and encourage them to deal with any problems and difficulties they might encounter during their studies and daily lives while participating in the programme.

All students, except those in their first year, were encouraged to participate in the present student exchange programme. However, the student pool in the two Schools was different, i.e. it was larger in Hong Kong than in Shanghai. A total of 84 students participated in the programme, 45 from Hong Kong and 39 from Shanghai. The participating students from the School of Nursing in Hong Kong were free to choose whether or not to take part in the programme and where to take part, i.e. in their home School, as a non-exchange student, or in the host School, as an exchange student, whereas the participating students from the School of Nursing in Shanghai were randomly allocated to either the exchange group or non-exchange group. The number of applications was many more than the available places.

Most of the exchange programmes had criteria for selecting the exchange students. First, the level of seniority of the student was identified. Several schools indicated the exchange students were from more than one level, i.e. both junior and senior students or undergraduate students and graduate students. Two Schools indicated that Master level students enrolled in their programme (Colling & Wilson, 1998; Stevens, 1998;), three stated the students could be junior or senior (Goldberg & Brancato, 1998;

Haebich & Wright, 1995; Haloburdo & Thompson, 1998) and others considered only students who were in their senior year of study to be eligible (Cummings, 1998; Duffy et al. 1999; Frisch, 1990; Ndiwane, 2001; Rolls et al. 1997; Thompson et al. 2000; Zorn et al. 1995). Although these reports did not indicate the reason for selecting senior students, most subjects in the exchange programmes reviewed focussed on community nursing or public health care, subjects which are normally offered to senior nursing students.

In some programmes, grade point average (GPA) was another criterion for student eligibility. In Goldberg and Brancato's (1998) programme, the students were required to have an above average academic profile but not a specific GPA, although the reason for this was not given. Another programme indicated that the students were 'in good academic standing' (Zorn et al. 1995), although the students' academic ability was not set as a criterion for entry to the programme. No other programmes indicated any specific GPA requirements for the students' eligibility, other than those required for their usual subjects in the School of Nursing. The reason for setting a GPA or equivalent academic standard for entry may have been to try to ensure that the students were likely to be able to make the most of the learning opportunities provided in the exchange programme.

Where an exchange was to take place to a country where the language was different from that of the exchange student, eligibility to enrol on the programme required the student to demonstrate proficiency in the language of the host country (Frisch, 1990; Haloburdo & Thompson, 1998; Koskinen & Tossavainen, 2004). Two programmes required potential students to take a formal subject in the language of the host country

before embarking on the programme (Frisch, 1990; Haloburdo & Thompson, 1998), and one programme, where students from the Netherlands and from Spain went to the UK, stated that the students should have a good command of English and be able to demonstrate linguistic competence so as to communicate effectively in the language of the host country (Scholes & Moore, 2000).

Only one programme had eligibility requirements other than the above, and these included demonstration by the student of a sincere commitment to study nursing from an international perspective and evidence of independent, effective decision-making abilities (Goldberg & Brancato, 1998). These authors claimed that these abilities were necessary for students who would live and study abroad for a period of time. However, it would be difficult to measure these criteria, and the authors did not specify how this could be done.

The eligibility requirements for enrolment in the present student exchange programme were the students' level of seniority, their academic profile, including their GPA, and their language skill; for the Hong Kong students, their understanding of Putonghua, and for the Shanghai students, their understanding of English. In addition, the Shanghai students were required to demonstrate commitment to nursing. The subject matter and academic level of the two subjects included in the programme were considered by staff of both Schools to be more appropriate for the more senior students, rather than for first year students. It was considered that students with a good academic profile might be more able to cope, not only with the theoretical content of the subjects, but with the clinical visits which were involved and various social activities in which they should take part. Language proficiency was essential

because one of the two subjects in the programme was taught in English and the other was taught in Putonghua. It was also necessary in order for the exchange students to take full advantage of the clinical visits and social activities.

2.2.6 Focus of the subject

Most of the schools in the reports described the focus/foci of the subject/subjects offered for students in their exchange programmes (Birchfield et al. 1991; Colling & Wilson, 1998; Duffy et al. 1999; Frisch, 1990; Goldberg & Brancato, 1998; Haebich & Wright, 1995; Haloburdo & Thompson, 1998; Ndiwane, 2001; Rolls et al. 1997; Scholes & Moore, 2000; Zorn et al. 1995). Five programmes did not offer any specific subject. (Bartholomew, 1996; Cummings, 1998; Koskinen & Tossavainen, 2004; Stevens, 1998; Thompson et al. 2000).

In all programmes, a strong emphasis was placed on studying differences in culture, health care delivery systems, nursing roles and health care needs. Some programmes included the subject of 'community health nursing' or 'primary health care' and some the subject of 'the health care system and health care delivery in the foreign country'- the latter so that the students could compare these systems with those of their home country. Others offered subjects on 'management of nursing care for groups of clients within various nursing care delivery patterns and health care organisations', 'the role of the nurse as an investigator and member of the discipline', and 'the foreign country's life and civilisation'.

Most of these subjects were electives, except for two which were offered in the programme reported by Frisch (1990) and Zorn and her colleagues (1995). In those programmes, it seemed reasonable to choose compulsory subjects for the exchange programme because the goal of that programme was to examine the students' cognitive development and particularly to find whether there was a difference in cognitive development between students who had attended the exchange programme and those who had remained in their home University. All students took the same assessment and their assessment scores were analysed to determine whether there was any difference between the exchange and non-exchange students. The results indicated a significant difference in favour of the exchange students.

Both subjects offered in the present student exchange programme were elective subjects. In Hong Kong, a 'Health Counselling' subject was offered and in Shanghai the subject was entitled 'Interpretation of Clinical Data'. Students who chose to take part in the programme did so for two reasons, their interest in the focus of the subjects and their interest in studying overseas. The opportunities to take part in clinical visits and in social activities enabled those students who studied overseas to gain an understanding of a different health care system and to learn about the different culture. Moreover, the non-exchange students in both places also gained some understanding of these differences as a result of their interactions with the exchange students in the programme.

2.2.7 Teaching and learning

Different programmes provided different teaching and learning experiences depending on the goals of the programme. Most provided a variety, including classroom lectures, visits, observation and clinical placement. Classroom learning experience included formal lectures, tutorials and seminars; visits and observation took place in hospitals, communities, and in family homes; and clinical placements were in hospitals and communities.

Even where the objectives of the programmes were similar, different teaching methods and therefore learning experiences could be provided. For example, two programmes, each with the same objective of examining the health care system of the foreign country, provided quite different experiences for the students (Birchfield et al. 1991; Goldberg & Brancato, 1998). In one, the subject was taught by classroom lectures conducted by teachers of the host University, and in the other, in which the students visited clinical settings and gained hands-on clinical practice experiences, there were no lectures but one or two orientation sessions were conducted prior to the visits.

Three programmes reported that the teacher provided one day of classroom lectures per week for the students on the exchange programme (Frisch, 1990; Goldberg & Brancato, 1998; Zorn et al. 1995). A majority of the programmes included field visits to and observation in a range of clinical settings, including acute care settings, out-patient departments and community health centres, and also health care organisations, family homes and rural plantation areas. Those types of experience gave students a picture of daily life in the host country and helped them to appreciate and understand local culture and phenomena. Some students carried out projects in the host country,

in which, for example they gave health teaching to school children, and/or provided immunisation for babies. Obtaining this kind of experience required permission to practise in the foreign country and this could be difficult for a foreign student to obtain. In this case, the students were from a developed country and they obtained the permission for clinical practice in an under-developed country (Stevens, 1998).

The present programme did not require students to gain permission to practise in the clinical setting because actual practice was not involved; the students simply visited clinical settings together with students from the host country and a local nurse.

In the programme reported by Colling and Wilson (1998), exchange students lived with local nurses' families in their own homes and worked together with them. This was another way of enabling the exchange students to be immersed in local culture, thus promoting their cross-cultural understanding. This 'pairing' allowed the visiting student to see, sense and feel what her partner experienced. It also helped the students to explain, analyse, evaluate and critique the health care system in the foreign country.

No visits were arranged to family homes in the present student exchange programme but the various social activities were intended to promote students' cross-cultural understanding.

2.2.8 Teachers' responsibility

As the goals were different from programme to programme, the subject(s) offered for the student was/were different too. There were two patterns of teaching (Birchfield et

al. 1991; Colling & Wilson, 1998; Frisch, 1990; Scholes & Moore, 2000; Thompson et al. 2000; Zorn et al. 1995). If the exchange students' programme included classroom teaching, the home University teachers gave the lectures in their home campus prior to commencement of the exchange programme. If the lectures were to be conducted in the foreign campus, in order to help the student integrate knowledge and practice skills, the teacher from the home University travelled with the exchange students to the foreign campus and delivered the lectures there. The advantage of these two patterns is that the students are familiar with the teacher's teaching approach and style, but the limitation is that the students cannot experience the potentially different teaching approach and style of the teachers in the other country. No programme reports indicated that teachers from the home University taught students of the host University, nor that host University teachers gave classroom lectures to the home University students as was done in the present student exchange programme. There was also no indication in the literature of the use of technology, for example, videoconferencing, as was used in the present student exchange programme.

Most programme reports stated that the host clinical instructor or nurse was responsible for the exchange students' clinical instruction and supervision (Duffy et al. 1999; Haloburdo & Thompson, 1998; Rolls et al. 1997; Scholes & Moore, 2000; Zorn et al. 1995). No reports indicated that the clinical instructor or nurse taught both groups of students, i.e. the exchange students and those from the host University together.

2.2 9 Benefit(s) and/or experience(s) gained from participating in a student exchange programme

Sheal (1992), in discussing the development of an exchange programme stated that “No education or training programme is value free and the value is closely tied to the organisations, their goals and their achievement of those goals”. Benefits and/or learning experiences gained by the students from participating in exchange programmes were described in all 16 articles. These could be divided into several aspects related to the programme’s goals and the activities which were organised.

2.2.9.1 Cultural learning

As all student exchange programmes exposed the students to a different culture from their own and enabled them, to varying extents, to interact with local patients, nurses and other people, students had opportunities to learn a lot about the specific culture, in relation to daily life, health beliefs and practice. A number of the reports indicated that students experienced culture shock at the commencement of their programme (Colling & Wilson, 1998; Cummings, 1998), but also that this enabled many students to change their attitudes towards another culture, religion and ways of living, gain a level of acceptance and understanding of these differences (Koskinen, & Tossavainen, 2004; Rolls et al. 1997), develop inter-cultural sensitivity (Koskinen, & Tossavainen, 2004), and learn to provide culturally sensitive care (Duffy et al. 1999).

2.2.9.2 Knowledge of another country’s health care system and policy

Participating in a student exchange programme offered an opportunity to experience cultural differences and enabled nursing students to come to know and understand the

host country's health care system and policy because they gained specific information about that health care system and nursing practices in the host country, in some cases, were involved in real nursing practice. Therefore, the students enhanced their level of awareness of health care and of the health needs of the host country (Rolls et al. 1997; Thompson et al. 2000), compared and contrasted the health care system and policy between their home and the host country (Bartholomew, 1996; Birchfield et al. 1991; Duffy et al. 1999; Scholes & Moore, 2000; Stevens, 1998), found out about similarities and differences in nursing practices and skill procedures (Cummings, 1998), explored and critiqued diverse cultural issues within nursing and health care (Goldberg, & Brancato, 1998) and expressed their willingness to be involved in the future, as qualified nurses, in their own country's reformation of health care system and nursing practice (Goldberg, & Brancato, 1998).

2.2.9.3 Cognitive development

Two student exchange programmes (Frisch, 1990; Zorn et al. 1995) were designed and conducted with the goal of examining the impact of participation in an international study programme on students' cognitive development. In these programmes, the exchange students spent several weeks of the term studying overseas in order to obtain experience of cultural differences while their classmates remained in their home School studying the same subject. An instrument which had high inter-rater agreement and internal consistency, i.e. 'The Measure of Epistemological Reflection (MER)' was used to measure students' cognitive development. Their results showed that the experience of taking part in an international exchange programme had a positive impact on students' cognitive development. The students

participating in the programme demonstrated significantly more cognitive growth than those who did not. However, it should be noted that both studies had a small sample size - one had six students in the intervention group and seventeen in the control group and the other had eight students in the intervention group and twenty in the control group.

2.2.9.4 Other experiences gained by attending the exchange programme

In addition to the above three major benefits or experiences gained from participation in the student exchange programmes, some other experiences, both positive and negative, were identified by the authors. The positive experiences included that the exchange students learned about nursing education in another country (Bartholomew, 1996); enhanced their self-confidence and personal development (Rolls et al. 1997) and developed relationships with the students, teachers and others from the host country (Colling & Wilson, 1998). The negative experiences reported related to the initial culture shock (Colling & Wilson, 1998; Cummings, 1998) and some difficulties in communication because of the language barrier (Stevens, 1998).

While it is widely believed that participation in an exchange programme can enhance the development of participating students' global outlook, especially in relation to gaining in cultural awareness and understanding of the health care system and nursing practice of the host country, the benefits gained in relation to the development of students' leadership skills, language skills, social and national responsibility, life-long learning and critical thinking were less reported. None of the sixteen programmes had an objective related to these latter benefits.

The present student exchange programme was designed and conducted with the intention of enabling students to fulfil the University's Strategic Objective One and to gain all of the benefits and experiences discussed in section 2.2.9 and subsections. Therefore, the design and planning of the programme emphasised not only exploring the students' global outlook and cultural appreciation, but also their development of knowledge and skills regarding leadership, language, social and national responsibility, life-long learning and critical thinking, in fact, a considerably wider range of benefits and experiences than had been indicated in any of the sixteen programmes reviewed.

2.3 TEACHING MODELS FOR STUDENT EXCHANGE PROGRAMMES

A model is a "representation of a set of components of a process, system, or subject area, generally developed for understanding, analysis, improvement, and/or replacement of the process" (ICGT, 2006). In a teaching situation, a model represents the process of how to teach the student to gain specific knowledge or skills and explains the relationships between student, teacher, teaching method and learning outcome. Therefore, a model for teaching is a plan for the actions of the teacher in the selection and creation of opportunities for students' learning (Joyce, Weil & Calhoun, 2003). The teaching model for the present student exchange programme was carefully designed with the intention to create learning opportunities to enable participating students to fulfil the specific objectives of the programme.

It is noted from the literature review that the student exchange programme is seen as a teaching model which is appropriate in teaching about cultural sensitivity and diversity. However, it is not the only model. This section discusses models of teaching used to promote cultural sensitivity and diversity in students and is followed by a discussion of different models for student exchange programmes.

2.3.1 Teaching models in teaching of cultural diversity competence

To enhance nursing students' ability to develop cultural sensitivity in providing nursing care, nursing teachers developed specific teaching methods, approaches, and strategies to organise appropriate teaching activities. May and Meleis (1987) described an approach which involved contact with international colleagues, in order to promote cultural awareness among nursing students. Lindquist (1986) described several teaching methods or approaches for teaching intercultural nursing to nursing students. These included integrating cultural diversity content in the curriculum; offering the opportunity for teachers to practise nursing in other countries so that they could apply knowledge from those experiences in the subjects they taught; completing a 'contemporary world project' which required students to study global issues while in their home campus so that they could develop an awareness and understanding of the world beyond their own shores; offering an on-campus elective subject dealing with nursing and health care in other countries; and clinical placements in other countries. According to Joyce and colleagues, these different teaching methods, approaches or strategies formed different teaching models in teaching cultural diversity competency.

To provide nursing students with a global view of nursing and health care in their nursing education programme, a University in the U.S. reformed their undergraduate nursing curriculum to integrate international and transcultural content (Lindquist, 1990). The teaching staff created three different teaching models to fulfil the goal. Firstly, in all compulsory subjects, the teachers made a concerted effort to add content on international and transcultural issues, including health care and social services provided for the people in other countries, international health organisations and issues, international variations in nursing education, practice and research, and, in two senior level subjects, issues in nursing management in other countries. Secondly, an on-campus elective subject of 'International Dimensions of Health Care' was developed and offered to nursing students and students in other disciplines, and thirdly, a summer student exchange programme was developed and offered to nursing students so that they could study and experience the culture and life in another country.

Compared with these teaching models, Dowling and Coppens' (1996) model had some differences. They offered a six-credit sophomore nursing subject dealing with 'Concepts of Professional Nursing Practice', so that the students could examine cultural and social structure dimensions as influences on health practices. The students studying this subject were divided into small groups, each of which studied a particular culture. To do this, they identified and used campus and community resources, acquired materials that represented selected subcultures, created multidimensional displays and then presented what they had learned to their classmates. It was concluded by the authors that following this particular teaching

model enabled the students to increase their awareness of cultural diversity as it relates to health and nursing practices.

Another model of teaching cultural competence was reported by Kirkpatrick, Brown & Atkins (1998). The Internet was used as the teaching medium or model in order to enable the students to integrate cultural diversity and global awareness. In studying the subject of “Clients with Complex Health Stressors”, the students were required to conduct, retrieve and exchange nursing/health care information via the Internet with nursing students in Universities in other countries and to compare and contrast the information received from these other countries with their own. In their exchange, students were asked to determine the issues, trends and strategies for managing the particular health stressors they had selected to study. If the Internet model were to become more commonly used, and this is possible given the wide-spread use of the Internet nowadays and the fact this model would not incur any travel or accommodation costs, then there might be less opportunity for students to have the benefit of immersion in a different culture, as happens in a number of exchange programmes.

The present student exchange programme applied another teaching model to enhance the nursing student’s cultural diversity ability by providing first hand experiences in another cultural society. This kind of teaching model has been applied more and more recently. However, the teaching methods or strategies under this model applied in different student exchange programmes were various.

2.3.2. Teaching models for student exchange programmes

Kraft, Ballantine, and Garvey (1994) identified three models of student exchange programmes: total immersion, protective studies abroad, and study tour. Most student exchange programmes are based on either one or more of these models.

The total immersion model places the students in a foreign University for the duration of at least one semester, but more typically for a year. This model allows students to participate in academic courses and experience an in-depth study of the language and culture of the host country in which they are residing. Linguistic and scholarly competences are the dominant goals of these programmes. Students take regular classes which offer credits and can then be transferred back to the home campus when they return to study in their home University. Students usually live in University housing or local homes.

Compared with the total immersion model, the protective studies abroad model of student exchange programme organises shorter periods of time abroad, and under more protective conditions. Some programmes using this model offer courses which are organised and taught by the home University Faculty followed by students' travelling to the foreign country to practise in clinical settings. Others place students in special institutions for foreigners, in which there are varying levels of interaction with students from different cultural backgrounds. Many of these protective studies abroad programmes include intensive language classes and the students are encouraged to make contacts with the host culture, while others tend to build a protective wall around the participating students and do little to promote interaction. Zorn and her associates' programme (1995) is one example of using this model. In

their programme, the students and their teachers from the U.S. studied in the UK for twelve weeks of a 16-week semester. All three subjects in the exchange programme in that semester were taught by the teacher who had travelled with the students, and followed the same subject outlines that the students would have received had they remained at the home University.

The third model is the study tour. These tours range in length from approximately two weeks to an entire summer and tend to include students from a broad range of academic ability. Many of the sixteen programmes cited earlier in this chapter were conducted using this model. They were conducted over a short period, included previously arranged visiting and observation opportunities, and had teaching provided by local community nurses or instructors.

These three models for student exchange programmes are neither mutually exclusive nor in conflict. More programmes were planned and conducted using the latter two models. All sixteen of the student exchange programmes described followed one of the two latter models; none were of the total immersion model. However, different programmes used different teaching methods or carried out different teaching strategies even when the programmes followed the same model, i.e. the protective studies abroad model or study tour model. This means that, within one model, there could be different methods/strategies. For example, the nursing student exchange programmes reported by Haebich and Wright (1995), Rolls and her associates (1997), and Cummings (1998) were all 4 week study tours and, although all included visiting activities, the teaching methods and strategies used in these programmes were different. Haebich and Wright's programme arranged for the exchange students to

attend workshops which covered the topics of culture, religion, language, lifestyle, health care system and health issues. In Rolls and her colleagues' programme the exchange students went to a community in a rural area of the country to participate in the community assessment of a village. This assessment involved, in conjunction with local nurses, mapping the village, drawing a plan of the area, interviewing residents using an assessment tool, analysing the data and developing a health plan for the village. Cummings's programme consisted of one week of classroom instruction conducted by local community college teachers and three weeks of clinical nursing practice in a variety of settings coordinated and supervised by local clinical teachers.

The present student exchange programme developed a unique teaching model. In this programme, exchange and local non-exchange students studied and worked together; two credit-bearing subjects, one from the curriculum of each of the Schools involved in the programme which interested both Schools were offered; teachers from both Schools participated in teaching and videoconferencing was used to link two classes, one in Hong Kong and the other in Shanghai. In addition, both English and Putonghua were used in the teaching of theory and in clinical visits. This is an innovative teaching model in student exchange programmes and is more akin to the study tour model than to the protective studies abroad model.

2.4 PROGRAMME EVALUATION

Programme evaluation is defined as "systematic procedures used in seeking facts or principles" (Barker, 2003, p.368). It is a "periodic assessment of the relevance, performance, efficiency, and impact (both expected and unexpected) of the

programme in relation to stated objectives.” (Fort, Martinez, & Mukhopadhyay, 2001). Programme evaluation in education thus refers to “the process of judging the worth or value of an educational programme.” (Oermann & Gaberson, 2006). The purposes of programme evaluation are “to provide data upon which to base decisions about the educational programme”, and “to provide evidence of educational effectiveness in response to internal and external demands for accountability.” (Oermann & Gaberson, 2006).

The methods selected to evaluate a programme vary, according to the type of programme and the reasons for the evaluation. The selection of appropriate methods is of critical importance in designing an evaluation. A measurement method useful in one evaluation may be inappropriate in another. In order to select the most appropriate evaluative methods for the present student exchange programme, a review of the literature regarding programme evaluation was conducted. That review is presented in this section of the chapter. It begins with an overview of the general approaches to programme evaluation, followed by a discussion of methods used in evaluation of nursing programmes and an illustration of some of the methods used in student exchange programmes.

2.4.1 Approaches in programme evaluation

2.4.1.1 Generic approaches in programme evaluation

There are many approaches to programme evaluation, and these are categorised differently by various researchers. One of the most commonly known distinctions is

that of formative and summative evaluation, first delineated by Scriven, in his seminal work on evaluation in 1967 (cited in Mertens, 2005). According to Scriven, summative evaluation occurs after completion of a programme and is used to determine the programme's effectiveness, while formative evaluation occurs while a programme is in progress and is used during the course of the programme to change or further develop the programme in some way. The approach selected for a programme evaluation depends on the nature of the programme, the purpose of the programme, and the purpose of the programme evaluation.

The summative approach was adopted in evaluating the present student exchange programme as it was considered appropriate for the nature of the programme, i.e. the nursing student exchange; the purpose of the programme, which was to enable participating students to fulfil the elements of Strategic Objective One (The Hong Kong Polytechnic University, 2001, p.10); and the purpose of the evaluation, which was to evaluate the programme's effectiveness in so doing.

Over the years there has been a gradual change in the approaches to or methods used in programme evaluation. These two terms, i.e. approach and method, are frequently used interchangeably in the literature. For the purpose of this thesis, the term approach will be used.

Two of the earliest authors to present what is termed the positivistic, evidence-based approach to programme evaluation were Fitz-Gibbon (1978) and Fitz-Gibbon and Morris (1987). They offered several ways to design an evaluation, all of which

include some form of measurement before and after an intervention. Examples they gave included:

- The True Control Group, Pretest-Posttest Design - which involves random assignment of the chosen sample to the experimental and control groups and data collection before and after the intervention;
- The True Control Group, Posttest only - which also involves random assignment to the experimental and control groups but data collection only after the intervention;
- The Non-equivalent Control Group, Pretest-Posttest - which differs from design number 1 above only in that the control group is non-randomised;
- The Time Series Design, - e.g. in the single group time series, the students in a class are in fact their own control group and the same measurement is made at regular intervals both before and after the intervention.

These experimental and quasi-experimental research designs have continued to be very widely used (Mertens, 2005) in programme evaluation, particularly in summative evaluations. However, they can only be effectively implemented in almost ideal conditions. The authors acknowledged (Fitz-Gibbon & Morris, 1987), and others agreed (Guba & Lincoln, 1989; Mertens, 2005; Stufflebeam, 2001) that programme evaluations rarely have ideal conditions and therefore other approaches should be considered.

Stecher and Davis (1987) went beyond the experimental, presenting four additional approaches to programme evaluation in a progressive continuum: goal-oriented, decision-focused, user-oriented and responsive approach.

- The goal-oriented approach emphasises the goals and objectives of the programme and attempts to measure the success of the programme in terms of these. An advantage of this orientation is the clarity gained by relating goals and outcomes, but that focus on original goals may leave some unintended but important outcomes unnoticed. This approach was adopted in evaluating the present student exchange programme with some modification.
- The decision-focused approach is used when systematic provision of information is needed by programme managers and/or funders in order to ensure ongoing effective programme management and implementation. The information is gathered at different stages of the programme and particularly if any change is contemplated. The strengths of this approach include its focus on the needs of decision makers and fact that specific pre-determined decision points exist within the programme so that relevant information is available on an ongoing basis, in effect providing a formative evaluation. Its weakness lies in the fact that many decisions are not made at these pre-determined points and may be based on subjective impressions rather than being data-based.
- The user-oriented approach concentrates on providing information that will be useful to those who are in a position to take action based on the data. The evaluator is conscious of a number of elements that may affect the utility of the evaluation. The strength of this approach is that the evaluator involves user groups throughout the evaluation. The main weaknesses lie in the potential influence of strong personalities and changing interests within the user group(s) and possible changes in the composition of such groups.
- The responsive approach places the evaluator in the position of seeking to understand all the evaluation questions from the multiple points of view of all

who have a 'stake in the programme' such as programme staff, administrators and others. The strengths of this approach are its sensitivity to multiple points of view and ability to accommodate less clearly expressed concerns and conflicting views. The main weakness is the virtual impossibility of including the views of all stakeholders.

The use of these four approaches in programme evaluation reflects a move from a reliance on experiments and quasi-experiments to more case-study orientations and interpretive designs (Worthen & Sanders, 1987). Guba and Lincoln (1989) described the changing emphasis in approaches to programme evaluation as four generations of programme evaluation.

Guba and Lincoln (1989) classified the first period of approaches to programme evaluation as the measurement period. During that period, evaluation focused exclusively on tests and facts which could be measured. This period encompassed approximately from the early 1900s to the 1930s. The second generation was that of description. Evaluation in this period, which spanned from approximately the 1930s to the 1950s, focused on the school curricula, while evaluation in the first period had focused on the student. Thus the focus moved from human performance to the effectiveness of the curriculum and its objectives, strategies for implementation, and the organisation of the school (Guba & Lincoln, 1989). The third generation focused on judgment and spanned approximately the 1960s and 1970s. In this period the importance of making judgments about the quality and effectiveness of a programme was recognised. These judgments were based not only on what the goals of the programme were and whether they had been achieved or not but also on whether these

goals were appropriate. The fourth generation was that of responsive constructivist evaluation. This approach involved continuous interaction with all elements involved in the programme in negotiating the progress and direction of the evaluation. Indeed, the evaluation became a constructed interaction between the evaluator and those involved in the programme (Guba & Lincoln, 1989).

2.4.1.2 Quantitative and qualitative approaches

The shift of approaches in programme evaluation represents the progress of methodology development which reflects a move from a quantitative approach to a qualitative approach. Lynch (1992) reviewed this approach shift and made the point that programme evaluation benefits greatly from the use of both quantitative and qualitative methodologies. This author argues that quantitative data can clear up ambiguities in qualitative data - for example, by linking student performance on tests and other objective measures with student (and/or teacher) perceptions of a programme or curriculum. Indeed, Lynch (1992) explained that each type of data can be used to explain ambiguities in the other. Knight and Kuleck (1999) offered further support for the use of both quantitative and qualitative approaches in programme evaluation through their example of an evaluation of a literacy programme, where, because there was a small number of participants, qualitative data was necessary to support positive quantitative results. Quantitative and qualitative approaches are viewed as compatible, complementary approaches in the evaluation of educational programmes. By offering a combined approach, the strengths of each can offset the weaknesses of each (Patton, 2002; Reichardt & Cook, 1979; Tashakkori & Teddlie, 1998). This mix of quantitative and qualitative approaches in a single programme

evaluation has been used in evaluating different types of programmes, e.g. social programmes and education programmes, including nursing education programmes.

2.4.2 Education programme evaluation

Education programme evaluation is the process of collecting and interpreting information about the effectiveness or otherwise of an entire programme or of elements within it. Judgments may be made about the curriculum and its content, about teaching, learning and assessment processes, about students' success in achieving the objectives of the programme and about the relevance of these objectives. In addition to these judgments, improvement of course content and format and of teaching are also considered as aims in education programme evaluation (Chen & Hoshower, 2003).

No report of an evaluation which used true experimental design was found in the literature search. According to Kember (2003), it is not possible to achieve true experimental control in education programme evaluation because of the likelihood of contamination between control and experimental groups in a class of students. However, Frisch (1990) and Zorn and colleagues (1995) used a quasi-experimental design and a quantitative approach in their evaluations of nursing student exchange programmes. However, it is more common to find both quantitative and qualitative approaches used in education programme evaluation, for example Scholes and Moore's report about a bilateral exchange programme (2000).

In the quantitative approach to programme evaluation, the most frequently used research tool is the questionnaire. In an evaluation of an engineering education programme (Soundarajan, 2004), the user-oriented approach was adopted, i.e. teachers, students and alumni completed questionnaires in their evaluation of the programme. The aim of the evaluation was to gain information about each course offered in the programme and to use these results to improve the courses and therefore the programme as a whole - 'to close the loop', i.e. identify strengths and weaknesses and implement improvements. The quantitative data from the questionnaires were collated in Course Group Reports (CGR) from which quantitative data were derived. At least once every 2 years faculty coordinators of the different courses were responsible for producing this report, which addressed, in relation to each course, questions such as "Are the course objectives appropriate and up-to-date?", "Are the current prerequisites appropriate?", "Do the students enjoy the course?". The author considered the quantitative approach used was effective in this evaluation of the engineering programme but did point out that it would not necessarily be appropriate for all types of programme.

In another study, the Course Experience Questionnaire was used to determine the quality of a university programme, rather than specific courses within it and to compare institutions' performances in teaching in higher education in Australia (Smith, Herbert, Robinson & Watt, 2001). The CEQ was administered to all graduates early in the year following their graduation. The results indicated the students' overall evaluation of their university experience and the risk is that they may express a biased view based on the impact of a limited number of highly positive or highly negative experiences, because the CEQ, as used in their study, did not enable evaluation of the

teaching in any individual subject. The University of Queensland therefore developed a comprehensive evaluation project named Continuous Curriculum Review (CCR) (Smith et al. 2001). In this project, which used the quantitative approach, the instruments used included the CEQ; but also questionnaires which included items relating to each year of study in a programme to measure the achievement of whole year objectives or goals; items relating to individual subjects; and items requiring self-assessment by students of their achievement of various graduate attributes. In their report of the mainly positive results from the project, the authors addressed the limitations of using quantitative data alone if the intention is to illuminate the students' experiences. For example the results did not enable the evaluators to learn why a student might have rated an aspect of teaching very well or very badly and therefore to distinguish what should be done to improve teaching. These authors recommended the use of interviews to provide a more in-depth evaluation, in other words, the combination of quantitative and qualitative approaches.

Lyon and Hendry (2002) conducted an education programme evaluation in which both questionnaire and small group interviews were used as research instruments. The aim of this evaluation was to assess the validity of the use of the Course Experience Questionnaire (CEQ) as an instrument to evaluate a medical programme and to measure improvements in teaching quality following the introduction of a problem-based learning programme at the University of Sydney. The entire cohort of students was asked to complete the CEQ and a sample of students from the same cohort was invited to small group interviews. The authors concluded that "the CEQ results could provide universities with useful retrospective data from graduates, providing insights into the relative strengths and weaknesses of the course" (P. 348). However, it was

recognised that the CEQ had its limitations and some items “do not seem to reflect the educational philosophy or the instructional processes of problem-based learning programmes” (P. 349). It is inferred therefore that the use of the quantitative approach alone cannot provide a sufficiently comprehensive evaluation. The qualitative component should be added in order to achieve a high quality of evaluation.

Nestel (2002) compared the use of a questionnaire with focus group interviews in relation to the time, quality and nature of feedback obtained from students in evaluating a three-week compulsory module in a medical programme. The results showed that both the quantitative approach and the qualitative approach had their strengths and weaknesses. For example, the quantitative approach meant that more students could be involved and responses were anonymous, whereas fewer students were involved in the focus group interviews but there were opportunities to explore the responses and gain more in-depth information.

2.4.3 Nursing education programme evaluation

Although some teaching of nurses takes place in the clinical areas while students are on clinical placement, nurse teachers in the university are accountable for the overall effectiveness of nursing education programmes which prepare nurses for practice and to meet the health care needs of society. Learning outcomes are frequently measured when an educational programme is evaluated. In addition, the students’ perceptions of their programme or course and of their learning experiences are also usually explored in programme evaluation.

Espeland and Indrehus (2003) conducted a nursing education programme evaluation in Norway. In this evaluation, 3-year nursing degree programmes in three university colleges in western Norway were evaluated with the aims of investigating students' satisfaction with their nursing programme in their last semester and measuring the reliability and validity of two instruments. These were the 'Course Experience Questionnaire' which investigated students' satisfaction with their programme overall and specifically with three subjects, and the 'Nursing Clinical Facilitators' Questionnaire' which investigated students' satisfaction with clinical practice. Two hundred and seventy six of 347 nursing students in three university colleges completed the questionnaires. The results showed that the students' overall satisfaction with their nursing programme was slightly negative but overall satisfaction was positive for their clinical practice. However, the limitations of using quantitative questionnaires only were displayed in this programme evaluation as the reasons why the students were not satisfied with their nursing programme could not be discerned from quantitative data.

Another focus of programme evaluation is to determine whether the objectives of the programme have been fulfilled. Barrett, Arklie and Smillie (1996) conducted an evaluation of a nursing baccalaureate programme. The purpose was to determine if the nursing education curriculum had enabled its graduates to meet the terminal objectives of the programme and to determine if these objectives were consistent with the requirements of their employers. An explorative, descriptive design obtained both quantitative and qualitative data, using a survey which was mailed to 190 graduates from the classes of 1989–1991 and 8 focus group interviews, with 4-8 employers in each group, all of whom had worked with graduates of the programme. Findings of

this evaluation indicated that the graduates and their respective employers rated the nursing programme to be very satisfactory. The strengths of this evaluation were that both quantitative and qualitative approaches were used; and the fact that both graduates and employers took part in the evaluation. The main limitation was the low response rate (N=77, 40.5%) to the survey. The authors acknowledged that the use of a mailed survey has the potential for bias in the results, in that it may be those who are most satisfied with the programme who are more likely to respond. However, it is considered that the graduates' learning experiences were not fully explored in this evaluation because the survey yielded only quantitative data.

Platzer, Blake and Ashford (2000) used a qualitative approach to conduct an evaluation of a part-time Diploma programme in Professional Studies in Nursing in a College of Higher Education in the south of England to explore students' learning experiences in a reflective practice group. In the programme, the students were taught and learned in one of the courses using reflective practice groups. They met once every two weeks and attended a total of approximately 15 meetings in the academic year. In-depth interviews, as the evaluation method, were conducted with each of the total of 30 students who had completed the programme or were currently participating in a group. Although the emphasis of the report was on exploring students' learning experiences rather than on analysing the method of evaluation, the usefulness of this qualitative approach in evaluating a nursing programme with the purpose of exploring students' learning experiences was indicated.

The following discussion focuses on the evaluation of student exchange programmes of which the nursing student exchange programme is one type.

2.4.4 Evaluation of nursing student exchange programmes

The main characteristics of exchange programmes include, for example, that they take place over a relatively short time period, generally involve a small number of students and tend to have a specific focus.

Among the 16 nursing student exchange programmes previously described, the evaluations varied in approach. The approaches selected were based on the purpose of the evaluation. For example, in Zorn and colleagues' study (1995) where the aim was to evaluate students' cognitive development, the quantitative approach was adopted and a questionnaire was administered before and after the programme. In Haloburdo and Thompson's evaluation of their programme (1998) where the aim was to explore the meaning of an international experience for the participating nursing students, the qualitative approach was adopted, i.e. an open-ended interview was conducted with the students.

Of these sixteen student exchange programmes, only one did not mention how the evaluation of the programme was conducted (Haebich & Wright, 1995). Evaluations of the other fifteen programmes were as follows. Three utilised the quantitative approach and used questionnaires (Frisch, 1990; Thompson et al. 2000; Zorn et al. 1995). Eleven adopted the qualitative approach. Of these, three conducted individual interviews with participating students (Bartholomew, 1996; Haloburdo & Thompson, 1998; Rolls et al. 1997) and one conducted focus group interviews (Koskinen & Tossavainen, 2004). Four collected and analysed students' reflective journals

(Cummings, 1998; Goldberg & Brancato, 1998; Ndiwane, 2001; Stevens, 1998). Three evaluated the outcomes of the programme by asking the students to write a paper and to present it to their classmates (Birchfield et al. 1991; Colling & Wilson, 1998; Duffy et al. 1999). Only one evaluation used a mix of both quantitative and qualitative approaches, i.e. questionnaires, focus group interviews and document analysis (Scholes & Moore, 2000).

In Zorn and colleagues' report (1995), the students studied three subjects within the student exchange programme. The students studied in another country for 12 weeks. For the programme evaluation, a quasi-experimental cohort design and a quantitative approach were used to assess students' cognitive development. The data obtained indicated the difference in students' cognitive development before and after attending the exchange programme by comparing exchange students' assessment scores prior to and on completion of the programme. Assessment scores between exchange and non-exchange students who had studied the same three subjects were compared to assess the difference between these two groups. However, other learning outcomes that the exchange students may have gained by attending the programme, e.g. cultural appreciation and sensitivity to cultural diversity were not explored. This was a potentially missed opportunity to assess an important outcome for the students.

Rolls and her colleagues (1997) evaluated a unilateral exchange programme between Australia and Thailand by conducting a series of three interviews with five participating students to explore their experiences of and concerns about the exchange programme. The first interview was conducted before the students' departure to travel to the host institution to assess their expectations of the programme. The

second interview was conducted during the third week of the programme, during which questions explored students' current concerns and expectations. The final interview was undertaken five weeks after the students' return home and involved a more detailed exploration of students' gains in understanding of forces influencing health and health care in the host country, together with their awareness of cultural differences. The use of a series of interviews not only allows exploration of the students' experiences in detail but also exploration of any changes in these experiences at different stages of the programme. However, while the qualitative approach used in this study provided rich data, the lack of any quantitative assessment of students' knowledge gain was a limitation. There could also have been the opportunity to conduct a formative evaluation based on the results of the second interview, and make any required adjustments to the programme, but there was no indication that the authors had considered this.

With one exception, none of the reports in which the qualitative approach was used indicated how the data were analysed. They simply described the results of the respective evaluations. In contrast, Haloburdo and Thompson's (1998) report not only gave detailed information about the data analysis but also on the results of the evaluation.

The above discussion has indicated that evaluations of nursing student exchange programmes were mainly summative and rarely used both quantitative and qualitative approaches. When an exchange programme contains different types of activity, e.g. studying a classroom-based subject and visiting clinical settings, programme evaluation is more complex. In such cases both quantitative and qualitative

approaches should be used together with several different research instruments in order to evaluate as many aspects of the students' experiences as possible. However, allowance must be made for the necessary resources and time.

CONCLUSION

Following this review of the relevant literature, the specific characteristics of the present student exchange programme will now be outlined. Firstly, the number of exchange students was relatively large. Secondly, both exchange and non-exchange students took part in the programme and studied and worked together. Both classes contained exchange and non-exchange students. Thirdly, the students enrolled for the same two subjects, one of which was taught in the School of Nursing in Hong Kong and the other in the School of Nursing in Shanghai. Fourthly, the teachers who taught these subjects remained in their own University and delivered the lectures from there, i.e. they did not travel with the exchange students. Fifthly, one subject was taught in the English language and the other in Putonghua. Sixthly, the teaching medium, videoconferencing, was applied to link the two classes simultaneously, one in Hong Kong and the other in Shanghai. It is believed therefore, that the present student exchange programme is both an innovative and unique model which has never before been implemented in a nursing student exchange programme. The evaluation of the present nursing student exchange programme is a summative evaluation which includes a mix of quantitative and qualitative approaches, and provides data derived from four research instruments and students' assessment scores.

The next chapter reviews the literature on the use of videoconferencing in education including nursing education.

CHAPTER THREE

REVIEW OF LITERATURE (PART II)

VIDEOCONFERENCING

INTRODUCTION

Videoconferencing was employed in an innovative way in the present student exchange programme. This chapter presents a brief review of the historical development of videoconferencing. This is followed by a review of the literature on the application of videoconferencing in education, the advantages and disadvantages of using videoconferencing, the equipment required for videoconferencing and the effectiveness of videoconferencing in relation to teaching and learning.

3.1 THE LITERATURE SEARCH STRATEGY

The literature review regarding videoconferencing began with an electronic search of databases including computerised index of education technology and teaching and learning media, e.g. HBSCO, CSA, ERIC, AACE, ACM, Good Universities Guides, Telecommunication SnetBase, Internurse.com, Ingenta, Journals@Ovid, Synergy, CINAHL, MEDLINE, and GOOGLE. Initially, the time period for the search was limited to '1990 to present'. However, later some earlier literature was also searched on in order to gain an understanding of the development of videoconferencing.

The key words to be used for this search included: videoconferencing, application of videoconferencing, teaching media, learning media, video conference, distance learning, nursing education, and student exchange programme. Different combinations of these key words were used to focus the search.

Manual searches of journals and textbooks were also conducted as some databases included only relatively recent years of journals and the journals or papers did not provide definition of key concepts used in this research, e.g. videoconferencing, the types of videoconferencing, and the equipment for videoconferencing.

A number of articles were found in the search and following a review of the titles only some articles were considered to be relevant. For those where were identified as relevant the abstract was reviewed to assess whether or not to access full text. The criteria for inclusion in the literature review of videoconferencing in this chapter included: the articles was published in English, the reports which described equipment required for videoconferencing and described the application of videoconferencing in education or nursing education and research reports about the application of videoconferencing and its advantages and disadvantages. Web based education as an increasingly used form of distance education has not been included in this review as it was not pertinent to the focus of this research, i.e. the present student exchange programme which was mediated by videoconferencing.

3.2 HISTORICAL DEVELOPMENT OF VIDEOCONFERENCING

The advent of the use of radio in the field of education took place in the early 1920s and this made delivery of educational programmes over a long distance a reality (Wallin, 1990). These early efforts in radio preceded implementation of Educational Television (ETV) by almost a decade. In the 1930s, Universities began broadcasting education programmes via television to distant sites. The first experiments into ETV have been attributed to the University of Iowa between 1932 and 1939. Over 400 educational programmes were conducted by the University of Iowa in the areas of botany, art, engineering and drama. A decade later, 62 ETV stations were operating in the U.S. (Koenig, 1969). A short time later, ETV was developing rapidly in Europe and Asia. The UK and Italy introduced programmes using ETV for schools in the 1950s. As long ago as 1926, a proposal termed the 'wireless university' was initiated by an electrical engineer. His proposal, which eventually developed into the Open University of the UK, was to establish a 'teleuniversity' which would provide degree programmes delivered by a combination of broadcast lectures, textual material and visits to conventional universities. The first programme was developed in 1962 and offered to students in 1963 and now the Open University, which was the first of its kind in the world, offers a broad range of programmes to thousands of students (The Open University, 2005). Yugoslavia, Poland, the Soviet Union, China and Japan began offering University-level course work using ETV in the 1960s (Koenig, 1969).

The key to the success of ETV was flexibility and feedback for the student. Students taking ETV courses could tape lessons on their VCRs and study at times convenient to their schedules. The perceived weakness of ETV as an educational medium was that the teacher was unable to relate to the student and *vice versa*. The lack of opportunity for the students to ask questions and to get immediate feedback was a

serious shortcoming. The students could not participate in discussions. Likewise, teachers might not like to teach using the medium of ETV because the student-teacher interaction was missing (Shane, 1989). They were unable to see for themselves whether or not students were grasping the material, and they missed the opportunity to gain and to provide immediate feedback from and to students, due to lack of student participation and involvement.

The next technology breakthrough was around 1970, with the advent of two-way audio systems, i.e. telephone conferencing (two-way audio, audio-conferencing) (Hardy & Olcott Jr., 1995; Henry, 1993). This medium was used to connect teachers and students at two or more sites. The most important example of the telephone conference was the Educational Telephone Network at the University of Wisconsin-Extension, with over 200 reception sites, used by over 35,000 students every year. Most uses of telephone conferencing were for remote delivery of classroom type teaching (Mason, 1994). Telephone conferencing made interaction between teacher and student possible, but, without anything to visualise, it was difficult for students to maintain attention. Teachers were also at a disadvantage because they could only rely on the students' voices to determine whether they had comprehended the information (Mason, 1994). There was no possibility to visualise any non-verbal cues.

Before videoconferencing equipment became generally available, a picture telephone was developed that enabled the communication to have visual cues. Later, an interactive video experiment between two points was carried out using a satellite link, that is one-way video, two-way audio (Mason, 1994). Students at a remote site or sites could see and hear the teacher on several monitors positioned around the room(s).

Using a telephone, the students could call in questions live to the teacher in the presenting site. At this stage of development, the use of satellite technology required only that the user pay rent to the provider and therefore the user could avoid set up costs and have easy access to an international audience (Mason & Page, 1994). However, teaching by satellite presented some specific challenges, although, in spite of these, many educational establishments continued to use satellite technology. For instance, the transmission time had to be planned around when the satellite was in position. Moreover, two-way communications between an earth station and a satellite require a special aerial at the earth station. Such connections were expensive and a limited number of satellites existed. A slight signal delay usually occurred with the audio portion of the transmission. In addition, the inability to achieve complete or full interaction between students and teacher could result in a feeling of isolation among the students. This feeling of isolation, according to Mayes (1993), often resulted in high failure or withdrawal rates from the programme. In addition, courses delivered via satellite required substantial amounts of technical support at the receiving site.

In the mid-1980s, the advent of two-way audio and video systems, also known as two-way interactive video (TWIV) systems, revolutionised distance education. Today, TWIV systems are at the forefront of distance-learning technology. The use of two-way interactive video consists of having a teacher (and students) in one classroom linked to students in one or several remote classrooms, designated as receiver sites. A key feature of the two-way interactive video system is the interaction capabilities. The teachers can see and hear everyone at each site and the students in each site can see and hear not only the teachers, but the students in every other site. Interaction can take place at any time. The teachers can receive and answer questions and, at the

same time, obtain feedback from the facial expressions of students, i.e. verbal and non-verbal feedback is possible. This allows for a sharing of ideas and questions that was not possible using previously available distance learning technologies.

Videoconferencing represents this kind of two-way interactive video and audio system. During the course of its development, there were many types or forms of videoconferencing, one of which is 'Desk-top video'. Using Desk-top video both the sending and receiving sites have video and audio transmission capabilities (Billings, Frazier, Lausch, & McCarty, 1989). Desk-top video was an early development in videoconferencing and involves insertion of a video card in a computer which has a small camera on top. Signals are transmitted from the computer through telephone lines. The use of Desk-top video, however, is limited to conferences and training sessions, as the transmission quality and the range of view of the camera are limited (Billings, 1996). The most recent generation of videoconferencing equipment is the Set-top system, Rollabout system and Room system linked by ISDN (Integrated Service Digital Network) or the Internet. This gives an equal two way video and interaction between the sending and the remote sites. The cost of videoconferencing decreased substantially, owing to the development of low-cost equipment and a reduction in the cost of telecommunication (Mielonen, Ohinmaa, Moring, & Isohanni, 1998). At the same time, the quality of both the sound and the picture improved. Both of these developments have led to more frequent use of two-way videoconferencing, and this use is expanding with time (Rhodes, 2001).

3.3 APPLICATION OF VIDEOCONFRENCING IN EDUCATION

Application of videoconferencing in education encompasses a wide range, from single subject to entire programme; from degree programmes to continuing education courses; from undergraduate programmes to post graduate programmes; from student education to patient education; and from lectures to seminars and tutorials.

MacIntosh (2001) reported the use of videoconferencing in entire curricula. In MacIntosh's report, learning experiences of RN students who took an entire programme for a baccalaureate degree via interactive videoconference were explored. Fetzer (2000) studied the use of videoconferencing in a 2-credit nursing research course offered in a National League for Nurses (NLN) accredited baccalaureate programme. DeBourgh (2003) described a nursing course which was a part of a Masters Degree in Leadership Skills and in which videoconferencing was used.

As the primary value of using audio and video technology to connect teachers and students is that learning opportunities can be made accessible to students who live at a distance from the teachers' base, videoconferencing is particularly suitable for part-time students who may have a job and have to study in the evenings and may live far away from the School or University, whether in urban or rural communities. As a result, videoconferencing is widely used in continuing education (Allen, Sargeant, Mann, Fleming, & Premi, 2003; Eaton, Francis, Odell, Reynolds & Mason, 2001; Himpens, 2003a). Eaton and his colleagues' study (2001) is an example. In their report, the most common reasons given for non-attendance at continuing education opportunities were distance from the postgraduate centre and domestic commitments, problems which could be overcome by the use of videoconferencing accompanied by provision of distance learning materials and programmes. Meanwhile, Himpens

(2003a) reported a continuing medical education programme offered by distance learning in which the doctors in different locations at the Katholieke Universiteit Leuven in Belgium took a weekly teaching and learning session using multipoint videoconferencing. The activities included in each session were presentations, interactive questions and answers and multi-site panel discussions.

As videoconferencing can connect two or more sites which are distant from each other, it has also been applied in communication between people with different cultural and other backgrounds. Tiwari, Chan and Loh (2003) reported the use of videoconferencing to link the Department of Nursing Studies at the University of Hong Kong and the School of Nursing at the University of Pennsylvania. The topic of the seminars mediated by videoconferencing between the two schools was the development of advanced nursing practice. Because advanced nursing practice was at an early stage of development in Hong Kong at that time, there was a lack of local expertise to provide mentorship to the students. The use of videoconferencing provided an opportunity for students to engage in interactive dialogue with the U.S. nursing experts who had been practising advanced nursing, and to do so without travelling from Hong Kong to the U.S. Videoconferencing in a study reported by Waddell, Tronsgard, Smith and Smith (1999) was used to enable participants to examine women's healthcare issues in the UK and the United States through interactive communication between teachers and students from both countries. Using a case study approach for discussion and dissemination of information, participants from these two countries which were geographically far distant from each other were able to learn about and compare the healthcare systems in their two countries.

No literature was found which illustrated the use of videoconferencing in a nursing student exchange programme. The application of videoconferencing in the present student exchange programme enabled, in an innovative way, interactive connection between the students who were at a considerable distance from each other geographically and, in so doing, also enabled communication between individuals with different cultural and other backgrounds. The choice of videoconferencing as the teaching medium for the student exchange programme was in tune with the University's recommendation- "to actively promote and increase the use of multi-media technology in programme delivery" in order to promote fulfilment of Strategic Objective One (The Hong Kong Polytechnic University, 2001, P.10).

3.4 ADVANTAGES AND DISADVANTAGES OF VIDEOCONFERENCING

The advantages and disadvantages of two-way videoconferencing have been indicated in various reports, several of which have been included in this review. Some compared experiences with videoconferencing, *vis a vis* other distance education technologies, such as web-based education or one-way audio-conferencing. Advantages and/or disadvantages of videoconferencing were also compared in relation to differences between the traditional face-to-face lecture and the videoconference mediated lecture. However, reports or studies related to two-way videoconferencing and its application in nursing education were relatively few.

3.4.1 Advantages of videoconferencing

Videoconferencing can provide educational programmes for large and diverse urban and rural populations. A programme delivered by videoconference would theoretically have no limitation in the number of participants because the videoconference can be connected to two or more sites. There is also potentially no limitation in the location of the students as the videoconference technology is capable of connecting students anywhere in the world, provided the appropriate communication link exists (Eaton et al. 2001).

Use of videoconferencing can reduce travel time and expense for participants (Himpens, 2003b). For a large group of students to travel long distances to take a course is, in most cases, impossible. It is equally difficult, if not impossible, for a teacher to travel regularly a long distance to another place or country to give a series of lectures or conduct a course or courses as part of a semester programme. Videoconferencing makes it possible for students to remain in their home campus but 'attend' the course delivered by a teacher in a distant campus. Comparing the cost of travelling and accommodation with the expense of videoconferencing, Himpens considered that videoconferencing is the more economic option.

The use of videoconferencing can also make possible the provision of specialised courses which, because the number of students taking the course in any one educational institution would be small, would not be economically feasible. By enabling the bringing together of interested students from several sites, videoconferencing helps make provision feasible. A further advantage of videoconferencing is in situations where there is a lack of local expertise. For example, as noted above, Tiwari and her colleagues (2003) illustrated this particular advantage

in the report of their study about sharing of expertise related to advanced nursing practice.

Videoconferencing also provides a means for communicating and holding meetings between Faculty and/or administrators in different locations, without the need to have large numbers of people travelling. Such dialogue between schools is important, especially between schools which have an existing partnership. Collaborations and partnerships amongst educational institutions are another longer-term benefit of the use of videoconferencing (Waddell et al. 1999). Separated by distance, these relationships may never have developed, and will take time to grow. However, special events and research seminars, along with jointly-delivered courses, are all beginning to happen more and more, using the medium of videoconferencing. Videoconferencing provides an opportunity for nurses and nursing students in one place or setting to access educational experiences being offered in a different site or setting – experiences which would otherwise be inaccessible to them. The use of videoconferencing also has the potential to contribute in a positive way to the internationalisation of the nursing profession (Watkins, 2002).

Visual communication is another advantage of videoconferencing (Mason & Page, 1994). One important aspect of visual communication lies in the creation of a social presence, rather than an actual physical presence, and a comfortable environment for learning. For many students, this satisfactory level of comfort is only possible if there is this visual contact with the teacher. However, the teacher must enhance this contact by addressing the camera directly, by reducing distracting gestures and body movements and by acting in a natural and relaxed manner. If students can then exploit

the visual aspect of lecturing, through their teacher's social presence, voice and manner, then both teachers and students are able to adapt to videoconferencing and thus contribute to the eventual success of the medium as a positive learning environment.

In summary, videoconferencing offers the advantages of two-way audio-video interaction. It allows teachers and students to see and talk to each other in real time, minimising the impersonality and potential for misinterpretation inherent in other forms of distance education, such as two way audio and one way video. Both teacher and students can raise questions so that the person in the other location can clarify and explain what they have said. Students themselves can interact with each other across sites in a natural and spontaneous way. This real time visual interaction provides a high level of psycho-social support to many students (Badenhorst & Axmann, 2002).

3.4.2 Disadvantages of videoconferencing

No consensus was found in the literature in relation to the time required for lecture preparation for videoconferencing. Some teachers thought that more time was required to plan a session and to prepare visual material compared to the preparation time required for a face-to-face lecture (Himpens, 2003c; Hobsley, McCloy, Jameson, Buckton, & O'Hanlon, 1997). However, Odell, Francis, Eaton, Reynolds, and Mason (2001) reported that in almost all cases preparation time for a videoconference session was similar to or little more than for a face-to-face lecture. This extra time ranged from 10 minutes to one hour for most teachers (Odell et al. 2001). Some teachers reported that using the medium demanded much higher energy levels than did face-to-

face lecturing and some mentioned that the lecture mediated by videoconferencing increased their workload, although it was not exactly clear why this was the case (Billings et al. 1994; Fetzer, 2000). Fetzer (2000) mentioned a number of limitations of her research and cautioned that her results could not be generalised beyond the group of nursing students (N=114) and the nursing instructor in the pilot study she reported.

When conducting the lecture mediated by videoconferencing, the teacher must concentrate simultaneously on the content, the visual material and the students at one or more remote sites. Odell et al. (2001) reported that this can lead to higher levels of stress during the session and a feeling of exhaustion afterwards. In addition, the restriction on physical movement during the session led to feelings of discomfort and inflexibility for some teachers.

Students found the medium more intense than face-to-face lectures (Mason & Page, 1994). The slight blurring of motion and the lack of complete lip and sound synchronisation due to compression and slow transmission speeds demanded more attention. The delay in sound transmission could result in students' questions being received after the teacher had begun talking again, especially if the teacher did not wait long enough for the students to raise questions. Some students found that one hour was too long for a videoconferencing session and that frequent pauses or changes of pace were necessary to maintain their concentration. Some student felt bored because the teacher was not physically present.

The lack of interactivity in many videoconferencing sessions was a cause of some concern. This might be because students were inhibited by their remoteness from the teacher, intimidated by the video equipment, or were unaccustomed to the medium and therefore did not exploit its potential for interaction. The lack of human contact was felt to be a significant negative factor and most teachers missed the opportunity for personal interaction (Odell et al. 2001). There remained a sense of distance from the student and it was therefore hard to respond to their mood (Himpens, 2003c; Odell et al. 2001).

The stricter timing required in providing distance education via videoconferencing was regarded as a disadvantage (Himpens, 2003c), particularly by many students who did not have regularly available free time for learning.

In summary, the dynamics of education were dramatically changed when mediated by videoconferencing. According to Himpens (2003d), the change was mainly due to the effect of inter-communication delay, lack of eye contact between students and teachers and body language.

3.5 THE EQUIPMENT FOR DIFFERENT TYPES OF VIDEOCONFERENCING

In the application of videoconferencing, the equipment is essential. In this section, only an overview of videoconferencing equipment can be given as the researcher is not a technical expert in videoconferencing equipment. However, as a nurse teacher she, together with many other teachers, utilises videoconferencing; hence this

overview of different types of equipment followed by the application in education of each type was considered relevant for inclusion in this thesis.

Two-way video and audio videoconferencing require certain basic equipment in order to transmit the sound and picture between two or more sites. With the development of technology, more and more advanced equipment is being employed. However, both advanced and less advanced equipment have value. Users should choose appropriate equipment for their particular purpose.

3.5.1 The basic equipment for videoconferencing

A basic digital videoconferencing system consists of “a video camera, a CODEC (compression-decompression unit), a TV monitor and an audio unit. Usually these are combined into one cabinet. The video CODEC and audio unit convert the analogue video and audio signals from the video camera into a digital format. These digital data must also be compressed so that they can be sent through a digital communications link” (Mason & Page, 1994, P.74).

The compressed data was delivered through a coaxial cable, microwave, or fibre-optic line in the early stages (Gooler & Roth, 1990) and currently, via ISDN or Internet Protocol (IP) (Mason & Page, 1994). Higher video quality generally requires higher bandwidth. The greater the available bandwidth, the better the picture and sound quality. ISDN is ideal for videoconferencing (Rhodes, 2001). It is relatively inexpensive, reliable and widely available. Most importantly, it provides the quality of service for technically demanding videoconferencing communications.

The physical environment is also considered as 'equipment' for videoconferencing. An appropriate room should be chosen and should be suitable for the number of students and intended teaching approach. For example, lecture-style seating does not encourage informal interaction; a room which can accommodate a large number of students is not suitable for a small group. The space required between screen and seat, the location of graphics/copy-stand camera, whiteboard and fax machines, and lighting levels in the room should also be considered in the choice of physical environment.

3.5.2 Type of videoconferencing and its equipment

The two-way audio and video conferencing systems currently can be divided into four general categories: Desktop, Set-top, Rollabout, and Room Systems (Rhodes, 2001). An overview of these four basic types of videoconferencing systems is addressed here, followed by an overview of the technical considerations involved in their deployment.

3.5.2.1 Desktop system

The desktop videoconferencing system is mainly suitable for individual PC users and for teaching very small groups. It is used when the person wishes to add simple 'picture phone' capabilities to their personal computer and when users wish to employ document conferencing, application sharing, and interactive computing in addition to simple face-to-face communication (Rhodes, 2001).

Most desktop systems consist of a personal computer with a small camera on top (Mason & Page, 1994). The most basic desktop systems use the personal computer's microprocessor and graphics card to handle the capture and compression of audio and video by running software of CODEC. The manufacturers provide kits for upgrading personal computers into ISDN and IP-based desktop videoconferencing systems. A speed of 128 kbps ISDN is needed.

The desktop system is simple to use, relatively inexpensive and many systems enable the integration of computer applications and broadcast video into videoconferencing. However, it is only suitable for use by two to three people at a time, per unit. The picture and sound quality of the desktop system is also limited. The frequency of training and support increases because the desktop systems tend to have many single-user units for each of which training and support is required.

The equipment used in Mattheos, Nattestad and Attstrom's study (2003) was the desk-top system. They used low-bandwidth videoconferencing to conduct an examination of undergraduate students. A web camera, two loudspeakers and two microphones were employed. The software, i.e. Netmeeting 3.1, was run on a laptop computer placed in the room. The students could see the main assessor through his Web camera, the video from which was screened by an LCD projector.

3.5.2.2 Set-top system

The set-top system units integrate camera, microphone, speakers, CODEC, network interface and other components into a single box which is placed on top of a TV set or

monitor (Rhodes, 2001). This system is usually used for small groups (two to six people) and routine meetings in which the participants already know each other.

The basic requirements of this system consist of a single camera, simple audio and 128 kbps ISDN connection. To ensure that the set-top system operates at sufficiently high transmission rates and provides an upgrade path to higher speeds, a unit that provides both ISDN (H.320) and IP (H.323) capabilities should be selected. The low speed 128 kbps videoconferencing over ISDN lines is economical, but the picture quality is suitable only for the simplest of conferencing applications, generally between people who already have a working relationship. A single, built-in pan-tilt camera that can cover two to six people seated at a table located in front of the TV/monitor is used in the unit. A suitable audio system and a reasonably quiet room are necessary.

Set-top systems are economical, simple to set up, easy to use and powerful enough for most small group conferences. Some set-top systems include advanced features such as built-in Web servers to enhance presentation capabilities and remote systems management. However, set-top systems have very limited capabilities for future upgrades and expansion (Rhodes, 2001).

Waddell et al (1999) described a set-top videoconferencing application in a project which aimed to examine women's health care issues in the UK and the United States. Using a case study approach for discussion and dissemination of information, students compared healthcare systems. Eighteen students, nine from each country, participated in the course. The workstation used in this project included 166 MHZ computers with

24 MRAM and a 2-gigabyte hard drive. The software and associated hardware included a digital camera, a telephone handset and a video card for the computer. The software was delivered by ISDN telephone lines but the number of lines used was not mentioned.

3.5.2.3 Rollabout system

The Rollabout system usually consists of a variety of audio, video, telecommunications and control systems electronics mounted on a wheeled cabinet, topped by one or two monitors, and crowned with a pan/tilt camera (Mason & Page, 1994). The use ranges from workgroups to boardrooms, and from distance learning to telemedicine.

Rollabout systems come in various sizes and speeds, from basic single 21-inch monitor units designed to operate at 128 kbps, to dual 40-inch plasma display systems that work at speeds of up to 1.5 Mbps and higher. Most Rollabout systems are based either on Wintel PC platforms or on proprietary software/hardware platforms (non-PC system) developed specifically for videoconferencing use. A non-PC system may provide a more reliable computing environment because the user would not have to learn how to use Microsoft's OS system.

Rollabout systems are relatively simple to install and use. They are easy to expand and modify to fit changing requirements. Audio, graphics and camera subsystems can be selected according to users' needs to produce the best results for specific applications and environments. However, the prices of Rollabout systems are higher

than many comparable set-top systems and they are more difficult to set up and move between locations.

Mielonen and his colleagues (1998) reported an application of the rollabout system in a telepsychiatry service. This service provided psychiatric diagnosis, counselling, treatment and follow up. The equipment used in this telepsychiatry included ISDN lines, the video-codec, a controllable camera and audio unit, a control unit, a microphone, a monitor and a device to prevent echo. A second camera could be connected if the conference members considered it desirable to have an overview of the room or a close-up of the doctor, the patient, a part of the patient's body or a document. A videoconferencing (Videra, VCS H. 320) connected by one to three ISDN lines was used.

3.5.2.4 Room system

A room system is the best design to meet specific conferencing requirements such as large numbers of students or conference participants in the room. The 'virtual' or 'candid' classroom most closely approximates a face-to-face lecture or training session, except that some of the students are not physically present. It is an information presentation given by a teacher who is talking directly to the camera, with or without illustrations and with the possibility for interaction with the students or other participants throughout.

Like other systems, a room system consists of a video camera, a CODEC, a TV monitor and an audio unit. These usually are combined into one cabinet. The video

CODEC and audio unit convert the analogue video and audio signals from the video camera into a digital format. These digital data must also be compressed so that they can be sent through a digital communication. A wide range of options for communication links, including an H.323 Gateway, Multipoint Control Units (MCUs), video routers, and a variety of network communications cards, are used to facilitate connection through LANs (Local Area Networks) and ISDN lines.

The cost of implementation and support of custom designed room systems have been the major limiting factors in their use. The example of a room system is the videoconferencing used in the student exchange programme in which a large group of students (each class consisted of more than forty students) attended the lectures held concurrently between the two places, Hong Kong and Shanghai. The details of its implementation are presented in chapter 5.

3.6 THE EFFECTIVENESS OF LEARNING WITH VIDEOCONFERENCING

With the increased application of videoconferencing in education, the effectiveness of videoconferencing has received more attention and has been examined extensively. This examination has focused on presentation of teaching material, quality of sound and image, students' performance in the course of learning, achievement of learning objectives, learning outcomes, the degree of satisfaction with videoconferencing, and experience of and feelings about videoconferencing mediated learning activities. This section addresses these issues and presents the information under three sub-headings: presentation of teaching material, technical issues and educational value.

3.6.1 Presentation of teaching material

A teacher presents teaching material in a lecture not only through his/her voice and body language, but by the use of teaching aids, e.g. slide, Power Point or video clip. The quality of presentation of these materials influences students' acceptance of information. Classroom participants in a videoconferencing learning environment are known to pay attention to the effectiveness or otherwise of the presentation of the teaching material.

It is generally agreed that teaching material which is suitable for presentation in the face-to-face classroom setting can also be used in the classroom with videoconferencing. The equipment used for videoconferencing must be such that material can be presented effectively (Fetzer, 2000). If the group of students in the remote site is large and a large classroom is used, a large screen is needed, and the size of the font for text and the size of the graphics should be large enough to be read with ease. The lighting in the classroom should be adjusted to be appropriate. Poor selection of teaching material or poor equipment set-up will result in poor visibility at the viewing sites (Odell et al. 2001). Faults which occur in the presentation of teaching material tend to be more common when the teachers are novices in the use of videoconferencing, for example a teacher in the presenting site may move around or walk across the camera field. This causes 'frame freezing and jittery images' (Vincent, Berg, Hudson, & Chitpatima, 2003). Vincent and colleagues (2003) considered that videoconferencing is best suited for small group teaching.

Evaluation of the presentation of teaching material in the lecture conducted with videoconferencing is seldom reported in the literature. Eaton and his colleagues (2001) conducted a formal evaluation of the videoconference presentation of teaching material using the lecture format. A questionnaire was designed which included four structured questions related to presentational style using videoconferencing. Participating students were asked to judge whether the teaching material was appropriate for delivery by videoconferencing and to rate the teacher as a presenter using this medium. These questions were rather superficial as a method for evaluating presentation style using videoconferencing. Therefore, modification and further development of questions is necessary for future evaluations of the presentation of teaching material in videoconferencing.

3.6.2 Technical issues

Compared with other distance teaching technologies, e.g. two-way audio or one-way video and two-way audio, two-way audio and video conferencing has fewer technical problems in its application in education. Some users reported having positive experiences with the technical issues of videoconferencing (DeBourgh, 2003; Mattheos et al. 2003). In these two reports, there were no direct complaints regarding the technology from the students or the teachers. The equipment and connection were considered to be reliable and stable.

However, some reports showed that technical problems were sometimes present in the application of videoconferencing for education. Most comments from teachers related to their lack of ability to move freely and to the less direct contact with the student,

particularly the lack of eye contact (Himpens, 2003d; Mattheos et al. 2003). Such limitations arising from the use of technology are difficult to prevent even when advanced equipment is used. These reported technological limitations of videoconferencing give a sense of difference between the face-to-face lecture and the videoconferencing mediated lecture (Shaeffer & Farr, 1993; Shomaker, 1993). However, MacIntosh (2001) considered that the teaching and learning experience could be enhanced when the teacher was well prepared, encouraged interaction with students in both sites and had received training in the use of videoconferencing before using that medium.

Some technical problems are caused by the unexpected interruption of transmission, use of inappropriate equipment and incorrect use of equipment. The four most common technical problems found in the application of videoconferencing were identified in the reports or research papers in the literature and are described below.

Firstly, there is the difficulty in asking and answering questions during the lecture, although, in MacIntosh's research (2001) the teachers were happy with their ability to communicate with students. The causes for the problem were the quality of the sound system and the presence of some sound delay. The solution may be that, after asking the question, the teacher or student should pause to wait for a response from the other site. This wait may be difficult for teacher and student and could influence both the physical environment and the atmosphere of the class. Use of high level bandwidth, i.e. 384 kbit/s or higher, was recommended to improve the quality of sound and speed of transmission (Mielonen et al. 1998).

Secondly, in some cases (Allen et al. 2003) the camera angle and seating arrangement can prevent all students in the classroom from being visible to the teacher. The teacher thus could be unaware that a particular student wanted to speak and/or ask a question. It is noted, if the teacher and students can see each other simultaneously, this makes teaching easier. To solve this problem, the camera at a receiving site should be focused on the whole group of students so that the teacher(s) can distinguish who, at the remote site, is speaking. A second camera is required at the back of the classroom so that the students can see their teacher's face when she/he conducts the lecture. A technician should always be available at the presenting site to function as the camera operator, so as to ensure that the students can see their teacher when she/he moves about in the classroom (Mielonen et al. 1998). To adjust the angle and focus of the camera and to switch the picture is important to ensure comfortable visibility for all involved. A document camera, e.g. which focused on a teacher's PowerPoint presentation, is useful in a videoconferencing lecture (Mielonen et al. 1998).

Thirdly, in a study by Eaton et al. (2001), poor quality of sound and image occurred on some occasions in a series of lectures being given to dental students. The main reasons for the poor quality were network congestion and bandwidth allocation for the videoconferencing equipment which was being used. The use of appropriate equipment and a higher level bandwidth could, to an extent, overcome this problem although it would not solve the network congestion. Vincent et al. (2003) reported on an international medical education programme conducted between Honolulu and Bangkok and pointed out that video quality with ISDN at 384 kbit/s was better than that achieved using internet2 at 768 kbit/s. Using internet2 as opposed to ISDN may

cause lower quality due to network congestion and bandwidth level. Eaton and colleagues' report (2001) also pointed out that sound quality was better where receiving centres used lecture theatre sound systems.

Fourthly, in some cases, technical problems led to classes starting late, due to the initiating site having difficulty in connecting with one or more other sites (Allen et al. 2003; Mattheos et al. 2003). Adequate and reliable equipment in all sites is essential to achieve effective connection (MacIntosh, 2001). Sometimes, the problem may be due to the commercial line connection, e.g. too many users at one time causing network congestion. Once the connection was under way, medical students in Allen and colleagues' study (2003) stated that they were 'fairly well satisfied' with the videoconferencing technology, except when the commercial line had 'traffic jams'. Lower satisfaction levels among students at remote sites have often been accompanied by problems with the audiovisual connections (Mattheos et al. 2003).

3.6.3 Educational value

The educational value of videoconferencing as discussed here relates to students' performance in learning and to learning outcomes. This section presents information from the review of literature regarding the influence of videoconferencing on classroom question and answer sessions, interaction between teacher and students and between students and students, achievement of learning objectives, the course completion rate and learning outcomes.

It is important to prepare students before they encounter teaching in a class mediated by videoconferencing. Students will feel comfortable if they can follow what the teacher is saying in the classroom, although how the teacher presents the teaching material also affects students' perception of the medium. Regarding the acceptance of videoconferencing, Himpens' study (2003d) found that most students thought videoconferencing easier to follow than face-to-face seminars because the lectures had been well structured and well prepared. The teachers in Himpens' study (2003d) had been trained in the use of the technology and had rehearsed their presentations.

Question and answer sessions are an important element in the teaching and learning process. The teacher should make an effort to encourage students to ask questions in the classroom. However, some students found it difficult to ask questions in a lecture mediated by videoconferencing. They did not know when to interrupt to ask questions, partly because they could not always see others who might be preparing to ask questions (MacIntosh, 2001). It is recommended that teachers should be aware of this difficulty when encouraging students to ask questions in the lecture mediated by videoconferencing (Offir & Lev, 2000). Mute microphones or wireless microphones should be provided to facilitate the asking and answering of questions (Allen et al. 2003).

Interaction in the lecture is a dominant and important factor in teaching and learning. It is a key process for the student in adapting the lecture content to his or her level and ability (Offir & Lev, 2000). These authors divided interaction in teaching and learning into two categories. These are non-direct, i.e. social and procedural interactions which provide and support an encouraging environment for learning, and direct content-

related interactions which encourage explanatory, expository and cognitive interactions. Interactions that support learning do not necessarily deal with the subject matter, nor with the content. The purpose of the social interaction is to create a personal connection between the teacher and the student and a relaxed environment, emotional support and encouragement for the student. Both functions of interaction are important and necessary in students' learning. Appropriate and sufficient interaction can lead the student to take an active part in the learning process and feel encouraged to make decisions and analyse the knowledge being transferred. In teaching and learning with the use of videoconferencing, the teacher is physically separate from the remote students, so that the 'social presence' of the teacher plays an important role. However, it is more difficult for the teacher to maintain social contact with the students in that environment so the teacher must pay particular attention to achieving this 'social presence' during the lesson.

From the descriptions, case studies and research reports found in the literature, results in relation to interaction in the learning environment mediated by videoconferencing were contradictory. In Himpens' study (2003c), sixty percent of the participants rated the interactivity as good or very good. No differences were noted between the sites or over the three years of the project. However, Loewen, Seshia, Askin, Cronin, & Roberts' survey (2003) revealed significant differences between videoconferencing groups and face-to-face groups on a scale item of 'felt comfortable interacting with the presenter'. Students in the face-to-face group recorded a significantly higher level of agreement with that statement than did the videoconference group. In a study by Lewis, Bredfeldt, Strode and D'Arezzo (1998) a comparison was made between learning in a videoconference group and in a group which experienced face-to-face

teaching. In the videoconference group, the interaction in the classroom between teacher and students was more poorly rated than it was by students who were in the face-to-face classroom and students in the remote sites asked fewer questions than those in the face-to-face classroom. Because the students in the remote sites felt rather inhibited in asking questions they found learning via videoconferencing to be a little boring.

The course completion rate of students is one indicator from which to infer students' views of the value of videoconferencing for learning. Kabat and Friedel (1990) conducted a study to examine the completion rate of students in a two-way interactive distance learning course using videoconferencing. They found that these students had lower withdrawal rates than previous students on similar courses delivered by face-to-face teaching. These authors did not discuss any reasons for this result, but it may have been because the students were able to study the course without having to travel and also that they were satisfied with their experience of videoconferencing as the teaching medium.

The effectiveness of videoconferencing for education is indicated by findings that students feel they gain information very well from the teacher and that they can achieve the objectives of the lecture. Some research has studied students' knowledge gain in a videoconferencing environment. Kabat and Friedel (1990) found that students in a course mediated by videoconferencing felt they were learning as much as they would in a face-to-face classroom. Himpen's study (2003d) found that videoconferencing was seen by students as a tool which facilitated the transmission, understanding, memorisation and application of information. Similar positive results

have been reported by Darkwa (2000), Liman and Miller (2000) and Tamai, Nakagawa, Yokomori and Nishiyama (2000). Another research report (Wallin, 1990) showed that students who attended classes with videoconferencing performed as well as or better than their peers in the face-to-face classroom. However, these evaluations are based mainly on students' self-evaluation and self-report and these are naturally subjective in nature.

Loewen et al. (2003) compared face-to-face and videoconferencing delivery of an education programme on the subject of learning neonatal stabilisation skills. A pre-test/post-test control group design was used to compare knowledge acquisition between the two groups. There were no statistically significant differences between the two groups of students for knowledge acquisition. Both groups showed significant gains in knowledge when pre-test and post-test scores were compared. The data used in that study were more objective because the study examined the learning outcomes of students by comparing the assessment scores. Similar results were obtained from studies in which the learning outcomes were compared between students who attended a videoconferencing course and those who attended an on-campus course (Hobbs, Moshinskie, Roden, & Jarvis, 1998; Kabat & Friedel, 1990; Lewis et al. 1998; Lyon et al. 1992; Mattheos et al. 2003).

From the above, it can be concluded that the students who were learning in the videoconferencing classroom could achieve the learning objectives as well as those students who were learning in the face-to-face classroom. This conclusion was supported by the results from a qualitative study (Tiwari et al. 2003) in which students reported that they felt they achieved most of the learning objectives. One objective in

this study that was unfulfilled by the students was recognised by their teachers as an unrealistic expectation.

CONCLUSION

Videoconferencing is increasingly implemented in education. Firstly, it meets the need for education which is accessible to students even though they live at a distance from the university, school or teachers. Secondly, the equipment for videoconferencing and the technology have developed rapidly over recent years. However, as different types of equipment and of technology exist, it is important to select the appropriate equipment and technology for the specific purpose for which it will be used. The technology of the communication linking has some limitations, and problems can occur if skilled technical support is not available before and during videoconferencing sessions. It is generally agreed that, using videoconferencing as a teaching medium, students can achieve their learning objectives. However, the key issues in achieving success in videoconferencing relate to thorough preparation of teachers before using this medium, selection of appropriate equipment, bandwidth and network and provision of expert technical support. It is also important to achieving success using videoconferencing to prepare students prior to their first experience of being taught and learning using this medium.

CHAPTER FOUR

RESREACH DESIGN AND METHODS

INTRODUCTION

This chapter briefly reintroduces the research design of programme evaluation which has been discussed in the literature review in chapter 2. Triangulation, the research method employed in the evaluation of the programme is defined, discussed and its application illustrated. The intervention, i.e. the student exchange programme and the research sample are described and this is followed by a description and discussion of the research instruments and approaches to data management. The chapter concludes with a report of the pilot study.

4.1 EVALUATIVE RESEARCH DESIGN

Programme evaluation is a well-defined field with clear definitions and standards which guide the design and process of an evaluation. The present nursing student exchange programme was primarily an educational programme in that two credit-bearing subjects were taught and assessed and clinical visits to health care settings were included. However, in relation to some elements, for example the social and cultural activities, the programme could also be described as a social intervention programme because the aim was to contribute to the accomplishment of the first strategic objective of the University in Hong Kong, which objective emphasises the enhancement of students' all-round development.

Evaluation research focuses on the activities within and the outcomes of programmes (Sarantakos, 2005) and examines the quality, effectiveness and efficiency of programmes. The present research focuses on a comprehensive evaluation of the quality and effectiveness of the teaching, learning and other activities which were part of the programme and on the variety of the outcomes that the students gained from participating in the programme. A summative programme evaluation (see 2.4.1.1) was therefore adopted as the appropriate research design.

4.2 TRIANGULATION

Triangulation is the main method adopted in this evaluation research. In this section, the definition of triangulation, the reasons for using triangulation, the types of triangulation, and the merits and limitations of triangulation are presented and their use in the present research noted.

4.2.1 Definition of triangulation

Triangulation, in Denzin's seminal work (1989), is defined as "the use of multiple methods in the study of the same object" (P. 236). It involves "varieties of data, investigators, and theories, as well as methodologies" (Denzin, 1989, P. 237). Since then, many researchers have defined triangulation. Almost two decades later, Sarantakos (2005) defined triangulation as "the practice of employing several research tools within the same research design" (P. 145). The triangulation metaphor derives from navigation and military strategies which use multiple reference points to locate

an object's exact position (Mitchell, 1986). Triangulation is a technical term used in surveying and navigation to describe a technique whereby two known or visible points are used to plot the location of the third object. In a similar way, researchers focusing on a particular phenomenon can use a number of different data sources to improve the reliability and validity of their results.

4.2.2 Reasons for the use of triangulation

There are three main reasons why researchers use triangulation. Firstly, the researcher should be able to address questions of measurement adequacy by providing the information needed to measure variables and test hypotheses. Brewer and Hunter (1989) pointed out that if there are several variables to be measured or hypotheses to be tested, multiple methods should be used to seek answers to the research questions. The objectives of the present programme were to explore the students' learning experiences which were multi-dimensional and took place in different contexts, hence the reason to use triangulation to assess achievement of these objectives.

Secondly, because there are two distinct approaches in research, i.e. quantitative and qualitative, each of which has its own strengths and weaknesses, a combination of the two can serve to maximise the former and minimise the latter (Bryman, 1992; Polit & Beck, 2006). The aim of both approaches is to contribute to knowledge about a particular subject or area but the way in which that knowledge is reached is different. The quantitative approach is favoured by those who support the view that information should be obtained in a systematic, objective and measurable way. This information, usually in numerical form, is then analysed, and a conclusion reached. The qualitative

approach was defined by Leininger (1985) in her seminal text as endeavouring “to document and interpret as fully as possible the totality of whatever is being studied” (P. 33). Polit and Beck (2006) viewed the qualitative approach as “the investigation of phenomena, typically in an in-depth and holistic fashion, through the collection of rich narrative materials” (P. 508). Qualitative researchers are interested in the in-depth study of human beings and their experiences, in order to try to understand the nature of these experiences and the effect they have on individuals.

The present research requires methods and approaches which will enable the researcher to describe and conceptualise the multifaceted complexity of the students’ response to the exchange programme, e.g. the students’ perceptions of their learning environment, the benefits, if any, gained from participating in the exchange programme, and the effectiveness of videoconferencing as a teaching medium. Therefore, both quantitative and qualitative approaches were considered appropriate.

Thirdly, Denzin (1989) considered that the researcher should examine a problem from as many methodological perspectives as feasible. The inherent weakness of using a single measurement instrument can then be overcome. This consideration was supported by Sarantakos (2005). She pointed out that triangulation can enhance the knowledge in which the researcher is interested by providing rich data. Data gathered by multiple means can be combined to form a fuller and more accurate picture of the population or phenomena being studied.

In the present research, five instruments were used to obtain multiple viewpoints and thus as comprehensive an evaluation as possible of the student exchange programme.

Fourthly, the purpose of using triangulation was to achieve confirmation and completeness of the data (Knafl & Breitmayer, 1991; Tobin & Begley, 2004). The use of multiple measures to converge on the reality of the phenomenon serves the purpose of confirmation (Breitmayer Ayres, & Knafl, 1993). Completeness refers to using multiple sources of data to provide breadth and depth to an investigation, offering researchers a more accurate picture of the phenomenon (Denzin & Lincoln, 1994).

The purpose of using several different instruments was to seek confirmation and completeness in the present research. The credibility of the conclusions of the present research about the students' perceptions of the learning environment in the programme and of the effectiveness of videoconferencing would be strengthened if the data obtained from the structured questionnaires and from the semi-structured interviews are mutually confirming. By employing triangulation a more complete understanding of the broad area of students' experiences related to the present programme could be achieved by revealing varied aspects of their experience and providing explanatory insights into relationships between these various aspects.

4.2.3 Types of triangulation

Denzin (1989) and Polit and Beck (2004, 2006) divided triangulation into four basic types: data triangulation, investigator triangulation, theory triangulation and methodological triangulation. Of these four types, data triangulation has three subtypes: time, space and person triangulation. Methodological triangulation includes within-method triangulation and between-method triangulation.

4.2.3.1 Data triangulation

Data triangulation refers to the use of multiple data sources with similar foci to obtain diverse views about a topic for the purpose of validation (Holloway & Wheeler, 2002; Redfern & Norman, 1994). It provides the opportunity to test how an event is experienced by different groups at different points in time. When using the strategy of data source triangulation, the researcher attempts to maximise the range of data that might contribute to a more complete understanding of the topic being investigated. As noted above, Denzin (1989) and Polit and Beck (2004, 2006) described three types of data triangulation: time, space, and person triangulation.

Time triangulation represents data collection on the same phenomenon at different points in time. Times of day, day of week or month of year are examples of times at which researchers might collect data for triangulation. Studies based on longitudinal designs are not considered examples of time triangulation (Kimchi, Polivka, & Stevenson, 1991). The objective of a longitudinal study is to document changes over time, whereas the purpose of time triangulation is to assess the stability of perceptions of the same phenomenon across points in time. Hyrkas, Paunonen, and Laippala, (2000) provided an example to explain time triangulation. In a study about patient satisfaction, data were collected from patients at four different times with intervals of six months. All of the sources of data had a similar focus which related to ‘quality of hospital care – patient’s viewpoint’. The purpose of using different times for data collection was to discover whether there were common perceptions regarding

patients' satisfaction with care in hospital at any given time rather than to compare and contrast the perceptions at different times.

With the possible exception of the students' reflective journals, the main focus of the evaluation of the programme was on completion rather than to collect data at different points of time in the six-week programme. Therefore it was not considered appropriate to use time triangulation in the present research.

Space triangulation involves the collection of data from multiple sites with the object of validating the findings. Data must be analysed for multi-site consistency and to ensure that there is no cross-site variation. An example is the research method used in Egerod's study (2002). In the study of terms regarding sedation used in ICU the data were collected from four ICUs in four different hospitals in Copenhagen, Denmark. The similar findings were obtained across the sites and thus the researcher got the confirmation of the terms of sedation used in ICU settings.

The present programme was conducted concurrently in two sites, i.e. Hong Kong and Shanghai. The intervention in both sites was similar although some variations, e.g. in subject matter taught and type of social activities were included in the programme design. Therefore, all data in the present research were collected from all of the participating students, whether they attended the programme in Hong Kong or in Shanghai. The use of space triangulation enabled the researcher to check there was no significant cross-site variation.

Person triangulation, according to Polit and Beck (2004, p. 431) involves “the collection of data from different levels of person: individual, groups (e.g. dyads, families or groups), and collectives (e.g. organisations, communities, institutions), with the aim of validating data through multiple perspectives on the phenomenon.” An example of the above different levels is Mackenzie’s study (1992) in which both individual and group interviews were conducted with students, all of whom were studying to become district nurses, i.e. individual and group. A further example comes from a more recent study of evaluating cultural competency in medical students. Wachtler and Troein (2003) reviewed the published list of learning objectives for the medical programme, conducted interviews with curriculum directors and individual teachers for each term about course content and carried out focus group interviews with medical students in all stages of the medical programme.

In the present programme, person triangulation was used. For example, the students and teachers all experienced videoconferencing used in the programme as a teaching medium, but from different perspectives as their roles were different during the lectures mediated by videoconferencing. Data were collected from individual interviews with students and teachers regarding the effectiveness of videoconferencing and analysed to examine whether or not the findings supported each other.

4.2.3.2 Investigator triangulation

There is some debate in the literature about the meaning of investigator triangulation and whether it refers to having more than one investigator involved throughout an

entire study, in which case, as Kimchi et al. (1991) pointed out, their areas of expertise must be complementary, or whether it refers to more than one investigator being involved only in data analysis. These two quite different views are shown in the following examples. Sarantakos (2005) considers it refers to combining the expertise of more than one investigator in the same study, whereas Polit and Beck (2004) consider it refers to having two or more researchers involved only in the analysis and interpretation of a data set. Through such collaboration, these authors consider the risk of bias in interpretation of data is reduced. Similarly, Ammenwerth, Iller, & Mansmann (2003) in a report of a case study, described how both a computer scientist and a social scientist analysed and interpreted data from interviews independently, with the aim of ensuring no bias in interpretation. Thorpe and Loo's study (2003) is another example of using investigator triangulation. In a study of nurse managers' professional and personal satisfaction, two researchers, one who had majored in Nursing and the other in Management, analysed and interpreted the data.

In the present student exchange programme, the researcher was the sole investigator. To avoid the potential risk of bias in interpretation of the data, two independent experts were involved in data analysis and interpretation of results. The issue of potential bias in the present research is discussed in section 9.3.

4.2.3.3 Theory triangulation

Theory triangulation incorporates the use of more than one theory in the analysis of the data set (Duffy, 1987). In this procedure, the researcher may use "competing theories" (Polit & Beck, 2004) in analysing and interpreting the set of data. The

results might accept one theory over the other, or merge the theories to form a new, more comprehensive theory. By using theory triangulation, the researcher can also increase confidence in the development of concepts and constructs from the research results. DeMarco (2002) used theory triangulation to demonstrate the complex relationship between the behaviour of nurses in their work context and in their home context. Using scales developed from two different theoretical frameworks, she was able to demonstrate statistically significant differences in the nurses' behaviour in these two contexts and, as a result, provide a deeper and broader understanding of what she termed 'spillover', or the influence of one upon the other.

The present research evaluated the student exchange programme which aimed to contribute to the accomplishment of the University's Strategic Objective One and explore students' learning experiences in the exchange programme rather than to test a theory. Therefore, theory triangulation was not considered as an appropriate method in the present research.

4.2.3.4 Methods triangulation

Methods triangulation is the most common type of triangulation. This involves the use of two or more methods of data collection within one research project (Polit & Beck, 2004). It may be any combination of quantitative and/or qualitative approaches appropriate for obtaining a comprehensive investigation and/or evaluation. The combination of different methods is intended to be complementary, with each method taking a different approach to explicate a phenomenon and discover different aspects.

Multiple methods of data collection can also validate research findings (Holloway & Wheeler, 2002).

There are two types of methods triangulation: within- and between-method, and within- and between-approach. Using within-method/within-approach triangulation, the researcher uses two or more different tools or instruments for data collection, but each tool or instrument is within the same research approach, i.e. quantitative or qualitative. For example, in a qualitative study, the researcher might combine interview with observation or reflective journals. On the other hand, the quantitative researcher might use different scales to measure a single concept, such as the use of a visual analogue scale, a Likert-type scale and/or a semantic differential scale to measure the concept of pain. All of these scales are different in the way they assess the patient's perception of their pain. However, they are all examples of a similar instrument, i.e. a quantitative scale. Within-method/within-approach triangulation is used to test the reliability of the data produced. The research design of Adamsen, Rasmussen, and Pedersen (2001) is an example of using within-approach triangulation. In that study, interviews and participant observation were used to explore how a group intervention programme which was designed for men with cancer affected their sense of well-being and had a positive impact on their ability to cope with the physical, psychological and social consequences of living with cancer. The interview transcripts and the observation notes were the qualitative data sources which confirmed the results, i.e. that the social interaction and physical activity in the programme increased the participants' physical stamina and well-being.

Between-method/between-approach triangulation uses different tools or instruments to assess or measure the same phenomenon. This usually means researchers using qualitative and quantitative approaches together in the one study with the aim of achieving convergent validity and of counterbalancing the weaknesses of one with the strengths of the other. For example, Holtzmann and Timm (2005) used both person triangulation and between-method triangulation to explore the experiences of and the nursing care for women with breast cancer undergoing immediate breast reconstruction. Regarding person triangulation, the researcher collected the data from both patients and nurses. Regarding between-method/between-approach triangulation, interviews, questionnaires and medical records were used to collect the data.

Both between- and within-method and between- and within-approach triangulation were applied in the present research. Quantitative and qualitative approaches were used. Within the quantitative approach, two questionnaires were used to assess different concepts of relevance to the research, i.e. the Course Experience Questionnaire (CEQ) and the Videoconference Participant Questionnaire (VPQ). Within the qualitative approach, interviews with students and teachers and students' reflective journals were used. Both between- and within-method and between-and within-approach triangulation were employed in the present research with the aim of achieving convergent validity and a deep and rich understanding of students' learning experiences in the programme. The collection of data from the students' interviews and from their reflective journals enhanced the reliability of the results.

4.2.4 Merits and limitations of triangulation

A commonly acknowledged merit of triangulation is that the resulting data provide rich and in depth explanations of the phenomena being researched, in this case the students' learning experiences in the present student exchange programme. For example, had the Videoconference Participant Questionnaire been the only data source used to measure the students' experiences of videoconferencing, the extent and depth of the students' feelings and reasons for liking or disliking the use of videoconferencing for lectures would not have been obtained. If the data from the interviews and the reflective journals are found to be consistent with the data from the questionnaires and the assessment scores, the results are more powerful or, in Knafl and Breitmayer's (1991) terms, confirmation and completeness is achieved. The use of triangulation can therefore strengthen the researcher's confidence in the results. In a similar way, Polit and Beck (2004, P.431) considered that use of triangulation can "enhance credibility" of results.

When triangulation is used, its limitations as well as merits should be kept in mind. Very few limitations were cited in literature. Fielding & Fielding (1986) considered that although triangulation designs could increase the likelihood of validity, this was not necessarily guaranteed. A similar view was taken by Sarantakos (2005) who cited a number of authors in support of that view. Over-reliance on triangulation to provide a 'true' picture may be a further limitation. In addition, the use of triangulation can require more resources and be time consuming.

However, taking both the merits and the limitations into account, the researcher decided to use triangulation to evaluate the student exchange programme.

4.3 INTERVENTION: THE NURSING STUDENT EXCHANGE PROGRAMME

In this section, the programme is presented in outline. Chapter 5 presents the main study, i.e. the nursing student exchange programme in detail. The pilot study is presented in section 4.7 of this chapter.

The programme was a six-week summer student exchange programme implemented between two Schools of Nursing of two Universities, one in Hong Kong and the other in Shanghai. Students from both Schools constituted two classes; one held in Hong Kong and the other in Shanghai. Each class contained a mix of students, i.e. some students from Hong Kong and some from Shanghai (see Figure 1-1). The learning experiences arranged in the present programme included theory taught in classroom lectures and in tutorials, clinical visits and social activities. The students who attended the programme studied two credit-bearing subjects - 'Health Counselling' and 'Interpretation of Clinical Data'. Three credits were allocated to each subject. The lectures were given by teachers from both Schools. The teacher from the School of Nursing in Hong Kong gave the lectures on 'Health Counselling', using English as the teaching language medium. Two teachers from the School of Nursing in Shanghai gave the lectures on 'Interpretation of Clinical Data', using Putonghua as the teaching language medium. With the use of videoconferencing, students in the classes in both sites received each lecture simultaneously. The tutorials were conducted in each of the sites separately, i.e. without the use of videoconferencing. In Hong Kong, the lecturer who taught 'Health Counselling' conducted the tutorials on that subject in English. The researcher conducted the tutorials for 'Interpretation of Clinical Data' in English. In Shanghai, two teachers who had not been involved in the classroom teaching in the

programme conducted the tutorials for the two subjects in Putonghua. Each lecture session was for three hours, with a fifteen minute break at an appropriate time. Each tutorial session was for four hours with one or two breaks. On every Wednesday to Friday during the programme, and in both Hong Kong and in Shanghai, one to two clinical visits were arranged in which the students visited different local health care settings and organisations. In the time available apart from above activities, the students attended social activities organised by the two Schools or by themselves, and conducted self learning.

Despite the fact that videoconferencing brought these students together and they were able to share the same classroom experiences, their individual learning experiences as well as other cultural and social experiences were different. For instance, students from the University in Hong Kong were divided into two groups, one of which studied in Shanghai while the other remained in Hong Kong. This was the same case as far as the students from Shanghai were concerned. Therefore, there were four groups of students in the present programme: the group which consisted of the students from the University in Hong Kong and attended the programme in Hong Kong, the group which consisted of the students from the University in Hong Kong but attended the programme in Shanghai, the group which consisted of the students from the University in Shanghai and attended the programme in Shanghai and the group which consisted of the students from the University in Shanghai but attended the programme in Hong Kong.

4.4 RESEARCH SAMPLE

The present programme was conducted between two Schools of Nursing, one in Hong Kong and another in Shanghai. This section describes and compares the characteristics of these two Schools and their students and teachers. The students and teachers who participated in the present programme were the main sample in the present research.

4.4.1 The Schools of Nursing

The School of Nursing in Hong Kong was the first in Hong Kong to offer the nursing degree programme, commencing in 1990, while the School of Nursing in Shanghai was the second in Mainland China to offer the nursing degree programme, commencing in 1985. The programmes in both Schools had similar aims, which, although expressed differently, can be summarised in the words used by the School of Nursing in Hong Kong, i.e. 'to equip students with the necessary foundational nursing knowledge and skills, and to produce a safe, competent, caring and informed nurse'. In Mainland China, all university programmes had the goal or aim to equip students with good morals, intelligence and healthy development. Specifically in the Shanghai School of Nursing programme there were additional aims in relation to clinical practice, education, research and management skills. The programme length and exact content, the teaching approach, the credits required and the title of the degree awarded differed, as did the language used throughout the programme. In relation to content, while both programmes included Foundation subjects, e.g. Anatomy and Physiology, Microbiology and Pathology, Nursing subjects, e.g. Fundamentals of Nursing, Medical and Surgical Nursing, Nursing Assessment and Diagnosis and 'General' subjects, there was a considerable difference in emphasis on the latter between the

two Schools. In Mainland China, every university student, whatever the degree programme he/she is registered in, follows an identical first year curriculum of 'General' subjects. These are compulsory subjects and are Mathematics, Physics, Chemistry, Philosophy, Materialist Dialectics, Thoughts of Chairman Mao and of Deng Xiao Ping and Physical Education. In Hong Kong, General subjects were all related to language, e.g. English for academic purposes, English in the workplace and Elementary Putonghua. In relation to clinical placements, there were major differences. In Hong Kong, the students had clinical practice throughout their four year programme and this constituted fifty percent of the total programme. In Shanghai, the students had a three week period of clinical practice at the end of their subject of Fundamentals of Nursing, i.e. the end of second year, and did not have any further clinical practice until the end of year four. At that point, students did not have any vacation but went directly into clinical practice and this continued throughout the entire final year of the programme. The organisation, supervision, and teaching/learning methods also differed. In Hong Kong, the university nurse lecturers supervised the students while they were on placement and clinical instructors and mentors from the hospitals supervised the third and fourth year students. In Shanghai, supervision of students on placement was done by clinical instructors who were employees of the hospital. The examinations and other forms of assessment, both in theory and in clinical practice also differed. Table 4-1 summarises these similarities and differences.

Table 4-1
Similarities and Differences between the Two Schools of Nursing

Item	School of Nursing in Hong Kong	School of Nursing in Shanghai
Aims of nursing degree programme	To equip students with the necessary foundational nursing knowledge and skills and to produce a safe, competent, caring and informed nurse	To equip students with good morals, intelligence, and healthy development and with clinical practice, education, research and management skills
Length of programme	4 years	5 years*
Degree awarded	Bachelor of Science (Honours) in Nursing	Bachelor of Science in Medicine**
Credits required	131	214.5
Number of weeks in one semester	14	18
Class hours required for one credit	14	18
Teaching approach	Nursing orientated	Medicine orientated
Teaching language	English	Chinese (Putonghua)
Teaching/learning methods	-lecture -seminar -tutorial -laboratory -web-based teaching -problem-based learning -clinical practice -project work	-lecture -laboratory -clinical practice -project work
Theory taught		
-credit required	97=74% of total credits	193.5=90.2% of total credits
-subject groups and credits		
-general	16=16.5% of 97	74=38% of 193.5
-fundamental	21=21.6% of 97	48.5=25% of 193.5
-nursing	60=61.9% of 97	71=36.8% of 193.5
-subject assessment method	-continuous and summative -seen and unseen examinations and tests -OSCEs(Objective Structured Clinical Examination) -essay writing and projects -seminar presentations	-summative -unseen examinations
Clinical practice		
-credit required	34 =26% of total credits	21=9.8% of total credits
-organisation	-3 weeks in year 1 -8 weeks in year 2 -6 weeks in year 3 -19 weeks in year 4	-3 weeks at the end of year 2 -8 weeks following completion of year 4 -whole of year 5
-supervisors	Lecturers and instructors from school	Instructors from hospital
-supervisor-student ratio	Ranges from 1 to 5 in first year to 1 to 15 in subsequent years	Ranges from 1 to 2 to 1 to 3
-assessment	-self evaluation -comprehensive assessment by supervisor of students' clinical competence including clinical skills and appropriate attitudes	-self evaluation -comprehensive assessment by supervisor of students' clinical competence including clinical skills and appropriate attitudes -written examination

*Note: The length of the nursing degree programme has now been reduced to four years with effect from the 2002 intake.

**Note: The title of the nursing degree is identical to that of the medical degree.

4.4.2 Nursing student sample

All students in the School of Nursing of the University in Hong Kong were born and had grown up in Hong Kong, while the students in the School of Nursing of the University in Shanghai came not only from Shanghai but also from a number of different provinces of Mainland China. The students from both Schools had completed twelve years of general education before entering the University. They were mostly therefore of a similar age. One third of the students in the School of Nursing in Hong Kong were male, whereas very few students in the School of Nursing in Shanghai were male. Most students in Hong Kong were living at home during their University study period, while the students in Shanghai were required to live in students' dormitory accommodation provided by the University. This was the case even if the student's home was in Shanghai.

The total number of nursing students in these two schools was different. The total number of Baccalaureate nursing students in the School of Nursing in Hong Kong was 467, of which 144 were in year one, 126 in year two, 108 in year three and 89 in year four. Meanwhile, there were 116 Baccalaureate nursing students in the School of Nursing in Shanghai. Thirty were in year one, 28 in year two, 11 in year three, 21 in year four, and 26 in year five.

The two subjects taught in the present programme were nursing subjects. As it was necessary for the students who were to participate in the programme to have successfully completed prerequisite subjects, those eligible to participate in the present programme were students from Hong Kong who had completed two years of

nursing studies and students from Shanghai who had completed one year of nursing studies. This difference was because the entire first year of University study in Shanghai was devoted to General, i.e. non-nursing subjects (see Table 4-2). Therefore, students from year two onwards in both schools were invited to participate in the programme. This invitation was posted on various notice-boards in locations where students would be likely to see the posters and flyers (see Appendix 1).

The five criteria for selection of these students were (1) commitment to nursing, (2) language proficiency, i.e. the students from Shanghai must demonstrate some ability in English and the students from Hong Kong must demonstrate some ability in Putonghua, (3) independent and effective decision-making abilities, (4) a Grade Point Average (GPA) of 2.5 or more and, as noted above, (5) successful completion of the prerequisite subjects. A majority of eligible students in each school applied. A short interview was conducted with the applicants in each school. Two academic staff from Shanghai, one of whom was the researcher conducted the interviews in Shanghai and one academic staff member, who was the researcher's supervisor, conducted the interviews in Hong Kong. The procedures for interview were slightly different in the two sites. In Shanghai applicants were assessed at the interview on the first three of above criteria. The other two criteria were assessed following interview, based on students' records. In Hong Kong, prior to interview, the student applicants had been asked to submit to the interviewer information on their academic assessment results. Based on these, and the interviewer's knowledge of the students and of the programme, she shortlisted potential applicants for interview.

The staff of both Schools decided for educational reasons that the optimal size of the classes for these two subjects should be 50 in each. Financial support was available from the University Grants Committee in Hong Kong in the form of sponsorship for exchange students. The quota for applications for exchange students for the proposed programme was set at 50, i.e. support would be available for 30 outbound Hong Kong students and 20 inbound Shanghai students. Therefore the decision was made that for the main study the class in Hong Kong should consist of 20 students from the School of Nursing in Shanghai and 30 students from the local institution, while the class in Shanghai should consist of 30 students from the School of Nursing in Hong Kong and 20 students from the local institution.

The process for the selection of Shanghai student participants was that they were then randomly allocated either to the exchange group or the group which would remain in their local school. First, each student was labelled with one code number which was written on a piece of paper. All the papers then were put into a box. The students whose numbers were in the first 20 to be picked out of the box were to become the exchange students and remainder were to stay in their local school. Each applicant was then informed of the result of the selection. Some negotiations between students' supervisors and students took place before the final decision was made. In Hong Kong, some students preferred to stay in local school while some students expressed that they prefer to become exchange students in the programme. The student's supervisors then would discuss and negotiate with these students and agree where they would go for the programme.

4.4.3 Teachers

There were some similarities and differences between the nurse teachers in the two Schools. The teachers in both Schools were, as a minimum, prepared at nursing Baccalaureate degree level, quite a number also had a Master degree but there were more doctoral prepared teachers in the School in Hong Kong. Most of them had several years of clinical nursing experience, although this was in different areas of practice. The teachers in Hong Kong were responsible for both classroom teaching and clinical teaching. The teachers in Shanghai taught mainly in the classroom but visited the clinical areas when they wished to present an actual patient to the students and to discuss their assessment, diagnosis and nursing care plan.

The subjects taught in the present programme were chosen following discussions in each school and communication with the other school. The three teachers who were responsible for teaching the subjects offered in the present programme were invited to become involved in the programme. All agreed, i.e. one from Hong Kong and two from Shanghai. All were experienced teachers. The teacher from Hong Kong had some previous experience of teaching using videoconferencing in which students were presented in the local classroom and in a remote classroom. While both teachers from Shanghai had previous experience with videoconferencing this was only to conduct lectures with students in a remote site, i.e. there were no students in their local classroom. The present programme was therefore their first experience of using videoconferencing as a medium for teaching students who were in their local school and in a remote site, i.e. Hong Kong.

4.5 RESEARCH INSTRUMENTS

This section describes the instruments used in the present research and the reason for their use. The instruments included: for the quantitative data - two questionnaires, i.e. the Course Experience Questionnaire (CEQ) and the Videoconference Participant Questionnaire (VPQ). In addition, the results from the students' assessment scores for the two subjects taught in the present programme were included. For the qualitative data - the instruments were two interviews, i.e. the interview for students and a different one for the teachers and the students' reflective journal.

4.5.1 Course Experience Questionnaire (CEQ)

4.5.1.1 The development of the Course Experience Questionnaire

The original Course Experience Questionnaire (CEQ) devised by Ramsden (1991) and based on the work of Entwistle and Ramsden (1983) who developed the 'Approaches to Studying Inventory' (ASI) was used in the present research to explore students' perceptions of the teaching in the present programme. The questions comprising the CEQ were based on research from several different standpoints which identified the characteristics of effective teaching. These included explanation and stimulation of student interest; concern and respect for the student and student's learning; appropriate assessment and feedback; clear goals and intellectual challenge; independence, control and active engagement; and 'learning from the student' (Ramsden, 1992). The students' experience of their curricula, teaching methods, and assessment procedures created the educational environment or context of learning (Ramsden, 1992). These important aspects of teaching in higher education fall into

five groups: Good Teaching, which includes that teachers give helpful feedback on students' progress; Clear Goals, which means that students are given a clear idea of what is expected of them; Appropriate Workload, which means that students are able to 'get through the work'; Appropriate Assessment, which means that teachers are interested in testing what the students have understood rather than what they have memorised; and Emphasis on Independence, which means that students are given choice in the work they have to do.

In the course of an investigation into the determinants of students' approaches to learning within higher education, Ramsden and Entwistle (1981) devised the Course Perceptions Questionnaire (CPQ) to measure students' experiences in British higher education institutions and to investigate links between student perceptions of the Department environment and their own approaches to learning (Ramsden, 1979). This instrument was later modified by Ramsden (1991) to yield the Course Experience Questionnaire (CEQ), designed specifically as a performance indicator for monitoring the quality of teaching on a particular degree programme.

The CEQ is now used in national annual surveys of all graduates in the Australian higher education system as a measure of perceived teaching quality in degree programmes and increasingly is being employed as a measure of the quality of teaching in universities in the UK (Ramsden, 2003). A number of researchers have used the CEQ to investigate students' course experiences and perceptions of learning environment, e.g. Bligh, Lloyd-Fones, & Smith (2000) and Cowman (1996) as they believed that the educational environment or context of learning was created through students' experience of the curricula, teaching methods and assessment procedures.

4.5.1.2 Description of the Course Experience Questionnaire (CEQ)

The CEQ consists of 30 items which are arranged in five scales: good teaching, clear goals, appropriate workload, appropriate assessment and emphasis on independence. There are 8 items in the scale of Good Teaching, 5 in Clear Goals, 5 in Appropriate Workload, 6 in Appropriate Assessment, and 6 in Emphasis on Independence. The items in the CEQ are arranged in random order. They are to be answered using the five-point Likert scale - 1 for “disagree”, 2 for “disagree somewhat”, 3 for “unsure”, 4 for “agree somewhat”, and 5 for “agree”. Half of the items refer to positive aspects of teaching; while half refer to negative aspects and are to be scored in reverse (see Appendix 2).

4.5.1.3 The use of the CEQ in the present research

The aims of the present research were to examine the effect of the programme which was an action intended to contribute to the achievement of the University’s Strategic Objective One of enhancement of students’ all round development in seven elements (see section 1.1.1.1). The students’ development, enhancement and experiences in these seven elements would however be gained and exhibited by attending activities organised in the programme. The main activities arranged in the programme were that students took two subjects in which teaching and learning occurred and a learning environment was formed. Therefore, the CEQ was chosen to be used in the present research. It was considered to be a valid, reliable tool with which to obtain data for exploring the teaching and learning experiences of the students from the two schools

of nursing, one in Hong Kong and the other in Shanghai. The students who participated in the programme took two credit-bearing subjects, and classroom teaching, tutorials, discussions and assessments were arranged for both subjects. The students engaged in a teaching and learning environment. All the teaching/learning items/scales in the questionnaire could be reflected in the learning environment in the programme and of course, that learning environment was unique and quite different from the students' conventional learning environment. The students came from two different schools and studied together in the programme. Both subjects were taught by teachers who came from both schools, which had predominantly different teaching styles. The exchange and non-exchange students studied in a different learning context which also included clinical visits. The students also took part in social activities in the present programme. All of these formed a unique, different and challenging learning environment for the students and as such should be evaluated. The five scales which were included in the questionnaire reflected the teaching and learning environment provided in the present programme. The CEQ was thus viewed as an appropriate questionnaire for use in the present research.

When the CEQ was used in the present research, three terms which appeared in the CEQ, 'teaching staff', 'staff' and 'lecturers' were changed to 'teacher' because in nurse education the normal equivalent terminology is teacher/tutor. However, the ordering of the items was not changed. They were presented in the order in which they appeared in the original version.

The period or length of the programme was only six weeks. This was considerably shorter than the full academic year, which was the period evaluated using the original

CEQ, i.e. as it was used in the annual evaluation survey of higher education in Australia. Using this questionnaire to assess the students' perception of their teaching and learning environment in the programme could therefore have limitations due to the much shorter period of the programme. The students' previous learning experiences could have affected their perceptions of teaching and learning within the shorter six-week programme. In addition, the questionnaire had not been designed to explore the students' learning experiences in their clinical visiting and in the social cultural activities which were arranged in the programme. Therefore, it was considered necessary to use additional evaluation tools, i.e. the interview and students' reflective journal, to measure or explore the students' perceptions of these experiences.

The CEQ was administered to each student before and after the programme had been conducted, in order to enable comparison of the students' perception of the learning environment in the programme with their conventional learning environment. The detail of the procedure of collection of questionnaire will be presented in section 5.3.2.

4.5.2 Videoconference Participant Questionnaire (VPQ)

The success of videoconferencing requires that it be well done in both technical and educational aspects (Blignault & Kennedy, 1999). Technical aspects include the availability of up-to-date equipment and its correct utilisation, the quality of any visual aids and sound transmission. The educational aspects include selection of appropriate teaching material and its presentation so that the videoconferencing medium adds value to students' acceptance and understanding of information

provided by the teacher. To evaluate the effectiveness of the videoconferencing, Eaton et al. (2001) stated that these aspects should be viewed as a theoretical framework from which to develop the instrument. Videoconferencing as a teaching medium was discussed in chapter 3. Eaton and colleagues developed two questionnaires to evaluate the effectiveness of videoconferencing in their evaluation of a **Pilot Regional Online Videoconferencing course in Dentistry (PROVIDENT)** project in which a continuing professional education programme was delivered from a dental school in London to small groups of dentists at distant sites in the United Kingdom via videoconferencing links. One questionnaire was the Provident Participant Questionnaire which was developed for students who attended the lectures in the project (Eaton et al. 2001), and the other was the Provident Presenter Questionnaire which was developed for the teachers who delivered the lectures in the projects (Odell et al. 2001). These two questionnaires were developed for use in the same study but the researchers published the results of the evaluation by the students and by the teachers in two separate papers.

4.5.2.1 Provident Participant Questionnaire for students

The Provident Participant Questionnaire (PPQ) consists of 15 questions grouped into 3 scales: presentation style (4 items), technical issues (4 items), and educational value (7 items). The fifteen questions included both closed and open questions. Twelve closed questions were to be answered using the five-point Likert scale. The scale was presented as a 'faces-scale', in which grades 1 and 2 indicated positive replies, grade 3 neutral and grades 4 and 5 negative. There was space at the end of each question to invite comments. Three open-ended questions were located at the end of the

questionnaire under the “educational value section” to encourage deeper comments regarding the usefulness of videoconferencing, such as suggestions for presentation improvement and any further comments.

4.5.2.2 The use of the Provident Participant Questionnaire in the dental discipline

In Eaton and his colleagues’ study (2001), 41 postgraduate videoconferencing teaching sessions were provided by 27 experienced academic teachers from 4 campuses of the London Dental School. The sessions linked a campus with student audiences at one of eight postgraduate centres which were located in different cities of the UK. Each individual session was evaluated by both the Provident Participant Questionnaire for students and Provident Participant Questionnaire for the teachers, which was completed by both students and teachers at the end of the session. Of the 41 teaching sessions, only one was considered as having failed, i.e. for technical reasons it was not possible to complete the session.

A total of 257 dentists attended the other 40 sessions. In relation to the four questions on presentational style an overall very positive response was given. Ninety percent of students gave positive responses to the question on the appropriateness of the teaching material for delivery by videoconferencing, 87% students answered ‘excellent’ or ‘good’ to the question on the ability of the lecturer as a presenter in the medium, 90% gave positive answers to the question which asked about their feelings about attending further videoconferencing sessions, and 90% gave positive answers to the question on ‘how did you compare the event with the alternative of travelling to London?’. As far as the technical aspects were concerned, the response was still positive, although

slightly less so. Sixty-nine percent of students gave positive answers to the question on the visibility of the visual aids, 54% to the question on ability to hear the presentation, and 76% to the question on the appropriate use of the technology by the presenter. The final three closed questions related to the perceived educational value of the teaching session delivered by videoconferencing. In their answers to the question on the appropriateness of the educational level, 90% of students were positive, 82% gave positive answers to the question on the value of visual aids used in presentation, and 85% gave positive answers to the question 'did you find the question and answer session useful?'

The response rate to the questionnaire in that study was high (100%). The authors concluded that the high response rate resulted from the fact that there were small numbers attending each session and that there were relatively few questions in the questionnaire. It may also have resulted from the fact that the participants completed the questionnaire before leaving the classroom.

4.5.2.3 The use of the Provident Participant Questionnaire in the present research

There were two main reasons for adopting the PPQ in the present research. Firstly, the situation in relation to the use of videoconferencing and its evaluation in the present research was in some ways similar to the situation in which the PPQ was developed and used. Secondly, the design of the PPQ was considered appropriate in relation to the objectives of the research, was of a reasonable length and the questions were clear. Both Eaton and his colleagues' programme and the student exchange programme used synchronous videoconferencing in which two-way audio and video communications

between the presenting site and the remote site took place. In Eaton and his colleagues' programme, one of four campuses of the London Dental School was linked with students at one or more of eight postgraduate centres, while in the present programme, the teacher and students at the School of Nursing in Hong Kong were linked with the students at the School of Nursing in Shanghai and vice versa. Neither the Dentistry nor the student exchange programme delivered subjects which required the students to take part in practical activity. The PPQ was used to assess the educational value and effectiveness of the videoconferencing, which was also one of the objectives of the present research. The PPQ covered most aspects of the use of videoconferencing. No better questionnaire regarding videoconferencing evaluation was found in the literature review. Therefore, the PPQ was chosen and adapted for use in the present research. The permission to use of the PPQ was obtained from the authors by the researcher by E-mail (see Appendix 3)

4.5.2.4 Modification of the Provident Participant Questionnaire to become the Videoconference Participant Questionnaire

Although the student exchange programme was similar in some respects to that of Eaton and his colleagues', there were also some differences. Modification of the PPQ therefore was needed to make the questionnaire more relevant to the evaluation of the effectiveness of videoconferencing in the programme. For example, the items in the PPQ did not cover all the aspects involved in the present programme. In the PROVIDENT project:

- videoconferencing was used to conduct continuing education related to dental health, while in the student exchange programme it was used to conduct lectures for two credit-bearing subjects of a nursing degree programme.
- the teachers delivered the lectures in the classroom without the student audience present, while in the student exchange programme, students were present in the classroom in which the teacher conducted the lecture.
- a small group of students (average 6.4) attended the lecture in each session, while a large group of students (average 46) was involved in each lecture session in the student exchange programme.
- the presentation style included lecture, tutorial, interactive question and answer session and case study, while in the student exchange programme, only one presentation style was used, i.e. the lecture.

Although not featuring in any of the questions, it is of interest to note that the videoconferencing equipment used in these two programmes was different. The equipment used in the PROVIDENT project was the PC based videoconferencing H320 international standard system which incorporated a Z350 Codec videoconferencing card connected by commercial ISDN2 (128 kbit/s) lines, while the equipment used in the present programme was the videoconferencing unit (Polycom protocol employed the H320 standard) connected by commercial ISDN3 (384 kbit/s) lines. Polycom 384/512 camera, a control panel, large projection screen, and LCD Projector were provided.

In the domain of 'presentation', only two questions from the PPQ were suitable for use in the VPQ. These were "Did you consider the teaching material appropriate for

delivery by videoconferencing?” and “How would you rate the lecturer as a presenter in the medium?”. In the PPQ, there was no question to evaluate the effectiveness of the visual aids, and some questions were not relevant for use in the present research, i.e. “How did you compare the event with the alternative of travelling to London?”, “How would you feel about attending other videoconference sessions?” and “Do you have a computer at home?”.

Modification of the PPQ therefore included deletion of the questions which were not relevant to the programme. Eight questions were added. Wording was changed in four questions (see Table 4-2). In addition, as interviews would be conducted in the present research, the space left under each question for students’ comments was not necessary and was therefore deleted. The literature review helped the researcher to formulate some questions which would further explore the effectiveness of videoconferencing in the present programme and these were added to the VPQ (see Table 4-2).

Table 4-2

Modification of the Questions in the PPQ to become the VPQ

Question in PPQ	Modification	Question in VPQ
Presentation style		
Did you consider the teaching material of the <i>session</i> appropriate for delivery by videoconference?	Changing the words	Did you consider the teaching material of the <i>subject</i> appropriate for delivery by videoconferencing?
<i>How</i> would you rate the lecturer as a presenter in this medium?	Changing the words	<i>Did</i> you think the lecturer was good as a presenter in this medium?
How would you feel about attending other videoconferencing sessions?	Deleting	
How did you compare the event with the alternative of travelling to London?	Deleting	
	Adding	Did you think the text that showed on the screen was clear enough for reading?
	Adding	Did you think the colour contrast of the slides on the screen appropriate?
	Adding	Did you think the slides, graphs and diagrams on the screen were busy?
Technical issues		
Do you have a computer at home /at work?	Deleting	
	Adding	Were you able to see the distant presenter in the videoconferencing?
	Adding	Did you feel any inter-communication delay between the two sites?
Educational value		
Was the <i>educational level</i> of the event pitched appropriately for you?	Changing the words	Were the objectives of the subject met?
Did you find the <i>question and answer</i> sessions useful?	Changing the words	Did you feel that the <i>interaction</i> between the two sites' audience was accomplished?
Did you find that the visual aids added value to the event?	Deleting	
	Adding	Would this videoconferencing alter your learning strategy?
	Adding	Did you think the amount of information you received was positively influenced by the use of videoconferencing?
	Adding	Did you think that your capacity to memorise the information was positively influenced by the use of videoconferencing?

The title of the modified questionnaire was changed from 'Provident Participant Questionnaire' (PPQ) to 'Videoconference Participant Questionnaire' (VPQ). Three

new open-ended questions were written for the VPQ and placed in a separate section. The three open-ended questions in the VPQ were “In your view, what was the most useful aspect of videoconferencing?”, “What, if any, do you think the differences were between a face-to-face lecture and the lecture which was conducted using the videoconferencing medium?” and “What would you suggest to improve the effectiveness of videoconferencing?”.

In the original version of the PPQ, the scale used in different questions had a different meaning, e.g. grade 1 meant “yes++” in some questions, “excellent” in other questions and “positive++” in the remaining questions. It was considered better to unify the scale used in the VPQ. In order to do this, some words in some questions were adjusted but the meaning was not changed. The ‘faces-scale’ was not used. Instead the scale used for all closed questions was “Yes++”, “Yes+”, “Neutral”, “No-”, and “No--”.

4.5.2.5 Completion of the Videoconference Participant Questionnaire

The Videoconference Participant Questionnaire (VPQ) in its final form consisted of 19 questions grouped into 3 sub-scales: presentation style (5 items), technical issues (5 items) and educational value (6 items), and 3 general open-ended questions. Sixteen closed questions were to be answered using the five-point Likert scale, in which grades 1 and 2 were positive replies, grade 3 neutral and grades 4 and 5 negative. “Yes++” represented the most favoured response and “No--” the least favoured. The three open questions were located at the end of the questionnaire. These were intended to encourage deeper comments regarding students’ general

views on the videoconferencing conducted in the programme (see Appendix 4). This questionnaire was handed out by the researcher to the students in both Hong Kong and Shanghai approximately two months after the programme was completed. The students were gathered in a classroom in each of the Schools and when they had completed the questionnaire they handed it back to the researcher. The detail of this procedure will be presented in section 5.3.2.

4.5.3 Students' assessment scores

Although not strictly speaking a research instrument, the third 'instrument' used in the quantitative approach was the assessment scores gained by the students for each of the two subjects taught in the present programme. Examinations of various types are used in education to assess students' levels of achievement and thus the success or otherwise of the programme. The students' assessment results were used in this research for these same purposes. There has been a long-running debate about assessment and just what types are appropriate for which purpose, about timing of assessments, about the many factors in the learning environment which can affect results, about how results are scored and about the relevance of assessment results to intended outcomes of a particular programme (Brown, 1999b; Heywood, 2000; Knight & Yorke, 2003;). While this research does not enter into this debate, the discussion below focuses on a few of the elements within it.

4.5.3.1 Types of assessment

There are many different types or forms of assessment in education. Many are in common use whatever the focus of the education programme. In nursing education most forms of assessment require the students to apply theoretical learning to clinical practice and this can be achieved in different ways. Some of the commonly used forms of assessment include for example, ‘unseen’ examinations, structured either as multiple choice tests or those requiring short answers or longer essay type answers. ‘Seen’ assessments include for example, essays for which a list of topics may be given to the students some time before they must submit their essay and from which list the student can choose which essay they will write. The latter is sometimes referred to as a ‘term paper’. In nursing education, while any or all of the above are used and most require integration of theory with practice, additional examples include case study reports which require analysis of the care of a particular patient and assessment of clinical competence which requires observation of students while they are providing nursing care during a clinical placement.

4.5.3.2 Factors affecting assessment results

Assessment results depend upon many factors, including student effort, student ability, the quality of the teaching and the design of the assessment. Frisch (1990) McLachlan & Whiten (2000) and Zorn et al. (1995) considered that the outcomes of assessments are also affected by the learning environment. This point was supported by Heywood (2000), who discussed how learning environment influences students’ decisions about which learning strategies or approaches they will use and this consequently influences their learning outcomes.

4.5.3.3 Scoring and grading of assessment results

The results of assessments are commonly presented as a numerical score and/or as a grade which represent the students' academic performance as objectively as possible. A score is most commonly presented as a percentage, e.g. 60% or as a raw figure, e.g. 6 out of 10. There are several types of grading systems in use in education, one of which directly relates to the level of performance which a particular score on an assessment reflects. For example, on the range from A to F, A might reflect a numerical score of 85% and over, B from 70% to 84%, and so on, with grades E and F reflecting a failure score. Some systems use a more detailed nine point scale from A+ to F, which may or may not relate these grades to a numerical score. The Grade Point Average (GPA) system uses a nine point scale but linked with a number or point, i.e. A+ is equal to 4.5 grade point; A=4; B+=3.5; B=3; C+=2.5; C=2; D+=1.5; D=1 and F=0 grade point (note: there is no E point).

4.5.3.4 Assessment in the present programme

In the present programme, two credit-bearing subjects were offered to all participating students and these subjects were assessed on completion. The 'Health Counselling' subject was assessed by a multiple choice question paper. Assessment of the 'Interpretation of Clinical Data' subject required the students to analyse a clinical case and present their nursing assessment, make one or more nursing diagnoses and propose possible nursing interventions. The students developed their knowledge regarding these two subjects in a unique learning environment. Many factors in that environment were not only likely to affect their learning, but were intended so to do.

Their assessment scores and grades for both subjects could therefore be considered as an indication of the students' efforts and abilities and also as an effect of the learning environment, the quality of teaching and of the two very different assessment designs.

The two schools of nursing which were involved in the present programme used different assessment marking systems. The School in Hong Kong reported the assessment results on a nine point grading scale which was however linked to a numerical score, while the School in Shanghai used only the numerical scoring system. After collecting the results for both sets of assessments, the researcher converted these to GPA grades/scores. For the results from the 'Health Counselling' subject taught by the Hong Kong teacher this involved one step, i.e. conversion of the grade awarded to each student to the GPA. For the results from the 'Interpretation of Clinical Data' subject taught by the Shanghai teachers this involved two steps, i.e. conversion of the numerical score to the nine point grading system used by the University in Hong Kong, followed by conversion to the GPA. The rationale for changing all of these assessment results to the GPA system was because both Universities were in the process of moving from their current systems for reporting assessment results to the GPA.

4.5.4 Interviews

The interview is a research instrument which is very commonly used in qualitative research (Green & Thorogood, 2004) or as Wengraf (2001) states is a frequently used data collection tool in qualitative research. Earlier in this chapter triangulation was introduced and both between- and within-methods triangulation were employed in the

present research (see section 4.2.3.4), i.e. both quantitative and qualitative approaches and different types of research instruments. This section describes the interviews used in the present research and the reasons for their use.

There are three main types of interview, the structured, semi-structured and unstructured. When the structured interview is used the interview is conducted in a rather rigid way, the questions have been previously set and are asked in the same order for all interviewees regardless of their responses (Polit & Beck, 2004). In the semi-structured interview, the researcher will have prepared in advance a list of topics or questions which he/she intends to follow through with each interviewee but the order in which these are discussed can vary depending on the interviewees' responses (Green & Thorogood, 2004). In semi-structured interviews the interviewees are encouraged to 'tell their own stories in their own words'. Lofland & Lofland (1984) described this as "guided conversation whose goal is to discover informants' experience of a particular topic or situation" (P.22). Unstructured interviews are used when the researchers "do not have a clear idea of what it is they do not know" (Polit & Beck, 2004, P.340) and therefore are unable to work with a prepared set of questions.

4.5.4.1 Advantages and disadvantages of interviews

Polit and Beck (2004) considered "the strengths of interviews far outweigh those of questionnaires" (P.341). Interviewing allows the interviewer to enter the interviewee's world, and to understand the interviewee's perspective. However, as mentioned by Green & Thorogood (2004), the interview can only provide information based on

what interviewees say rather than what they may actually do. Moreover, there is a risk that interpretation of the data may be subjective, i.e. that there is researcher bias. Polit and Beck (2004) and Sarantakos (2005) included in their discussion of the advantages of interview that the response rate is usually high and this applies to all questions; any misunderstanding of a question by the interviewee can be clarified; different view points on the same issue can be explored (Coles & Mountford, 1988); the researcher can observe any non-verbal behaviour and there is the possibility to record spontaneous answers to questions which often provides supplementary data. The interviewer is able to control not only the order in which questions are presented but can decide the location and timing of the interview. The limitations or disadvantages of interview include that they tend to be more expensive and time-consuming to conduct than questionnaires; it is essential to protect the anonymity of the interviewees and in situations where sensitive issues are to be probed some people find it easier to write about these rather than to talk about them. As mentioned above, there is the ever-present risk of interviewer bias (Sarantakos, 2005).

4.5.4.2 The interviews used in the present research

As previously noted, both the CEQ and the VPQ had some limitations to their use in the evaluation of the programme. To gain richer and wider understanding of the students' experiences, and that of the teachers in the present programme and to counterbalance the weakness of one method with the strengths of another, interviews were conducted with both students and teachers. The semi-structured interview was considered to be the most appropriate instrument to be used in the present research.

All research shares the common goals of eliciting present knowledge and/or developing new knowledge (Wengraf, 2001). Every research study however has its unique emphasis on the knowledge area of specific interest to that particular study. The present research aims to explore nursing students' learning experiences regarding the seven elements emphasised in the University's Strategic Objective One and to evaluate the effectiveness of the innovative teaching medium used in the present programme, i.e. videoconferencing. It also aimed to explore teachers' experiences of teaching using videoconferencing and of taking part in the programme. Therefore, two different interview schedules were developed, one for the students and one for the teachers.

Interview schedule for students The questions which were used in the interviews with the students were devised by the researcher based on the literature review regarding evaluation of student exchange programmes, on the objectives of the programme and the activities arranged within it and on the objectives of the present research. Before being used for the interviews, the questions were reviewed by the researcher's supervisors in order to ensure relevance, clarity and that there was no researcher bias in the format or content. A total of ten open-ended questions were designed to gain a broad and in depth view of students' individual experiences regarding theoretical learning, clinical visiting, social cultural activities, videoconferencing, and being a student ambassador (see Appendix 5). For example, the question "How did you feel about learning together with students from another school of nursing?" was designed to elicit the students' broad thoughts and feelings regarding learning together with classmates from the other school, while the question "How did you feel about the

learning experiences regarding videoconferencing?” was more specific, i.e. asked the students to focus on one element within the programme - the videoconferencing.

Interview schedule for teachers Ten open-ended questions were used in the interviews with the teachers. Seven of these, which focused on videoconferencing as a teaching medium, were developed based on the questionnaire used in Odell and his colleagues’ study (2001). The other three questions were developed by the researcher to explore teachers’ general perceptions of their experiences of teaching exchange students and their views on the student exchange programme overall (see Appendix 6). These three questions were subject to the same scrutiny by the researcher’s supervisors as had been done with the questions in the students’ interview schedule.

The interview schedule for the teachers was developed from the questionnaire entitled the ‘Provident Presenter Questionnaire (PPQ) used by Odell and his colleagues (2001) in a continuing education programme for dentists delivered by videoconferencing (see section 4.5.2). Their questionnaire consisted of six open-ended questions and two closed questions. These eight questions focused on issues in using videoconferencing in education and included time required for lecture preparation, availability of technical assistance, comparison of experiences between conducting a lecture mediated by videoconferencing and the alternative of travelling to give the same lecture, the quality of technical aspects, e.g. sound transmission and audio-visual reception and the effectiveness of communication with the students.

The content of the Provident Presenter Questionnaire was little modified for use in the present research but its format was changed from a questionnaire to an interview

schedule. This was considered appropriate because only three teachers were involved in the lectures mediated by videoconferencing in the programme. One question which was not relevant to the programme was deleted, i.e. “How would you compare this experience with the alternative of travelling to give the lecture?”.

4.5.4.3 Conduct of interviews

Although the interviews for the students and for the teachers in the present research were different, the conduct of the interviews followed a similar pattern.

Before conducting the interview, all interviewees were approached personally by the researcher by telephone or E-mail. The time for interview was determined by the interviewees and the place for interview was announced after the time was confirmed. The students and teachers knew they could make contact with the researcher should any change be required.

Interviews were conducted two to three months after completion of the programme. For the students in Hong Kong, these were conducted in an interview room in the School of Nursing, and in Shanghai, in a small meeting room in the School of Nursing. For the teachers, the interviews were conducted in their own office. These rooms were considered suitable both physically and psychologically as they were quiet, free from disturbance, convenient to access, and a non-threatening environment for the interviewees.

The interview for both students and teachers began with a brief exchange in which the researcher thanked each interviewee for taking time to come to interview. She stressed that there were no right or wrong answers to the questions she was going to ask; she simply was interested in hearing their views, thoughts and perceptions about the programme. This introduction provided the interviewee with an opportunity to 'warm up' to the interview and to relax before being asked the interview questions. The interview then commenced. The researcher listened carefully to what the interviewees said. Such listening, hearing and learning is done in an attempt to understand the students' experiences from their points of view, to unfold the meaning of students' experiences, and to uncover their lived world in the programme.

Because not all students were to be involved in the interviews, the selection of informants was done before conducting the interviews. One third of the students were invited to attend for interview and they were chosen randomly. All three teachers were invited to attend the interviews. However, the tutors were not invited to interview because they were not involved in videoconferencing.

4.5.5 Reflective journals

4.5.5.1 Advantages and disadvantages of the reflective journal

According to Bolton (2001), a journal is a record of happenings, thoughts and feelings about a particular aspect of life. Journal writing done by students allows them time for reflection and expression without having to formulate immediate responses to questions. In Riley-Doucet and Wilson's (1997) study of self-reflection using

reflective journal writing they consider journaling provided each student with the opportunity to record personal experiences in an uninhibited environment. However, when journal content includes such personal experiences, some of which may describe the writer's private emotions, this may or may not be helpful to the writer (Brown, 1999a). Callister (1993) described the reflective journal as a tool to assist students to integrate what they thought with what they had learned in a real situation and to enable them to release their feelings about their learning. Kessler and Lund (2004), in a similar way, explained that reflective journals should place emphasis on the connection between thought process and learning content, rather than writing a simple description of what was observed and what was done. These authors also suggested, in relation to developing an online reflective journal in distance nursing education, that a set of parameters for organising their reflective journals should be given to each student with the aim of ensuring the quality of the journal.

However, there are some shortcomings in relation to the use of journals. For example, if used as part of a summative assessment. Knight and Yorke (2003) stated there are problems with reliability of marking and also in deciding what sort of comment to reward. In a qualitative study of reflective journals written by physical therapy students, Williams and Wessel (2004) considered the instructions given to students may have affected the content of the journals and students' levels of reflection. In addition, although the students had experienced several teaching sessions and related learning events each week, the fact that they were required to prepare 'at least one journal entry per week', may have led to some students feeling their choice of what to write about was somewhat forced. A quite common criticism of journal writing is "that students may write what they think the teacher wants to hear" (Cameron &

Mitchell, 1993), and this may be more likely if the journal is to receive a mark or grade.

4.5.5.2 Use of reflective journals in the present research

Reflective journals were used as an additional qualitative instrument in the present research because, however carefully the researcher structured the interview sessions to try to help the students relax, it inevitably was not a natural situation for them to be in. Writing their reflective journals enabled the students to write about their learning experiences when and where they wished and to do so without the researcher's presence. The students' reflective journals were therefore considered to be a valuable tool not only to assist the students to integrate their thinking with what they had learned and express their feelings about that learning, but also to assist the researcher to explore these learning experiences and to assess any changes which may have occurred in students' learning and other experiences during the course of the programme.

Each student was asked to write a minimum of three journals, one to describe their reflections on the first week of the programme, another to describe their reflections around midway through the programme, and a final journal to be written during the fifth or last week when they reflected on their whole experience of the programme. No length was specified for the journals. A one hour briefing meeting was conducted by the researcher, prior to commencement of the programme at which a learning guideline handout was provided (see Appendix 7). This guideline included some information about what might be included in the reflective journal. At that briefing

meeting it was explained that the reflective journal should place emphasis on connecting their thought processes with the learning content rather than simply describing what was taught, describing clinical visits and/or social activities. In other words, they were encouraged to write down the feelings, thoughts and perceptions which arose in relation to a specific happening at a particular point of time. Each student was required to submit all three journals at the end of the programme. Neither the researcher nor the teachers had seen these journals during the course of the programme.

4.6 APPROACHES TO DATA MANAGEMENT

This section discusses the procedures of data analysis. Quantitative data were collected from two questionnaires and students' assessment scores. Qualitative data were collected from interviews with students and teachers and from students' reflective journals. These data were used to evaluate whether and how the present programme enhanced the students' all-round development in the areas of global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, and leadership; to assess the value of videoconferencing in its application in the present programme; and to explore what other learning experiences the students gained as a result of participating in the programme. As both quantitative and qualitative data were collected, these data were analysed using two different approaches. The quantitative data was managed by statistical analysis using the Statistical Package for the Social Sciences (SPSS) version 12 (SPSS, Inc., Chicago IL, USA), while the qualitative data was treated by means of content analysis.

4.6.1 Quantitative data analysis

All quantitative data were entered into a computer database and analysed using SPSS version 12. The responses of the students to all closed questions in both questionnaires were elicited on 5-point Likert scales and were interpreted as ordinal data. The students' assessment scores were also treated as ordinal data because they were presented using the grade point system. The data were then dealt with using non-parametric tests and a 5% level of significance was adopted (Kuzma & Bohnenblust, 2001).

4.6.1.1 Course Experience Questionnaire (CEQ)

Data were obtained from the students' responses to the Course Experience Questionnaire (CEQ) which was administered both before and after the programme. The analysis of these data was conducted using descriptive statistics and inferential statistics. The descriptive statistics were used to calculate the mean, median and range and the inferential statistics used the Mann-Whitney U Test and Kruskal-Wallis Test (Kuzma & Bohnenblust, 2001). The Wilcoxon Signed-Ranks Test was also used as it enables comparison before and after intervention. The results from the descriptive statistics were used to explore the students' perceptions of their teaching and learning environment prior to their experiences of the programme and their perceptions of the teaching and learning environment in the programme. The Mann-Whitney U Test was used to compare the differences in the students' perceptions of their teaching and learning environment, between Hong Kong students and Shanghai students and

between the students who attended the programme in Hong Kong and in Shanghai. The Kruskal-Wallis Test was used to compare the differences in the students' perceptions of their teaching and learning environment between three or more groups. For example, students who were in different study years and students in the four different groups, i.e. Hong Kong students who studied in their local school (non-exchange students), Hong Kong students who studied in Shanghai (exchange students), Shanghai students who studied in their local school (non-exchange students) and Shanghai students who studied in Hong Kong (exchange students). The Wilcoxon Signed-Ranks Test was used to compare the differences in the students' perceptions of their conventional teaching and learning environment and the teaching and learning environment they experienced in the programme.

4.6.1.2 Videoconference Participant Questionnaire (VPQ)

In order to determine the students' perceptions regarding the effectiveness of the videoconferencing, descriptive and inferential statistical tests were used to analyse the data obtained from the Videoconference Participant Questionnaire (VPQ). The descriptive statistics included calculation of the mean, median and range. Inferential statistics used included the Mann-Whitney U Test and Kruskal-Wallis Test, which were performed to compare the differences in students' perceptions (Kuzma & Bohnenblust, 2001). The Mann-Whitney U Test enables comparison of differences between two groups, in this case the differences in students' perceptions of the effectiveness of videoconferencing between two groups; firstly, the students who came from the School in Hong Kong and those who came from the School in Shanghai and secondly, between the students who attended the programme in Hong

Kong and those who attended the programme in Shanghai. The Kruskal-Wallis Test enables comparison of differences between three or more groups, in this case, firstly, students who were in different study years and secondly, students in the four different groups, i.e. Hong Kong students who studied in their local school (non-exchange students), Hong Kong students who studied in Shanghai (exchange students), Shanghai students who studied in their local school (non-exchange students) and Shanghai students who studied in Hong Kong (exchange students).

4.6.1.3 Students' assessment scores

Students' assessment scores for both subjects in the present programme were analysed to assess their levels of achievement of the learning outcomes, the differences in learning outcomes, if any, between Hong Kong students and Shanghai students, and differences, if any, between the class in Hong Kong and the class in Shanghai. Descriptive and inferential statistics were employed. The descriptive statistics provided the mean, median and range of the students' levels of achievement of the learning outcomes. The Wilcoxon Signed Ranks Test was used to determine whether a difference was present in students' learning outcomes in relation to the two subjects taught in the present programme. The Mann-Whitney Test was performed to examine the differences between the students from the two Schools and between the students who attended the programme in the two venues. The Kruskal-Wallis Test was used to compare the differences in students' learning outcomes between the groups of students who were in different study years and of students in the four different groups, i.e. Hong Kong students who studied in their local school (non-exchange students), Hong Kong students who studied in Shanghai (exchange students), Shanghai students

who studied in their local school (non-exchange students) and Shanghai students who studied in Hong Kong (exchange students).

4.6.2 Qualitative data analysis - Content analysis

Many authors, for example Polit and Beck (2004), cited Crabtree and Miller (1999) as stating “there are nearly as many qualitative analysis strategies as there are qualitative researchers” (P. 571). Most also agree that qualitative analysis is a very labour intensive process requiring creativity on the part of the analyst.

The qualitative data in the present research were analysed using content analysis. There were four sources of qualitative data: two sets of interview transcripts (one set from the participating students and one set from the participating teachers), students’ reflective journals and data obtained from the open-ended questions in the Videoconference Participant Questionnaire. Following definitions of content analysis, this section then discusses the reasons for using content analysis, the procedures followed and the reliability and validity of content analysis as used in the present research.

4.6.2.1 Definitions and characteristics of content analysis

Polit and Beck (2004) defined content analysis as “the process of organising and integrating narrative, qualitative information according to emerging themes and concepts.” (P. 714). According to Holsti (1969), in his seminal text, content analysis is a multipurpose research method developed specifically for investigating any

situation in which the content of a communication serves as the basis from which inferences can be made. Krippendorff (1980; 2004) states that content analysis is a research technique to enable replicable and valid inferences to be made from data to context. In contrast, Downe-Wamboldt (1992) deemed content analysis to be an inexact method, because of its ubiquitous use in very different research fields, methodological approaches and types of data. However, the researcher did not consider this to be a limitation and therefore used content analysis in the present research.

Content analysis appears to have certain characteristics which include a focus on the subject and the related context, an emphasis on similarities and differences between themes and concepts or alternatively between codes and categories, and the method deals with manifest as well as latent content (Holsti, 1969) in the data.

4.6.2.2 Approaches to content analysis

There are four approaches to content analysis. These are conventional, directed and summative content analysis (Hsieh & Shannon, 2005) and manifest and latent content analysis (Downe-Wamboldt, 1992; Kondracki, Wellman, & Amundson, 2002). Conventional content analysis is used when there is no or very little existing theory or literature regarding the phenomenon which is to be studied. Directed content analysis is chosen when theory or prior research exists about a phenomenon but is incomplete and/or requires further description. In directed content analysis the process begins by identifying key concepts or variables (Potter & Levine-Donnerstein, 1999) alternatively expressed as key categories and codes (Morse & Field, 2002) which may

or may not be predetermined. Summative content analysis is employed when the intention is to identify and count the use of certain words in a text, e.g. an interview transcript, in order to understand the use of these words in the particular context of a study. Both manifest and latent content analyses can be employed in all three of the above approaches (Hsieh & Shannon, 2005). Manifest content analysis deals with what might be termed the obvious content, i.e. the generally understood meaning of the words within the text, be they derived from an interview transcript or responses to an open question in a questionnaire, what Downe-Wamboldt, (1992) and Kondracki and colleagues (2002) refer to as the content with visible, obvious components. The researcher applies empirical and statistical methods to the textual material in order to make replicable and valid inferences (Catanzaro, 1988). In contrast, latent content analysis seeks to find the deeper meaning underlying the text (Holsti, 1969) and thus involves interpretation by the researcher of the content (Downe-Wamboldt, 1992; Kondracki et al. 2002). The latent content is therefore inferred by the researcher (Holsti, 1969) who views each element of the textual material within the context of the whole (Catanzaro, 1988).

4.6.2.3 The reasons for using content analysis in the present research

There were several reasons for using content analysis to manage the qualitative data in the present research. Firstly, the interviews with students and with teachers were in effect a communication conversation. Secondly, the reflective journals and responses to the open-ended questions in the VPQ provided written narrative data to communicate students' impressions and opinions, and thirdly, it was the intention to make inferences from all four sources of data to the context, content and objectives of

the programme. Therefore, content analysis was adopted as the method for the analysis of the data from the interview transcripts and reflective journals, and from the open-ended questions in the questionnaire in the present research. Directed content analysis was the main approach adopted, but elements of the conventional content analysis approach were also used, as were manifest and latent analysis.

4.6.2.4 Use of the directed content analysis approach combined with manifest and latent content analysis in the present research

The major focus of the evaluation of the programme was the achievement by participating students of the elements of the University's Strategic Objective One (The Hong Kong Polytechnic University, 2001). Directed content analysis was therefore appropriate as predetermined categories existed to guide the data analysis in the present research. These categories derived from the University's Strategic Objective One (see section 1.1.1.1). An additional predetermined category was related to videoconferencing as a teaching medium. Data analysis yielded, within each of these categories, various codes, which were then grouped into subcategories. Manifest and latent content analysis was employed in this process of categorisation, coding and sub-categorisation.

4.6.2.5 Use of the conventional content analysis approach combined with manifest and latent content analysis in the present research

There were more aspects of interest in relation to the students' learning experiences in the programme than could be covered by the above predetermined categories. From

the literature (see section 2.2) it was seen that several student exchange programmes were being/had been conducted internationally in nursing education. Although no underpinning theory was found regarding these programmes which might explain how students gained learning experiences as a result of participating in a programme, aspects of benefits gained by participating students were identified in various reports. Results described in these reports could potentially guide the analysis of the data obtained from the present research and suggest potential categories. For example, videoconferencing was used as the medium to connect two sites, i.e. Hong Kong and Shanghai. Although literature was found regarding the use of videoconferencing in general education and in nursing education, the way in which videoconferencing was used in the present programme was innovative. However, the existing literature did serve, to an extent, as evidence to guide the data analysis in examining the effectiveness of videoconferencing as applied in the programme. Because, therefore, there were no predetermined categories for these additional aspects of students' learning experiences, the conventional content analysis approach together with manifest and latent content analyses were adopted in the categorisation, coding and sub-categorisation of the data from both student and teacher interviews, students' reflective journals and open-ended questions in the VPQ.

4.6.2.6 The procedure of data analysis

There is general agreement in various research texts (Holloway & Wheeler, 2002; Morse & Field, 2002; Polit & Beck, 2004) on the procedures or processes of analysis. In summary, these include careful and accurate transcription of tapes of interview data; re-listening to these tapes at the same time as checking the transcripts; developing a

categorisation scheme; coding data according to different categories and, in some studies, developing subcategories within these codes.

As noted above, the qualitative data in the present research included four parts: the data from the interviews with students, interviews with teachers, the students' reflective journals and the students' answers to the open-ended questions in the Videoconference Participant Questionnaire (VPQ). The procedures of data analysis of these four sources of data are described below.

The data from students' interviews Following the directed content analysis approach, data analysis began with the researcher identifying and highlighting all content which represented students' learning experiences in the present programme. This process enabled the researcher to organise and code the raw data prior to allocation of data to the appropriate predetermined categories, i.e. global outlook, life-long learning, critical thinking, social and national responsibility, cultural appreciation, language skills, leadership skills and videoconferencing. Initially the researcher coded all the data into the predetermined categories. The next stage of the process was to create subcategories within each category, for example within the category of language skills, the subcategories included difficulties the students encountered in using the different language and strategies the students used to overcome these difficulties. The detailed procedure of the interview data analysis is described below.

Step 1. Listening to the audiotape

Each audiotape was listened to at least once prior to transcription. This allowed the researcher to begin to immerse herself in the life world of the student. Vocal

inflections and interactive segments helped emphasise points made by the students and reinforced these in the researcher's mind.

Step 2. Transcribing the audiotape

After listening to one entire audiotape, transcription was done by the researcher, sentence by sentence. If a sentence could not be clearly heard, that part of the tape would be listened to again for a second or even a third time in order to ensure that the words transcribed were an accurate record. On completing the transcript for each audiotape, that transcript was checked by listening to the audiotape again at the same time as reading the transcript. This procedure was repeated until all 26 audiotapes were transcribed.

Step 3. Reading the transcript

On finishing the transcription of one audiotape, the entire transcript was then read by the researcher. The aim of this was so that the researcher could gain a sense of the whole picture of the students' learning experiences in relation to the predetermined categories. At this point, the researcher recognised the existence of data which did not fit the predetermined categories but no further action was taken at this stage.

Step 4. Highlighting the text

In this step, all text that on first impression seemed simply to describe a student's experience or appeared to indicate a feeling or a thought from the student was highlighted, i.e. the process of content analysis began. This highlighting helped the researcher identify all instances of a particular aspect or topic (Morse & Field, 2002), such as the students' learning experiences.

Step 5. Coding the highlighted text

After highlighting, these highlighted passages were then coded as relevant to a predetermined category. Highlighted text which specifically related to students' perceptions of teaching, learning and clinical nursing practice was coded as relevant to the predetermined category of culture appreciation. However, the researcher felt these data should be categorised more precisely, although re-categorisation was not done at this stage (see steps 7 and 13).

Step 6. From coding to categorisation

After completing the coding of five transcripts, the process of categorisation began. For example, the codes under the category of 'global outlook' in transcript A were put together with the codes under the same category in transcript B. This facilitated the review of data under each category.

Step 7. Checking the accuracy of coding

All codes in each category were re-checked by the researcher to ensure that every code was suitable for allocation to a particular category. At the same time, these five transcripts were sent to the researcher's two supervisors who coded and categorised them independently into the predetermined categories. At a meeting with her supervisors the results of the coding and categorisation by all three coders were reviewed. The few discrepancies were discussed and it was agreed that a satisfactory level had been reached in relation to categorisation of the data into the predetermined categories. Although both supervisors had categorised data related to students' perceptions of teaching, learning and clinical nursing practice within the

predetermined category of culture appreciation, the researcher discussed with them her unease as to whether this was the appropriate category for these data. Following this discussion however, it was agreed that it was an appropriate categorisation.

Step 8. Coding the remaining transcripts

After achieving acceptable inter-coder reliability for the five transcripts, the above procedures, from step 3 to step 6, were repeated to deal with the remaining 21 transcripts. Thus, all 26 transcripts were coded and all codes were grouped together under the appropriate predetermined category.

Step 9. Confirming accuracy of the categorisation

The researcher reviewed all the data coded within each category to ensure appropriate categorisation. A very few data were found to have been inappropriately categorised and these data were relocated in a suitable category.

Step 10. Creating sub-categories

Within each category the data were reviewed and subcategories created. For example, within the category of biliteracy, four subcategories were formed. These were (a) students' difficulties in language learning, (b) the influence of the learning environment within the programme on their language learning, (c) strategies students developed to overcome their difficulties in language learning, and (d) students' views of the improvement they achieved in language skills.

Step 11. Final reading of the transcripts

After all of above steps had been completed, all transcripts were read again. The aim was to ensure no data which could have been coded and categorised had been omitted. Although this process was time consuming, it was considered an important step. In a very few cases some additional explanatory data from the transcripts were added to enrich a particular statement.

Step 12. Checking coding and categorisation over time

This step was designed to check the consistency of the coding and categorisation from start to finish of the process. Five transcripts were randomly selected and coded and categorised once more. The two results were then compared and this showed complete consistency, i.e. there was no difference between the initial and subsequent coding and categorisation.

Step 13. Final checking by an independent coder

Copies of all transcripts were sent to independent coder who was a nurse educator and had considerable experience in conducting qualitative research. A separate list of the codes, categories and sub-categories were also sent. The independent coder was asked to analyse the data and allocate these to the listed codes, categories and subcategories. The aim of this process was to check the accuracy of the researcher's decisions as to the coding, categorisation and sub-categorisation of the data. The result of this verification process showed high reliability in relation to categorisation of data into all but one of the predetermined categories. In reporting her results, the independent coder discussed with the researcher the categorisation of students' perceptions of teaching, learning and clinical nursing practice within the predetermined category of culture appreciation. She felt these data should be allocated into a new and distinct

category. At this point the researcher raised with the independent coder her initial unease about her categorisation of these data into the culture appreciation category as she too felt they represented views which were more specifically related to their educational experiences. Such data she had tentatively coded as ‘other learning experiences’. The independent coder asked the researcher to consider what might be an appropriate category and to meet with her to discuss this matter. The researcher then created the new category of ‘nursing education’ with subcategories of ‘teaching’, ‘learning’ and ‘clinical nursing practice’. Further discussion with the independent coder led to agreement on the coding of these data within the new category and subcategories. The high reliability of the data analysis was then confirmed (see section 4.6.3).

Analysis of other sources of data There were three other sources of data. The data from students’ reflective journals were analysed following the same process as the data from the students’ interview transcripts, except that steps 1 and 2 were omitted as they were not relevant. Analysis of the data from the interviews with the teachers also followed the same process as used for analysis of students’ interviews, although there was only one predetermined category, i.e. videoconferencing. The data from the answers to the three open-ended questions in the VPQ were treated in a similar way except that the three questions each represented a sub-category under the category of videoconferencing.

4.6.3 Reliability and validity

Polit and Beck (2004) define reliability as “the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure” (P. 730)

and validity as “the degree to which an instrument measures what it is intended to measure” (P. 735). Every research study must be evaluated in relation to the research tools and procedures used to generate the findings. Reliability and validity are concepts commonly used in quantitative research although some debate exists about their relevance and definition in qualitative research. However, the concepts of reliability and validity are relevant in qualitative research to evaluate the tools and procedures used in generating the findings (Downe-Wamboldt, 1992; Olson et al. 1998; Shields & King, 2001). Sarantakos (2005) confirms that reliability and validity are integral to qualitative research but point out that both terms may be expressed using different words. For example, qualitative researchers may use the terms ‘applicability’ or ‘credibility’ when discussing reliability and ‘trustworthiness’ is the term commonly used when assessing validity in qualitative research. The concepts of reliability and validity were thus used in the present research to address the issues of applicability, credibility and trustworthiness of the results in the present research. The next section discusses the reliability and validity of both quantitative and qualitative data analysis.

4.6.3.1 Reliability and validity of quantitative data analysis

Course Experience Questionnaire (CEQ) The reliability and validity of the CEQ were reported by Ramsden (1991), using several types of analysis, in a national trial in Australia in 1989 with 3372 usable responses from students across many disciplines including the humanities, social sciences, mathematics and computer science, natural sciences, commerce, engineering, health sciences, education and visual and performing arts. In all, 13 higher education institutions were involved.

Ramsden (1991) used item factor analysis, scale validity and scale internal consistency measurements. A series of item factor analyses broadly confirmed the scale structure developed in his pilot study and all scales were retained in the final version. Scale validity was also obtained by assessing the strength of the relationship between the scale totals and three external criteria: the quality of student learning, students' satisfaction with their courses and their lecturers' own descriptions of their attitudes to teaching and to students. Internal consistency analyses (Cronbach's alpha and item-scale total correlations) provided evidence of the stability of these measures. The Cronbach's alpha for the five scales in Ramsden's test were: 0.87 (good teaching), 0.80 (clear goals), 0.77 (appropriate workload), 0.71 (appropriate assessment) and 0.72 (emphasis on independence) respectively.

The Cronbach's alpha for these five scales in the present research were: 0.78 (good teaching), 0.60 (clear goals), 0.63 (appropriate workload), 0.46 (appropriate assessment) and 0.77 (emphasis on independence) respectively. As the questionnaire used in the present research was not modified, the validity of the questionnaire was not tested.

Videoconference Participant Questionnaire (VPQ) The reliability and validity of the original Provident Participant Questionnaire (PPQ) was not reported (Eaton et al. 2001). The face validity of the modified questionnaire, i.e. the Videoconference Participant Questionnaire (VPQ) was assessed prior to its use in the present research by one of the researcher's supervisors who is familiar with videoconferencing as a teaching medium. After use of the VPQ in the present research, the internal consistency reliability (Polit & Hungler, 1999) was tested and Cronbach's alpha for

each of the three subscales and total scale was 0.72 (presentation style), 0.64 (teaching issues), 0.53 (educational value) and 0.83 (total scale) respectively.

4.6.3.2 Reliability and validity of qualitative data analysis

Reliability Two types of reliability of the data were considered when using content analysis in the present research: stability over time and reproducibility (Krippendorff, 1980; Weber, 1994). Stability over time refers to the extent to which the same results, from the same coder, analysing the same content have been arrived at on more than one occasion. To achieve stability over time requires that clear and precise rules exist for coding and that the process of transcribing and coding data is done accurately. In order to ensure reliability in terms of stability over time in the present research, the researcher coded the first two transcripts and recoded these one month later, without reviewing the previous codes. The two coded transcripts were compared and a high level of agreement (96.8%) of the codes between the two transcripts was obtained. After completing the coding of all transcripts, five transcripts were then chosen at random to be re-coded. This process occurred two to three months after the original coding. Again the results of comparison between the two times coding showed a high level of agreement (96.2%).

Reproducibility is a form of reliability checking. It refers to the extent to which more than one coder independently codes and categorises data in the same way as another coder. In the present research, reproducibility was tested. Following coding, categorisation and sub-categorisation by the researcher, all the original transcripts, together with a list of the codes, definitions of the categories and the subcategories

were given to the independent coder. Reliability in relation to reproducibility was calculated using an equation which divides the number of agreements by the number of agreements plus disagreements (Miles & Huberman, 1984). The result was 95.6%, which is an acceptable level of reliability (Miles & Huberman, 1984). Reproducibility in relation to quotations included in the thesis was achieved by the following process. Those quotations, from both interviews and reflective journals, which were originally spoken in Putonghua or written in Chinese were first translated into English by an independent translator. The English translations were then given to another independent translator who back translated the quotations into Chinese. Both Chinese versions were then compared and no difference was found. This process ensured the reproducibility and therefore reliability of the translations.

Validity Both content and construct validity were considered in relation to the two interview schedules in the present research. Content validity means that derived categories must be sufficient to represent all aspects of the phenomenon/phenomena being studied (Sarantakos, 2005). In the present research, the researcher's supervisors reviewed the interview schedule, and the coding, categories and subcategories used in analysing the data. They agreed that the interview schedules covered all objectives of the programme and that the derived categories were sufficiently representative. In this way, content validity was achieved.

Construct validity refers to the extent to which categories are able comprehensively to describe a theoretical and abstract construct (Sarantakos, 2005). Peer review was one means of achieving this construct validity (Morse, 1991a). Two reviewers (the same two supervisors of the researcher) were asked to judge whether the categories and

subcategories adequately reflected the reality of the data in the transcripts. These two reviewers agreed to the conceptualisation of the categories and the subcategories, their definitions, and the mutual exclusivity of each.

By using an interview schedule that consisted of open-ended questions, validity was enhanced. This was because the interviewer was able to use probing questions in the event of any ambiguities in the answers from interviewees and to clarify any apparent misunderstanding of a question by the interviewee.

Validation using multiple data sources Validity of data was also accomplished by using multiple data sources. The quantitative data were compared with the qualitative data. Within the qualitative data, the collated information from the student interviews was compared with collated information from student reflective journals and from the open-ended questions in the VPQ respectively.

4.7 THE PILOT STUDY

This section presents the pilot study of the proposed student exchange programme. The pilot study was conducted in the summer of 2002, two years prior to the main study. The purpose of conducting the pilot study, interventions taken, experiences and difficulties encountered in the pilot study and strategies which would be taken in main study are presented.

4.7.1 The initiation of the pilot student exchange programme

Six months before the pilot programme commenced, The School of Nursing of the University in Hong Kong approached the School of Nursing of the University in Shanghai to initiate discussions about the possibility of conducting a joint nursing student exchange programme. The Hong Kong School of Nursing representative explained the aim and objectives of the proposed programme, the pattern of the exchange and the main activities intended to be included in the programme, together with the financial support available from the University in Hong Kong to participating exchange students from Shanghai. The School of Nursing of the University in Shanghai appreciated the proposal for the student exchange programme and, following discussion by the senior management group of the School, decided to submit a favourable report of the proposal to the University recommending that the School of Nursing became a partner in the proposed exchange programme. The University agreed to the School of Nursing participating in the programme. Thereafter the plans were made for the pilot study.

4.7.2 Purpose of conducting the pilot study

The purpose of conducting the pilot study was to test the feasibility of the design, organisation and activities planned for the student exchange programme, to identify any issues and/or problems that might occur, pilot the various research instruments which would be used to evaluate the programme and then to use the lessons learned from the pilot study to design the main study.

4.7.3 Preparation for the pilot programme

4.7.3.1 Student selection and related arrangements

The pilot programme was conducted between the School of Nursing of the University in Hong Kong and the School of Nursing of the University in Shanghai from July 7 to August 3 of 2002, a period of 4 weeks. As mentioned in section 4.4.2, information about the purpose, duration, activities, pattern of the exchange, number of participants, criteria for application and method of selection of participants was displayed in poster form in both Schools. All eligible students were invited to participate in the pilot programme and all who indicated their interest in participating were interviewed. In both Schools the researcher along with a nurse lecturer from each School conducted the interviews. In Hong Kong the nurse lecturer was also one of the researcher's supervisors. Following the interviews, each student's GPA was reviewed. Where, in the case of the Shanghai students, their GPA was 2.5 or less, and in the case of the Hong Kong students, it was less than 3.0, the interviewers met with these students again and explained that they would be not selected for the programme, and why. Of the remaining students, the interviewers then decided, based on their judgement of the students' ability with English – for the Shanghai students, and with Putonghua – for Hong Kong students, whether or not to include them as participants in the pilot programme. Those who were to be included were then informed, in Hong Kong by one of the researcher's supervisors and in Shanghai by the students' supervisors. At that point, it was explained to the students that there would be two groups, exchange and non-exchange students and that they would be informed about which group they would be allocated to. There was an opportunity for the students to discuss this decision with the academic staff member and to negotiate if they would prefer to be in a different group. For those Shanghai students who would exchange to Hong Kong,

the International Office of the University assisted them to obtain the required visa. For Hong Kong students who would exchange to Shanghai, but who did not have the required paper work, they obtained this themselves. The cost of travel and insurance for all the exchange students was funded by the University in Hong Kong. The cost of the accommodation in Hong Kong for Shanghai students was also funded by the University in Hong Kong. Hong Kong exchange students lived, without charge, in the University in Shanghai students' dormitory accommodation.

4.7.3.2 Briefing of participants

The researcher conducted a briefing meeting with all students who were to participate in the pilot programme. In Shanghai, she was accompanied by another member of the nurse academic staff and in Hong Kong by one of her supervisors. At that meeting, she explained in detail about the programme and gave each student an information sheet to retain. She then explained that she would be conducting a formal evaluation of the programme and, in order to do this, she would be asking them to complete three questionnaires, a reflective journal and to meet her for an interview about their experiences in the programme. They were assured of the confidentiality of the results, in other words, their responses would be anonymised. The researcher then gave out consent forms to the students and explained that, although they were all participating in the programme, they were free to agree or not to take part in evaluation. The completed consent forms were then handed in to the researcher. No student refused to take part in the evaluation.

4.7.4 Description of the pilot programme

A total 59 students participated in the programme, of whom 30 were from the school in Hong Kong and 29 were from the school in Shanghai. The group of students from each School were divided into those who remained in their home school and those who went to the other School, i.e. non-exchange and exchange students. The 59 students therefore constituted two classes, one in Hong Kong and the other in Shanghai, in each of which there was a mix of non-exchange and exchange students. The activities organised in the programme included theory input, in which the students took two credit-bearing subjects entitled respectively Health Counselling and Contemporary Issues in Nursing and Health Care; clinical visiting, including visits to different types of health care settings; and social activities which were organised by the two schools or by the students themselves. In relation to the theory input, teachers from both schools were involved. Health Counselling was taught by the teacher from the school in Hong Kong and English was used as the language medium, while Contemporary Issues in Nursing and Health Care was taught by the teacher from the school in Shanghai and Putonghua was used as the language medium. The requirement for each subject was 42 hours which gained 3 credits. Videoconferencing was used as the teaching medium to connect Hong Kong and Shanghai for the concurrent conduct of the lectures to the students, who were in these two different places. Tutorials were conducted separately in the two places, and were facilitated by local tutors from the two schools. The weekly organisation of the programme was as follows. Every Monday from 9:30 am to 12:30 pm and from 2pm to 5:30pm, with a short break mid-morning and mid-afternoon, the lectures for Health Counselling were conducted. Every Tuesday the same pattern was followed for Contemporary Issues in Nursing and Health Care. On Wednesday mornings, the tutorials for Health

Counselling were conducted from 9:30am to 12:30 pm with a short break mid-morning. On Wednesday afternoons, the tutorials for Contemporary Issues in Nursing and Health Care were conducted from 2pm to 5:30pm with a short mid-afternoon break. Clinical visits took place on Thursdays and Fridays and the weekends were reserved for social activities although occasionally social activities might also take place on Thursdays and Fridays.

4.7.5. Evaluation of the pilot programme

In the evaluation of the pilot programme, the following research instruments were used.

- The questionnaire entitled ‘Approaches and Study Skills Inventory for Students’ (ASSIST) (Entwistle, 2001) was selected as this questionnaire focuses on students’ learning approaches. This questionnaire was administered to the participating students by the researcher before and after the pilot programme.
- The Course Experience Questionnaire (CEQ) was used to assess students’ experience of the learning environment in the programme. This questionnaire was administered to the participating students by the researcher before and after the pilot programme.
- The Videoconference Participant Questionnaire (VPQ) was used to assess students’ perceptions of the effectiveness or otherwise of videoconferencing as a teaching medium. The questionnaire was administered to participating students by the researcher after the students had completed the pilot programme.

- Two interview schedules were used, one for students and one for teachers. The interviews with the students were intended to explore in more detail their learning experiences in relation to the objectives of the programme. For the teachers, the interviews explored their experiences of videoconferencing as a teaching medium. The interviews with both students and teachers were conducted after completing the pilot programme.
- Students' reflective journals were used to enable the students to write freely about their perceptions of taking part in the programme. The participating students were required to make entries in their reflective journal at least one time per week and to submit the journal on the following Monday.
- The students' scores on the end of course assessment for each of the two subjects were included within the evaluation of the programme. The subject teachers, who had set the assessments, then marked these following their normal procedure. Thereafter, the assessment results were collected by the researcher.

4.7.6 Experiences gained from the pilot study

This section describes the students' and teachers' experiences gained in the pilot programme and is followed by a section on the lessons learned for the main study from the pilot programme and its evaluation.

The data from interviews with students and students' reflective journals showed that participating students had positive views about the opportunity of learning, working and living together with the participating students from another School. All students,

exchange and non-exchange, believed that they had learned a lot, not only about the culture of life in another social context, but about the differences in teaching and learning in nursing education in the two Schools. This was obvious to them because of the videoconferencing, from which they saw the different approaches to teaching and learning in the two schools. Although both Hong Kong and Shanghai belong to China, there were many differences in life, work and study. These had not been anticipated by the students prior to their participation in the pilot programme. The Hong Kong students who exchanged to Shanghai said that, because they lived together in the University dormitories, they came to know both the other Hong Kong students and the Shanghai students well. Even although the Hong Kong students in each study year had all attended their classes together, they all lived in their own homes and so did not have as much interaction with their classmates as they had in the programme.

The comments from teachers showed similar views to those of the students. The teachers believed that the programme was not only to do with the content, e.g. the subjects taught, but was more than that. It was to do with the totality of the students' experience.

The data from interviews and reflective journals in relation to the visits to different clinical settings in the pilot programme indicated these were also viewed very positively. All students felt these visits helped them not only to learn about local nursing practices but also to recognise the strengths and weaknesses of each others' health care systems and practice. The students discussed with each other various issues and topics regarding health care practice and nursing knowledge and skills in

which they were interested. The local students from both schools also appreciated these visits and believed that they learned a lot as they had not previously had many opportunities to visit a number of different clinical settings. The students believed that they gained a 'real' picture of the health care service in another culture and society and that this had changed some of their views and ideas. The Shanghai exchange students particularly felt that the knowledge they gained from the clinical visiting would affect their nursing career positively in the future. Where previously they had been unsure about the value of a career in nursing and had had no previous experience of clinical practice, their visits had shown them that the Hong Kong nurses cared for patients in a very personal way and were concerned that the patient should benefit from their care. Students from both schools mentioned that, if it were possible in future exchange programmes, they would like to have actual practice experience in clinical settings.

On completion of the programme, the use of videoconferencing as a teaching medium was evaluated for its effectiveness. The results from the VPQ showed the students considered that being taught using videoconferencing as the teaching medium was innovative and creative and that it enabled them to experience different teaching styles without having to travel to the other school. Because the use of videoconferencing meant all the students shared in the same teaching sessions, they were able to discuss both the content and the teaching style with each other. This they did by interacting directly with students in the other school during the break times and by discussing within their own class of exchange and non-exchange students after the classes. It was the first experience of videoconferencing for almost every student

participant. They were excited and interested and believed videoconferencing was effective and useful for this programme.

The teachers' views on the effectiveness of videoconferencing confirmed what the students mentioned. Both teachers believed that there is no difference in preparation and delivery between a face to face lecture and a lecture mediated by videoconferencing. The teachers also thought that the use of videoconferencing can save time and money as more students can attend a class and there is less travelling for students and teachers.

4.7.7 The lessons learned from the pilot study and strategies for improvement

Although the design of the pilot exchange programme was appreciated by the student participants and the value of the programme was recognised very positively, some weaknesses or shortcomings in the organisation of the programme were identified in the evaluation. Lessons learned from the pilot study were important to the finalising of the design of the main study.

4.7.7.1 Regarding organisation of the pilot programme

The students considered that 4 weeks was too short a time for studying two credit-bearing subjects, each of 42 hours. They spent a lot of time attending the lectures and tutorials and felt they did not have enough time to read the teaching material and go to the library to find and read references. In addition, they felt they needed more time to study and learn because, for all of them, one of the subjects was taught in a language

different from their own. The Hong Kong teacher taught in English which was difficult for the Shanghai students and the Shanghai teacher taught in Putonghua which was difficult for the Hong Kong students. For the above reasons, the students felt they had to work hard on their learning of the theoretical content at the weekends and suggested that the programme should be of longer length so that they could enjoy the lectures and their learning more. The issue of the programme length for the main study will require to be considered. However, the teachers made no mention about the lectures' schedule in the programme.

The students thought it would be better if the subjects offered in the programme could be more relevant to and representative of the local culture or situation. While their views about the Health Counselling subject were very positive, they felt the subject content of Contemporary Issues in Nursing and Health Care was less related to the situation in Hong Kong or Shanghai. This subject concentrated on international issues and, in addition, most students from the School of Nursing in Hong Kong had already taken this subject. Therefore, more attention should be paid to subject selection in the main study.

In the pilot programme, the whole day on Monday was the lecture time for the subject of Health Counselling, as was Tuesday for the lectures on Contemporary Issues in Nursing and Health Care. The whole day on Wednesday was arranged for tutorials, in which the tutorial for each subject occupied half a day. The students thought that it was difficult for them to concentrate on listening in the classroom for an entire day and they also thought it would be hard for the teacher to have to give lectures throughout a whole day. They suggested that each day should be divided between the

lecture and the tutorial, e.g. the lecture could be delivered in the morning and the tutorial in the afternoon. Alternatively the lecture for subject A could be delivered in the morning and the lecture for subject B in the afternoon. This however, was not an ideal solution as the students would still have to concentrate on listening in the classroom for an entire day. A different structure for the days in the main study programme will be considered.

In relation to the students' daily living activities, they commented on the structure of the groups within which these activities took place. For example, the students who attended the programme in Shanghai tended to share these activities in pairs, i.e. one local student and one exchange student. The students who attended the programme in Hong Kong were arranged in groups which consisted of two to three local students and two to three exchange students. Both patterns were designed to ensure that the exchange student could receive help whenever she or he needed it. The evidence indicated that the group pattern in Hong Kong was seen to be more effective because occasionally a student in Shanghai who was paired with a student from Hong Kong might not be available to accompany the Hong Kong student. The group structure in main study will be reconsidered.

The Hong Kong students who attended the programme in Shanghai lived in the University student dormitories together with the Shanghai students. This arrangement allowed much more communication between the exchange and non-exchange students than was the case in Hong Kong where the Shanghai students lived in a hotel. However, the Hong Kong students found it difficult to live during the summer in a room which did not have air conditioning, for example some had problems in sleeping.

Accommodation arrangements should therefore be re-considered in planning the main study.

Although most students and teachers believed that the videoconferencing used in the programme was helpful and valuable, some shortcomings were identified. These were mainly related to the quality of sound and the connection between the two sites. The students could not always hear the teacher clearly and they thought that this was caused by the teacher's inappropriate use of the microphone. In order to solve this problem, the teachers who would take part in the main study should be trained in the use of the microphone before commencement of the main study. In relation to the issue of connection between the two sites, both students and teachers mentioned this. Although there had been a trial of this before the pilot programme commenced, the problem persisted. Discussions with the technicians at both sites led to a decision that, in the main study, the connection will be made and tested at an earlier stage, i.e. before a class commences.

Teachers' experiences were similar to those of the students. As to the connection problem, the teachers were not sure whether the students in the other site could hear or not and needed to confirm this sometimes. As correcting problems with the connection between the two sites used up some lecture time, the teacher then had to cut out some of the planned lecture content. One of the teachers mentioned that she felt she had not paid attention to the technical requirements for the lecture mediated by videoconferencing, i.e. did not use the microphone properly and also that she was not sufficiently concerned about the students in the other site. Both teachers suggested that it would be important, before a teacher used videoconferencing as a teaching

medium for first time, that they should be trained in the skills required. The technical aspects should also be trialled before being used.

4.7.7.2 Regarding the evaluation of the pilot programme

In the evaluation of the pilot programme, the 'Approaches and Study Skills Inventory for Students' (ASSIST) questionnaire, which focussed on the students' learning approaches, was used. Initially it had been thought that this questionnaire would be appropriate because the learning environment in the exchange programme was likely to be very different from what the students were used to. However, it was found that this questionnaire was not appropriate for use in the 4-week pilot programme. Busato, Prins, Elshout and Hamaker (1998) believed that a student's learning approach was formed over a considerable time period and could not be changed within a short time period. This was confirmed by the results from the analysis of the data from the ASSIST questionnaire which showed no significant differences in students' learning approaches before and after the pilot programme. Given that the likely duration of the main study exchange programme will also be relatively short, the ASSIST questionnaire would be valueless and will therefore not be used in the main study.

The place in which interviews are to be conducted should be chosen carefully. In the pilot programme evaluation, the rest room in a ward of the hospital was used for some of the interviews. This was because some interviewees were having clinical practice experience during the evaluation period and the interview was held in the ward in which they were having that experience. As a result, however, the interview was sometimes interrupted and this inevitably affected the quality of the interview. The

choice of room for interview should therefore be carefully considered for the main study.

Each student was asked to write their reflective journal and to submit it every week. It was noted that, in these journals, students simply listed the activities they had attended and, at a rather superficial level, what they had learned from attending the activities within that week. They seldom reflected their feelings and thoughts about their experiences. In the main study, it is clear that students will require instruction on how to write a reflective journal and this should be done before they begin the process. This was not done in the pilot programme. In addition, the timing of collection of the journals will required to be reconsidered. For example, it may be better to collect the journals on completion of the programme or even later, thus giving the student time to reflect and think more about their feelings and experiences before having to write about them.

CONCLUSION

The research design, i.e. programme evaluation was discussed in chapter 2. This chapter briefly reintroduced the design and this was followed by a discussion of triangulation, the method used in the evaluation of the programme. An evaluative research design and the triangulation method were used to collect the data. The reasons for using multiple data sources were discussed. The research sample and settings were explained. This was followed by a description of the instruments used in the present research and the justification for their use. The approaches to data management included the use of statistical tests for the quantitative data, while the

content analysis method was adopted for the qualitative data. Reliability and validity of both quantitative and qualitative data results were discussed. Lastly, the pilot study and its evaluation were described, and the chapter concluded by outlining the experiences gained in conducting the pilot study and the strategies proposed for improvement in the main study.

The next chapter describes the main study.

CHAPTER FIVE

THE MAIN STUDY: THE STUDENT EXCHANGE PROGRAMME

INTRODUCTION

The present student exchange programme was conducted between two Schools of Nursing, one in Hong Kong and the other in Shanghai during the summer vacation of 2004*. In previous chapters, the aims and objectives of the programme were described and discussed and chapter 4 included details of the pilot study. This chapter presents the main study, the preparation and implementation of the programme and the programme evaluation. The description of the events which occurred before the programme commenced includes information on the administrative aspects and details about the preparation of the participating students, the subjects taught in the programme, the teachers, the videoconferencing and the clinical visiting. The description of the events which occurred during the programme implementation provides details on the conduct of the lectures, including the application of videoconferencing, on the conduct of the tutorials and on the clinical visits. The description of the programme evaluation, including the data collection procedures, provides details on the issue, completion and collection of the two questionnaires, the conduct of the interviews with the students and with the teachers, explanations and submission instructions given to the students in relation to their reflective journals and the procedures followed in relation to the students' assessment scores.

*As the SARS outbreak occurred in 2003 the main study was postponed for one year.

5.1 THE PREPARATION OF THE PROGRAMME

In order that the programme could be conducted smoothly and effectively, prior preparation was important.

5.1.1 Administrative aspects

Administrative arrangements were prepared in both Schools of Nursing. Although there had been agreement between both Schools as to the conduct of the pilot study, the first step in relation to the main study was taken by the Head of the School in Hong Kong who sent a letter to the Dean of the School in Shanghai in order to gain agreement and cooperation for the main study. This was necessary because the programme was initiated by the School of Nursing in the University in Hong Kong. After receiving the reply indicating agreement from the partner, the detailed administrative work began, the most important initial step of which was to set up a programme team in each of the two Schools.

The team members in each School included nurse academics, technical staff, a secretary and supporting administrative staff. The overall responsibility of the team was to report to their respective Heads of the School about the programme, to report to the Academic Exchange and Collaboration Office in their respective Universities, to communicate with the partner School and to manage the programme within their own School context. The specific responsibilities of the team members, after discussion and agreement with the partner School, included:

- selecting the two subjects to be offered in the programme;

- contacting the teachers who would be responsible for conducting the lectures and tutorials and negotiating with them for their collaboration as the programme was conducted in the summer vacation and would be evaluated;
- recruiting the students;
- arranging the clinical visits;
- negotiating with the technician responsible for the preparation and conduct of the videoconferencing;
- arranging the classroom and tutorial rooms;
- arranging accommodation for the exchange students;
- helping the local students who would go to the other School to attend the programme to get the relevant travel documents, e.g. passport and visa;
- helping these exchange students from both Schools to apply for sponsorship and financial support from the University Grants Committee in Hong Kong; and
- helping the exchange students to settle down after arriving at the other site.

To ensure the preparation work took place smoothly, each team developed a work plan and time schedule, according to the priority assigned to the above matters. The researcher acted as coordinator between the two Schools and was involved in some of the above tasks. Where this occurred it is mentioned in this chapter.

5.1.2 Preparation of students

There were several steps involved in the preparation of the students. These included advertising the present student exchange programme on campus and inviting eligible

students to apply, interviewing the student applicants, meeting with those students who were selected to participate in the programme, and dealing with the preparations for the exchange students who would go to the other site.

At the end of 2003, both Schools posted a notice on their campus which announced the present student exchange programme (see Appendix 1). The content of the poster included:

- the purpose of the programme;
- the time at which it would run;
- the activities involved, including which subjects would be offered to the participating students and how much credit these subjects would bear, and what types of visit would be organised;
- the pattern of exchange; i.e. the participating students in Hong Kong and in Shanghai would form two classes, one in Hong Kong and one in Shanghai, and in each class there would be a mix of students. Half of each class would be exchange students who had travelled to the other site, and half would be non-exchange students, who had remained in their home School.
- the cost of attending the programme and the possibility of financial assistance;
- the criteria for eligibility to apply, including
 - which study year the student should be in;
 - the student's GPA;
 - language ability, i.e. English or Putonghua skills;
 - commitment to study nursing from an international perspective; and
 - independent and effective decision-making abilities.
- how to apply for the programme, including

- the date period for application;
- where to obtain the application form
- where to submit it
- the date and timing of selection interviews and
- the contact person for any enquiry.

After applications were received, an interview of 5 to 10 minutes was arranged with each student applicant. The researcher, together with a member of the academic staff, was involved in the interviews of the Shanghai students. One of the researcher's supervisors interviewed the Hong Kong students. The purpose of the interview was to gain information about the motivation and expectations of the applicant and their independent and effective decision-making abilities and to assess their language skills. In order to assess these skills English was used for the discussion with the student applicants in Shanghai and Putonghua for those in Hong Kong. After completing all the interviews in Shanghai and reviewing each student applicant's academic work from the previous semester, the interviewers discussed and then decided which students should be selected to attend the programme. The students who were selected to attend the programme were then randomly divided into two groups, one of which would go to the other School and one of which would stay in their home School. This randomisation was done by the two interviewers (see section 4.4.2). Students in Shanghai were informed of the results of the selection and that they could negotiate with the academic staff member who interviewed them if they wished to change the group to which they had been allocated. In Shanghai, one student who had been allocated to the exchange group asked to remain in her home School and this was agreed. Another student then agreed to take her place in the exchange group. The

School of Nursing in Shanghai then sent the list of names of the exchange students to the School of Nursing in Hong Kong. These exchange students then received a letter of invitation to take part in the programme from the School of Nursing of the University in Hong Kong. This letter was needed so that they could apply for and obtain the necessary travel documents, i.e. the passport and visa. The academic staff helped the students make their application. The students in Hong Kong were asked by the interviewer to provide the information about their previous academic assessment and to indicate their preference as to whether they would like to stay in their home School or to go to Shanghai. The interviewer then allocated the students to either the exchange or non-exchange group accordingly.

After interview, all students who had been selected to attend the programme were invited to a briefing meeting, one of which took place in Hong Kong and one in Shanghai. The researcher, together with an academic staff member, was present at each meeting, in which detailed information about the programme was provided and the fact that the programme would be formally evaluated was also explained, as were the ethical approval procedures. This introduction was followed by a question and answer session. When there were no more questions, the non-exchange students, i.e. those who would remain in their home School, left the briefing. The exchange students were then given an introduction to the various issues related to studying and living in the other site, including information about exactly where they would live, about the campus of the host University, about what they would require to prepare for travelling and about how to apply for sponsorship. The researcher introduced herself and acted as a resource person to provide the above information, for example how to telephone home, where to gain access to the internet, what facilities were available in

the University or School and in the student accommodation, and about any special requirements for which the exchange students should prepare. She then gave an opportunity for the students to ask questions.

Following the briefing meeting, the programme teams in both Schools made the travel arrangements for the exchange students. The Hong Kong team booked the flight tickets and arranged travel to the airport for the exchange students and the Shanghai team booked the rail tickets and arranged travel to the rail station for the exchange students.

5.1.3 The subjects to be taught in the programme

One of the two subjects which had been taught in the pilot programme was included in the main study programme, i.e. Health Counselling. The other subject had not proved to be suitable, for reasons outlined in section 4.7.7.1, and negotiation took place between the two Schools to decide on the replacement subject. Agreement was quickly reached that the subject to be included in the main study should be Interpretation of Clinical Data.

5.1.4 Preparation of the teachers

After the programme teams had selected the subjects to be offered to students in the programme, they organised a meeting in each School at which the teachers and tutors for the chosen subjects were approached to see if they were prepared to participate. The purpose of the student exchange programme was explained and the activities

involved were introduced. The responsibilities of participating teachers and tutors were then fully discussed, including the fact that videoconferencing would be used to deliver the lectures concurrently to the students in both Schools, i.e. to the students in the classroom in which the teacher was present and, at the same time, to the students in the classroom in the remote site. In Shanghai, where the teachers had no previous experience of this specific format of videoconferencing, they then contacted the technician who gave them two training sessions, one to provide them with knowledge about the videoconferencing equipment which would be used in the lectures, and the other to give them the opportunity of a trial session of teaching using videoconferencing as it would be used in the programme.

Three teachers conducted the lectures in the programme, one from the School in Hong Kong and two from the School in Shanghai. The tutorials for both subjects were conducted separately in Hong Kong and in Shanghai, as videoconferencing was not used for these. Two tutors were involved in each School, one for the Health Counselling subject and one for the Interpretation of Clinical Data subject. The teacher who conducted the lectures on Health Counselling in Hong Kong also acted as the tutor in tutorials for that subject and the researcher conducted the tutorials in Hong Kong for the subject of Interpretation of Clinical Data. In Shanghai, two tutors were each responsible for tutorials for one subject. The teachers discussed with the tutors how the tutorials should be conducted. The teachers responsible for the lectures prepared their teaching material, including the subject description, their lecture notes, Power Point presentations and, for the students in the class in Shanghai, reference material. All of these were also provided as handouts for the students, and were sent

to the tutors in the other School so that they had advance notice of the content of the lectures and so that the material could be copied and handed out to their students.

5.1.5 Preparation for videoconferencing application

The researcher approached the technicians in both Schools to prepare the equipment and connection between the two sites. An introduction about the exchange programme and the purpose of using videoconferencing in the lectures was provided to the technicians in both sites. A telephone discussion was then arranged between the technicians of the two Schools, at which the technicians exchanged information on the list of videoconferencing equipment which would be used for the programme. This exchange helped the technicians to get to know each other, a factor which would facilitate the solving of problems should any occur in the programme. At a time close to the commencement of the programme, a videoconferencing trial was conducted between the two Schools, the purpose of which was to test the correct functioning of the equipment and the connection between the two Schools. At the first trial, the connection failed. The technicians in the School of Nursing in Hong Kong then tried to find the source of the problem. They approached the relevant person in the commercial company which was responsible for connection of the lines between the two sites to consult with them about the problem and to find a possible solution. Following this, a second trial was conducted and was successful. A third trial was then conducted, in order to test the stability of the connection and, at this point, to train the teachers in Shanghai in the use of videoconferencing. The teachers from the School in Shanghai conducted a 10 minute lecture, to test the quality of sound and image transformation and gain some experience in presenting the lecture mediated by

videoconferencing. The teacher from the School in Hong Kong did not require this training as he had previous experience in conducting a lecture mediated by videoconferencing.

5.1.6 Preparation for clinical visiting

Both Schools organised clinical visits for the students who attended the programme. The programme team in both Schools did some preparation for these visits. They discussed which clinical settings would be suitable for the visits. The principle followed for the selection of settings was that each should represent a different type of the local health care services. After making this initial selection the team contacted the responsible agency and, if they were positive about the visit, to seek permission for it to take place. The method of contact was different in the two Schools. The School in Hong Kong sent a letter to the agency to indicate the requirement, purpose of the visit, the number of visitors and the proposed date of the visit. They then waited for the agency to answer the letter. Occasionally it was necessary to talk with the agency by telephone, in order to clarify and discuss the proposed visit. The School in Shanghai contacted different health care agencies by telephone. After receiving approval, a memorandum of confirmation was sent to each agency.

5.2 THE IMPLEMENTATION OF THE PROGRAMME

Following these detailed preparations, the programme commenced on time. This section describes the process of implementation of the programme, and includes a description of the time schedule for the activities in the programme, commencement

of the programme, conduct of the lectures, use of videoconferencing, conduct of the tutorials and conduct of the clinical visits.

5.2.1 Process of implementation

The programme was conducted between the School of Nursing of the University in Hong Kong and the School of Nursing of the University in Shanghai from July 5 to August 13 of 2004, a period of 6 weeks.

A total of 84 students participated in the programme. Of these students, 45 came from the School in Hong Kong, of which 29 exchanged to the School in Shanghai and 16 remained in their home School, whereas, of the 39 students who came from the School in Shanghai, 20 exchanged to the School in Hong Kong and 19 remained in their home School. The number of students who attended the programme in Hong Kong was therefore 36, while 48 attended the programme in Shanghai. In both Schools, each class of students was divided into several groups, and each group consisted of students from both Schools.

The activities organised in the programme included classroom teaching, i.e. the theory input, clinical visiting and social activities. For the theory input, all the students took two credit-bearing subjects, entitled respectively Health Counselling and Interpretation of Clinical Data. The former was taught in English by the teacher from the School in Hong Kong, while the latter was taught in Putonghua by the teachers from the School in Shanghai. The classes in the two sites were connected by the use of videoconferencing, so that the lectures in both sites were conducted concurrently.

Tutorials for each subject were carried out separately at each campus without the use of videoconferencing.

The students in both sites visited different clinical settings. The students in Hong Kong visited Princess Margaret Hospital, Alice Ho Liu Ling Nethersole Hospital, Alice Ho Miu Ling Nethersole Elderly Care Home and Caritas Medical Centre. They also visited the Nursing Skills Laboratory in the University and its nurse-led Integrated Clinic which provides out-patient care with both Traditional Chinese Medicine (TCM) and Western style medicine. They also visited the Health Information Centre of the Hospital Authority. The clinical visits for the students in Shanghai were to Zhong Shan Hospital, Hua Shan Hospital, Pu Dong Wei Fang Community Health Centre, Ling Fen Elderly Care Home, Shanghai Paediatric Medical Centre and No. 1 Social Welfare Care Centre which is an elderly care home (see Appendix 8).

The local students were responsible for organising different social activities in each site. They selected venues which were of historic interest, and which illustrated the culture of Hong Kong or Shanghai respectively. Often these were also tourist attractions. The local students in Hong Kong took the exchange students to visit Stanley Market, Hong Kong Science Museum, Hong Kong Convention and Exhibition Centre, Repulse Bay Beach, Tai Long Wan Country Park, Victoria Park Garden and Ocean Park. The local students in Shanghai took the exchange students to visit the main campus of the University, Shanghai Museum, Shanghai Science and Technology Museum, Oriental Pearl TV Centre, Yuyuan Garden, Nan Jing Lu Street, and Zhu Jia Jiao Country Garden.

The time for activities in each week was scheduled. Every Monday, for the subject of Health Counselling, the students attended a lecture in the morning and a tutorial in the afternoon. On Tuesdays, they worked on the subject of Interpretation of Clinical Data and attended a lecture in the morning and a tutorial in the afternoon. Wednesdays were designated for self study time, and clinical visits and social activities were arranged on Thursdays and Fridays (see Appendix 9). If there was a need to visit a clinical setting on a Wednesday, the students would have self study time on the Thursday.

5.2.2 Commencement of the programme

The day before the programme commenced, the exchange students arrived at the host School. The teachers and local students in both Schools helped the exchange students to settle down in the new place. The teachers and students in Shanghai took the exchange students from the airport to their dormitory, helped them get their Library card and Canteen card, and bought some useful things for their daily life in the new setting, e.g. a telephone card so that they could telephone home, and they introduced them to the campus. The researcher and students in Hong Kong first took the exchange students from the train station to the student hall. They then took them shopping for useful things for their daily life in the new setting and introduced them to the surroundings of the University, which included a supermarket, shopping centre and the canteen in the student hall. These actions made the exchange students feel welcomed and enabled them more quickly to enjoy life in the new place and feel less homesick.

On the morning of July 5, before the class began, the Head of the School of Nursing of the University in Hong Kong gave a welcome speech to the students in both sites using videoconferencing. The speech formally announced the commencement of the programme and the students were encouraged to work hard to fulfil the goals of the programme and gain benefit from their participation.

5.2.3 Conduct of lectures

On the morning of every Monday and Tuesday, the teacher gave the lecture to the students who were in two separate classes, one in Hong Kong and the other in Shanghai. The technicians in both sites went to the classroom earlier in the morning, in order to do some preparation, e.g. ensuring the connection between the two sites was operating correctly. The teacher came to the classroom half an hour before the class began, to prepare for the lecture. Usually, the teachers in both sites used Power Point as a teaching aid in their presentation of the teaching material in the lecture. Sometimes, they gave a demonstration to the students, had the students do role play and encouraged them to ask questions. Teachers' lecture notes were handed out to the students before the lecture began. At the end of each class, there was a final question and answer session. Each lecture lasted three hours, from 9:30 to 12:30, with one or two breaks within the session.

5.2.4 Application of videoconferencing

In the School of Nursing in Hong Kong, the room-system videoconferencing was used. Commercial videoconferencing equipment (Polycom SP384/512 video conference system) was employed with the H.323 standard protocol communication and was connected to a 384 kps (3x128 kps) ISDN line. Additional equipment was necessary and included audio, video, and projection equipment. The audio equipment included the sound system, lectern microphone, wireless microphone, wired microphone and audio cassette recorder. The video equipment included a projector with resolution of 1024X768 pixels, visualiser, video cassette player (VHS), DVD player, Polycom video-conferencing camera and Panasonic video camera. The projection equipment used the Barco projection system which included a projection screen (100inch×100inch), overhead projector and slide projector. The connection of these components in the Hong Kong site is illustrated in Figure 5-1. The video and audio were digitised and compressed by a codec (Compression-decompression unit) before transmission, to reduce the bandwidth requirement. For every lecture session, the School of Nursing in Hong Kong initiated the connection with the School of Nursing in Shanghai.

In the School of Nursing in Shanghai, commercial videoconferencing equipment (Polycom VS4000) was used. All audio, video and projection equipment was similar to that used by the School of Nursing in Hong Kong. The video camera located at the back of the classroom was a Panasonic 3CCD and the other cameras were JVC. The projection system, located at the front of the classroom, was a rear projection system with two LCD projectors. The connection of the videoconferencing was similar to what is shown in Figure 5-1.

Connection Diagram of components

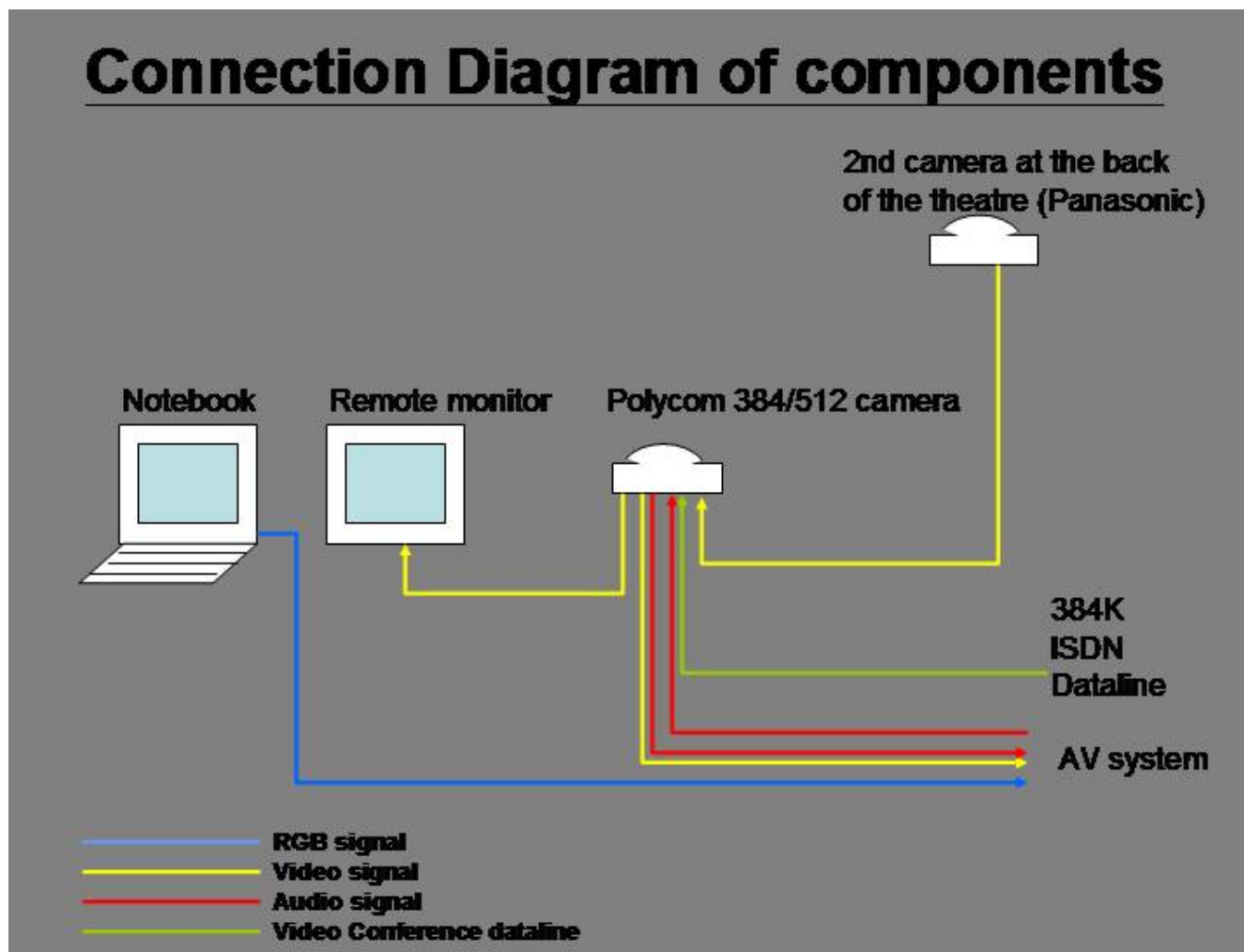


Figure 5-1 Connection of Videoconferencing Equipment in the Hong Kong Site

When the School of Nursing in Hong Kong was the presenting site, two cameras were available in the lecture theatre. One was located at the back of the theatre to give the remote site students an overall view of the classroom, including a view of the teacher and all the students; the other camera, which focused on the teacher who was presenting the lecture, was used for the question and answer sessions when the Power Point slides did not need to be shown. In these sessions, this camera could be switched by the technician to focus on the students, so that the students in the remote site could see the student who was asking the question. In addition, there was sufficient light at the presenting site to illuminate the teacher, so that the students in the remote site could maintain eye contact with him/her. Using a notebook (1 BM ThinkPad T30), the teacher displayed the Power Point slides to the students in both sites. A LCD monitor (Samsung 17 inch TV monitor) was set up (see Figure 5-2) so that the teacher could see what was happening in the remote site. There was one projection screen in the classroom in Hong Kong which displayed the teacher's Power Point slides and the students in the remote site. In Shanghai there were two projection screens (100inch×100inch). One showed the whole classroom in the presenting site (see Figure 5-3), and the other showed the teacher's PowerPoint presentation.

When the School of Nursing in Shanghai was the presenting site, the conditions were reversed. One camera was used in the classroom to provide an overall view of the classroom for the receiving site. As there were two screens in the classroom in Shanghai, the students in Shanghai could see the teaching material, i.e. Power Point slides on one screen and the classroom in Hong Kong on the other screen. However, as there was no remote monitor in Shanghai, the teacher could not see the students in the receiving site unless she looked over her shoulder to see the screen which

displayed the Hong Kong classroom. As just one screen was used in Hong Kong, the students could see the teaching material and the view of classroom in the presenting site on that single screen.

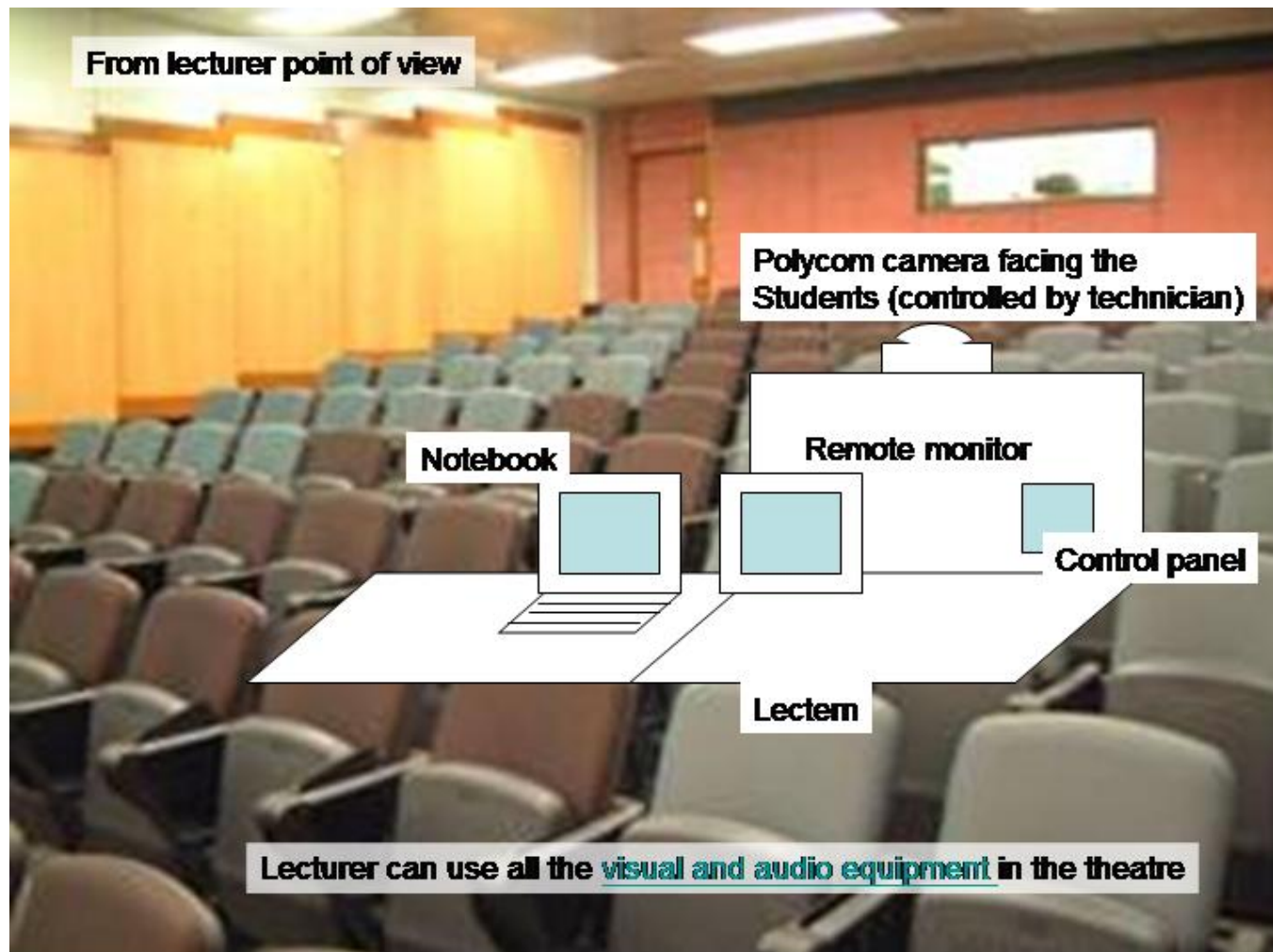


Figure 5-2 Presenting Site: from the Teacher's Point of View

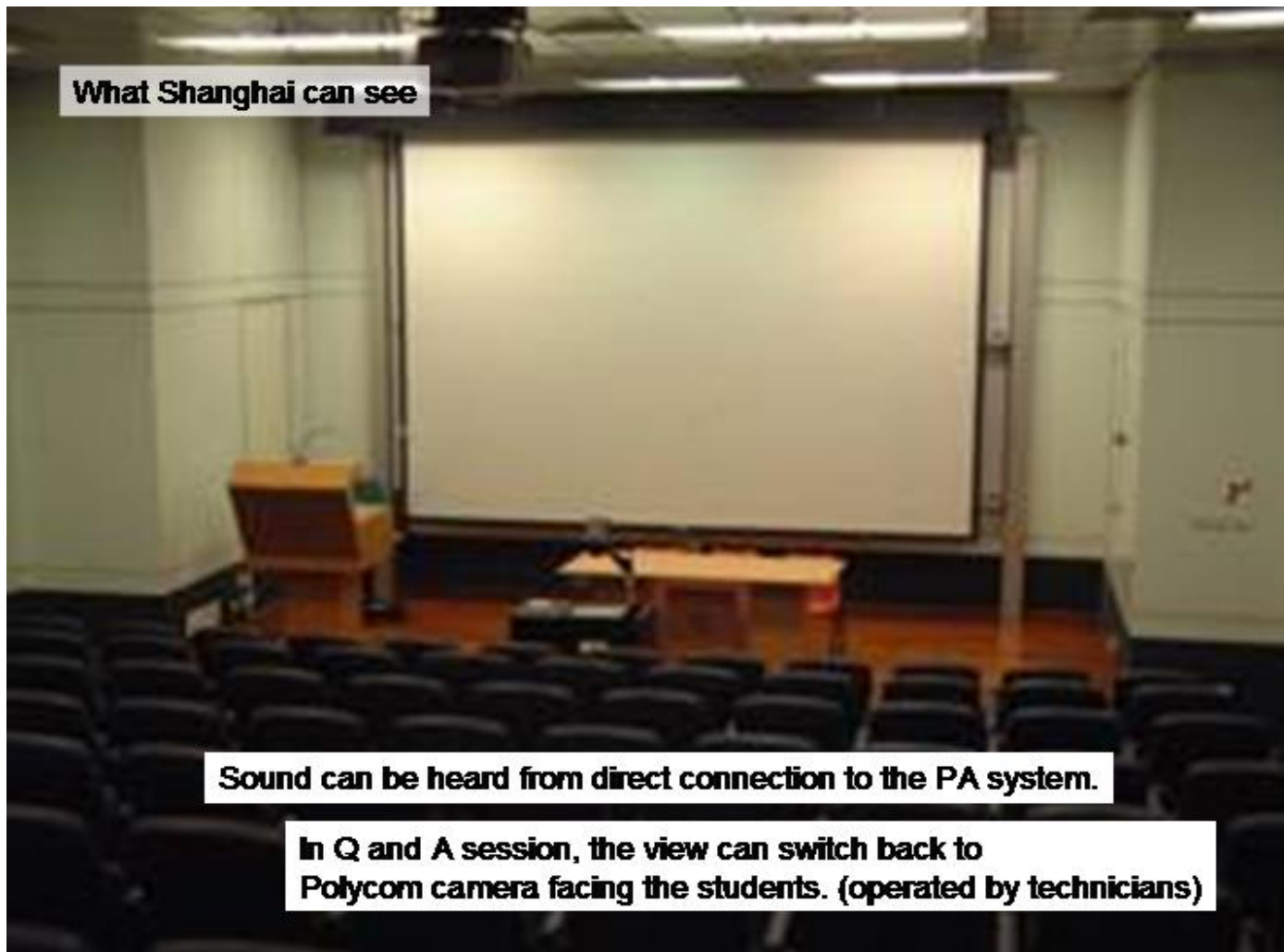


Figure 5-3 Receiving Site: the View of the Classroom in the Presenting Site

5.2.5 Conduct of tutorials

Every afternoon on Monday and Tuesday, the tutorials were conducted. The duration of each tutorial session was 4 hours with a short break at around the midpoint. In the tutorials for the subject of Health Counselling, the tutor in each site summarised the content presented in the morning's lecture, and the students then practised health counselling. They worked in small groups of 4 to 5 students in which one student played the role of the patient, and one the role of counsellor, while the others observed the interaction. Demonstration and re-demonstration were undertaken in these tutorials. The tutorials for the subject of Interpretation of Clinical Data in each site were similar in that the students discussed patient cases. However, the conduct of the tutorials was different in the two sites. In Shanghai, for some of the tutorials, the students, in two groups of 20, accompanied by a teacher and a tutor, went to a hospital ward and met a patient. Prior to this, the teacher or tutor had chosen two appropriate patients and had requested their permission to bring the students. The students had then been given information from the consenting patient's case notes just before meeting him/her and informed that all patient information must be kept confidential. Some then asked the patient questions and one or two students in the group might do a clinical examination. After that they thanked their patient and left the ward. They then returned to the tutorial room and discussed the patient case and took part in making a nursing assessment. For the other tutorials, the tutor provided patient case studies, i.e. no visit to the hospital took place. In Hong Kong all the tutorials for the subject Interpretation of Clinical Data were based on the same patient case studies which were provided to the tutor in Hong Kong by her colleagues in Shanghai. No visits to patients took place. In the tutorials in both sites the students, in small groups of 4 to 5,

discussed each of the patient's case studies. The discussions focused on analysis of the data from each case, following which the students came to an agreement about the nursing diagnosis, decided on appropriate nursing actions and organised a nursing care plan for each individual case. After discussion within each small group, one student agreed to present their patient case study to all students in the class. After each presentation there was a general discussion, in which the students exchanged their views about the nursing care for each case.

5.2.6 Conduct of clinical visits

A visit schedule was prepared by the programme team in each of the two Schools (see Appendix 8) before commencement of the programme and delivered to each student. Neither the teachers nor any other staff from either School was involved directly in the clinical visits. The students themselves organised the travelling activity for each visit. On the occasion of each visit, the local students were responsible for first finding the exact location of the place for the visit, then deciding how to reach there, where to meet up with the exchange students, and then go together to the clinical setting. For example, the students who attended the programme in Shanghai usually went to the clinical setting as a whole class, both exchange and non-exchange students together, as they all lived in a dormitory on the campus. In Hong Kong, one local student from each group went to the students' hall where the exchange students lived, and collected the exchange students so that they could go to the visit together. After each visit, this local student took his or her group members back to the students' hall. At a later time in the programme, when the settings for two visits were far away from

the campus, the students in Hong Kong booked a 'bus so that all could go together to the visit and return together.

5.3 THE PROCEDURES OF DATA COLLECTION

This section describes the data collection procedures in detail. The data sources in the present research were derived from two questionnaires, interviews with students and teachers, students' reflective journals and students' assessment scores. The procedures for collection of each of these data sets are presented here. As a variety of data sources were used, different data collection procedures were performed.

5.3.1 Preparation for data collection and obtaining ethical approval

Prior to commencement of the programme, ethical approval was requested and obtained from the Human Subject Ethics Committee of the University in Hong Kong. A briefing meeting was carried out at both Schools for the students who were selected to participate in the programme. The researcher introduced herself and acted as a resource person to provide the relevant information including introduction of the programme in detail and the evaluation of the programme. She then gave an opportunity for the students to ask questions. By the close of this meeting, the students had become more acquainted with the researcher, who felt a rapport had been established. The students were then invited to take part in the actual research. This involved the researcher in explaining that they would be asked to complete two questionnaires, possibly to take part in an interview and to write a reflective journal. An information sheet was given to the students (see Appendix 10). This sheet

introduced the purpose of the research, what they were expected to do in the research and how their personal information would be kept confidential. As explained in chapter 4 (see section 4.7.3.2.) the researcher then issued consent forms to the students and explained that, although they were participating in the exchange programme, they were free to agree or not to agree to take part in the research evaluation. All students agreed to take part and completed their informed consent form (see Appendix 11). At the close of the meeting the researcher provided the students with her contact details.

5.3.2 Administration and collection of the questionnaires

Two questionnaires were used in the research. All the students who attended the programme were invited to complete these two questionnaires. The Course Experience Questionnaire (CEQ) was administered to the students in a classroom before commencement of the programme and after the programme was completed. The researcher was present in the classroom when the students completed the questionnaire prior to the programme commencing. The students were encouraged to answer every question and if they were not clear about the meaning of any of the questions, the researcher said she would clarify the question(s) for them. The questionnaire was collected after being completed. A total of 45 students from the School in Hong Kong and 39 students from the School in Shanghai completed the questionnaire at the end of briefing meeting in Hong Kong and in Shanghai.

The completion of the post-programme CEQ took place 6 to 8 weeks after completion of the programme. Students were contacted by telephone and a suitable time and place

for completion of the questionnaire were identified. As the participating students were in different study years and therefore had different schedules, it was not possible to bring them all together at one time. However, all the students from the same study year were brought together to complete the questionnaire and the same procedure used as for the pre-programme questionnaire. One student completed the questionnaire at home as he was on sick leave on the day on which his class-mates completed the questionnaire. The questionnaire was sent to him by e-mail and returned to the researcher in the same way. As with the pre-programme CEQ, a total of 45 students from the School in Hong Kong and 39 students from the School in Shanghai completed the questionnaire.

The VPQ was completed by all the students at the same time as they completed their post-programme CEQ. The students were encouraged to answer every question, including the three open-ended questions located at the end of the VPQ. The student who was on sick leave also had the VPQ sent by email and returned it in the same way.

5.3.3 Collection of the reflective journals

Each student participant was asked to complete three journals and submit them at the end of the programme, although they were informed that more journals would be welcomed. During the course of the programme, a reminder was issued to the students by the researcher. The students who attended the programme in Shanghai received the reminder from the researcher via the videoconference link, and she was helped in this by the programme team members in Shanghai. The researcher herself, who was in

Hong Kong, and the team members in Shanghai collected the journals when the programme ended. Some students submitted their journals not later than one week after the programme ended. Some students in Shanghai, and some in Hong Kong, sent their journals to the researcher by E-mail. All but two of the students submitted the required three journals and a few submitted four or five. The two students above-mentioned submitted only one journal.

5.3.4 Conduct of the interviews

Two different semi-structured interviews were used in the research: one with the students and the other with the teachers. However, the flexible process of conducting the interviews was the same. The presentation here is thus divided into two parts.

5.3.4.1 Interviews with the students

Not all students were involved in the interviews and those who were invited to attend were chosen randomly using a 'lucky draw'. The code numbers of the students in each of the four groups, i.e. 16 in the Hong Kong non-exchange group, 29 in the Hong Kong exchange group, 19 in the Shanghai non-exchange group and 20 in the Shanghai exchange group. As a result, a total of 27 students were chosen. Of those, 16 were exchange students and 11 were non-exchange students. Of the exchange students, 8 came from the School in Hong Kong and 8 from the School in Shanghai, while of the non-exchange students, 6 came from the School in Hong Kong and 5 from the School in Shanghai. Students had given consent to be interviewed at the briefing meeting (see section 5.3.1) and before conducting the interview all 27 were

approached personally by the researcher by telephone or E-mail in order to arrange the time and place for the interview. The time was determined by the student and the place was negotiated with the student. Either the students or the researcher made contact with the other should any change be required.

Interviews with students were conducted two to three months after completion of the programme, either in an interview room in the School in Hong Kong or in a small meeting room in the School in Shanghai. The interview rooms were suitable both physically and psychologically as they were quiet, free from disturbance and convenient to access. The length of interview varied from 35 minutes to 1 hour. All but three were conducted in the students' native language, i.e. Cantonese for Hong Kong students and Putonghua for Shanghai students. The three exceptions were because three Hong Kong students preferred that English was used in their interviews. All the interviews were audio recorded, permission for which had been previously given by the students. Due to technical problems, one interview failed to be recorded so the total number of transcripts was 26. All interviews were conducted by the researcher herself.

The interview process began with a "grand tour" question, 'What do you think about the programme?' This broad question provided the interviewee with an opportunity to "warm up" to the interviewer and to organise his or her thoughts. It also allowed the interviewees to focus on the areas of importance to them and to phrase their experience in their own terms. The remaining questions allowed the researcher to explore with the interviewee all the different elements of the programme and the

interview concluded with the researcher asking the interviewee if she/he had anything else they wanted to say.

Flexibility in the order and phrasing of the questions allowed the researcher, in the process of the interview, to adapt the order in which she asked the questions depending on the interviewee's responses. For example, when the interviewee mentioned biliteracy in response to the 'grand tour' question, the interviewer followed the student's thinking at that moment and asked the question in the interview schedule related to biliteracy, although that question was fourth in the schedule.

Active listening and respect were consistently given to each interviewee. This would encourage her/him to talk more freely about what they were really thinking and so enable the interviewer to pick up verbal and non-verbal cues. The interviewer explained any question if necessary but tried to achieve a balance between talking and listening. On conclusion of the interview, the interviewer extended her appreciation to the interviewee for her/his willingness to participate.

5.3.4.2 Interviews with the teachers

All three teachers who taught the subjects in the programme were interviewed, either in Hong Kong or in Shanghai. Before the interview, the teachers were approached by the researcher by telephone or E-mail. Informed consent was obtained and the time and place for interview was agreed. The interview process and pattern were similar to the interviews with students except that the place where the interview was held was in each teacher's own office.

5.3.5 Collection of the assessment scores

The students' assessment scores from both subjects were collected by the researcher from the administration office after the teachers had completed their marking.

CONCLUSION

In the process of implementing the main study some strategies were developed to overcome the shortcomings encountered in the pilot study. More attention was paid to the details of preparation of the programme, for example, the preparation of the students and of the videoconferencing. The process of implementation of the programme was improved in many aspects, compared with the pilot programme. For example, the length of the programme was extended from 4 to 6 weeks, the subject delivered from Shanghai was different, in that it was more relevant to the students' needs, and more clinical visits were arranged than had been feasible in the pilot programme. However, some new problems were encountered in the process of implementation of the main study. As the class in each site was bigger than in the pilot programme, the interaction between the teacher in the presenting site and the students in the remote site during the lectures was insufficient. In spite of more attention having been paid to the technical aspects, the connection between the two sites was at times problematic. In addition, there was a delay of one or two weeks in the Shanghai students receiving the lecture notes from the presenting teacher in Hong Kong. This was due to the University holiday in Shanghai.

CHAPTER SIX

THE RESULTS OF THE MAIN STUDY: QUANTITATIVE DATA

INTRODUCTION

This chapter presents the findings from the analysis of the data from the two questionnaires which were completed by the students who participated in the programme and the data from the students' assessment scores for the two subjects which they studied in the programme. The Course Experience Questionnaire (CEQ) was administered to the students before and after the programme to measure the students' perceptions of their learning environment. The Videoconference Participant Questionnaire (VPQ) was used to measure the students' perceptions of the effectiveness of videoconferencing, which was applied as the teaching medium in the programme. The students' assessment scores were analysed in order to measure the outcome of the students' learning and to indicate indirectly the students' learning experience in the programme. These three quantitative data sets were analysed using computer software. The presentation of this chapter includes: (1) general data management procedures; (2) the students' characteristics; (3) the students' perceptions of the learning environment; (4) the students' perceptions of the effectiveness of videoconferencing; and (5) the students' learning outcomes in the programme. The discussion about these findings will be presented in chapter 8.

6.1 GENERAL DATA MANAGEMENT PROCEDURES

The responses collected from questionnaires and the assessment scores were scored numerically, as explained in chapter 4 and were entered into the computer. Before entering, all completed questionnaires were reviewed. The aims of this review were to find any unacceptable value, i.e. a number which was out of the given range, and to check if there were any unanswered questions. All participating students completed all questions listed in the questionnaires and no unacceptable value was found.

The statistical analysis of these data was completed using SPSS version 12 (SPSS, Inc., Chicago IL, USA.) Two steps of data management were undertaken prior to formal analysis. The first step, after completing the entry of all of the data into the database, was to screen for any data entry errors. The database was examined for patterns of incomplete, inconsistent or missing data by performing range checks and checking distributions of all variables against acceptable values. The second step was to compute the scale score as a summary of the responses to the cluster of items belonging to the same scale. For each respondent, responses to items belonging to the same scale were combined to form a scale score by calculating the mean. The scale score was calculated by adding up the raw score on individual items of the same scale and then dividing it by the number of items in that scale. In fact, the research was not intended to examine individual responses to each item but to describe the students' perceptions in relation to each of the scales and then of the totality of their perception of the learning environment and of the effectiveness of videoconferencing. The next step was to compare any differences in students' perceptions between the two Schools from which the students came, the venues where the programme had been implemented, the different study years of the students and the four groups formed in the programme. As a result, the CEQ scores given by each student were reduced to

five sets of scale mean: appropriate assessment, good teaching, appropriate workload, clear goals and standards, and emphasis on student independence, while the VPQ scores given by each student were reduced to three sets of scale mean: presentation, teaching issues and educational value.

The responses from the total of 84 students, which were elicited on two 5-point Likert scales in the CEQ and VPQ surveys, were interpreted as ordinal data. The students' assessment scores were also treated as ordinal data because the scores presented here used the grade point system (GPA). The score for assessment of each subject was presented from 4.5 (A+) to 0.0 (failure). Nonparametric statistical procedures for all data were then employed. The Mann-Whitney and Kruskal-Wallis Tests were applied to investigate the differences in students' perceptions of the learning environment and the differences in students' perceptions of the effectiveness of videoconferencing. The Wilcoxon Signed Ranks Test was used to investigate the differences in students' perceptions of the learning environment, i.e. differences between their perceptions of the conventional learning environment and the learning environment in the programme. The 5% level of significance was adopted in the analysis. As the differences between the ranked measurements of ordinal data were less important than the differences between the measurements of the interval or ratio data, a significance level of 5% was considered appropriate (Polit & Hungler, 1999).

6.2 STUDENT CHARACTERISTICS

A total of 84 students participated in the programme. The vast majority of the students (89.3%) were female, while 9 (10.7%) were male. All male students came from the

School in Hong Kong. As shown in Table 6-1, just over half of the students (53.6%) came from the School in Hong Kong and 46.4% came from the School in Shanghai. Slightly less than half (N=36 or 42.9%) of the students attended the programme in Hong Kong, while 48 students (57.1%) attended the programme in Shanghai.

Regarding the study year of the students, 37 (44%) students were in their year two. Of the remaining 47 students, 27 (32.2%) were year three students while 20 (23.8%) were year four students. All of the year four students came from the School in Shanghai because the Bachelor of Nursing programme there lasted for five years, whereas in Hong Kong it lasted for four years.

As described in section 4.4.2, once the selection of students to attend the programme had been made, the participating students from Hong Kong were then allocated to the group they wished to, i.e. the non-exchange or exchange group, and those from Shanghai were randomly allocated to either the non-exchange or exchange group. There were thus four groups of students in the programme. Group one consisted of the students who came from the School in Hong Kong and attended the programme in Hong Kong. Group two consisted of the students who came from the School in Hong Kong and attended the programme in Shanghai. Group three consisted of the students who came from the School in Shanghai and attended the programme in Shanghai. Group four consisted of the students who came from the School in Shanghai and attended the programme in Hong Kong.

Table 6-1***Demographic Characteristics of the Student Participants (N=84)***

Characteristics	Frequency	Percentage
Gender		
Male	9	10.7
Female	75	89.3
Institution*		
HK	45	53.6
SH	39	46.4
Venue**		
HK	36	42.9
SH	48	57.1
Group***		
1	16	19.0
2	29	34.6
3	19	22.6
4	20	23.8
Study year		
2	37	44.0
3	27	32.2
4	20	23.8

*refers to the school that the student came from. 'HK' indicates that the student came from the School in Hong Kong while 'SH' indicates that the student came from the School in Shanghai.

**refers to where the students attended the programme. 'HK' indicates that the student attended the programme in Hong Kong while 'SH' indicates that the student attended the programme in Shanghai.

***refers to the group to which the student belongs. '1' indicates that the student came from the School in Hong Kong and attended the programme in Hong Kong. '2' indicates that the student came from the School in Hong Kong and attended the programme in Shanghai. '3' indicates that the student came from the School in Shanghai and attended the programme in Shanghai. '4' indicates that the student came from the School in Shanghai and attended the programme in Hong Kong.

6.3 THE STUDENTS' PERCEPTIONS OF THE LEARNING ENVIRONMENT

The five scales of the Course Experience Questionnaire (CEQ) were used as the variables to investigate the students' perceptions of the learning environment. For

each respondent, responses to the items belonging to the same scale were combined to form a scale score by calculating the mean value. The mean score for each of the five scales from each of the 84 students were grouped according to the School from which the students came, the venue where the students attended the programme, the study year of the students and the group the students belonged to. The questionnaire was administered to the students before and after the programme. The aim was to examine the differences in students' perceptions of learning environment between their conventional learning environment, i.e. before the programme commenced, and the learning environment in the programme. The following dimensions in respect of students' perceptions of learning environment were examined:

- the students' perceptions of the learning environment before the programme;
- the differences in students' perceptions of the learning environment between the two Schools before the programme;
- the differences in students' perceptions of the learning environment between the two venues before the programme;
- the differences in students' perceptions of the learning environment from different years of study before the programme;
- the differences in students' perceptions of the learning environment from different groups before the programme;
- the students' perceptions of the learning environment after the programme;
- the differences in students' perceptions of the learning environment between the two Schools after the programme;
- the differences in students' perceptions of the learning environment between the two venues after the programme;

- the differences in students' perceptions of the learning environment from different years of study after the programme;
- the differences in students' perceptions of the learning environment from different groups after the programme;
- the differences in students' perceptions of the learning environment before and after the programme;
- the differences in students' perceptions of the learning environment of the two Schools before and after the programme;
- the differences in students' perceptions of the learning environment of the two venues before and after the programme;
- the differences in students' perceptions of the learning environment from different study years before and after the programme; and
- the differences in students' perceptions of the learning environment from different groups before and after the programme.

6.3.1 The students' perceptions of the learning environment before the programme

An overview of the distribution provides essential information on the extent to which the data meet the assumptions of the intended analysis. To obtain a whole picture of the distribution of the scale score for each student in the sample, descriptive statistics were computed, including the range, minimum and maximum values, sample mean, and standard deviation. The results are shown in Table 6-2.

Table 6-2***Description of Students' Perception of Learning Environment before the Programme (N=84)***

Scale	Range	Min.	Max.	Mean	SD	95%CI
Appropriate assessment	2.50	1.50	4.00	2.671	.525	2.557-2.785
Good teaching	3.50	1.50	5.00	3.531	.556	3.411-3.652
Appropriate workload	3.20	1.40	4.60	2.805	.599	2.675-2.935
Clear goals and standards	2.60	2.20	4.80	3.576	.562	3.454-3.698
Emphasis on student independence	3.33	1.17	4.50	2.956	.672	2.811-3.102
Entire CEQ	2.23	1.67	3.90	3.131	.418	3.040-3.221

The mean of the CEQ scores for the whole sample ranged from 1.67 to 3.90. The students perceived the teaching quality and goals and standards positively as the means of the scores for these two scales were greater than 3. However, they scored the scales of assessment, workload and emphasis on student independence lower than 3, the average of the score. Mean scores were highest for Good teaching and lowest for Appropriate assessment. It is inferred therefore that the students felt that they had good teaching and clear goals and standards in their learning and had less satisfaction with their assessment, workload and independence.

Spearman's Rank Correlation Coefficients were computed between the scales of the CEQ. A direct relationship between two sets of scales is shown in Table 6-3. Each of these exhibited significant correlation ($p \leq .05$). Most pairs of scales had a very strong correlation ($p \leq .01$). All sets of scales had a positive relationship.

Table 6-3

Correlations between Scales of CEQ before the Programme (N=84)----Spearman's rho

Scale	1	2	3	4	5
1. Appropriate assessment	—	.322**	.362**	.308**	.313**
2. Good teaching		—	.220*	.593**	.540**
3. Appropriate workload			—	.367**	.302**
4. Clear goals and standards				—	.221*
5. Emphasis on student independence					—

** . Correlation is significant at the .01 level (2-tailed).

* . Correlation is significant at the .05 level (2-tailed).

6.3.2 Differences in students' perceptions of the learning environment between the two Schools before the programme

The Mann-Whitney Test procedure was conducted to examine if there was a difference in students' perceptions of the learning environment between the two Schools before the programme. The mean scores of each of the five scales were compared. The results are shown in Table 6-4. Significant differences were found only in the scores for the scale Clear goals and standards ($p < .01$). It is inferred therefore that the students from both Schools had similar perceptions about their conventional learning environment, except that the students who came from the School in Hong Kong had a more positive feeling about their goals and standards.

Table 6-4

Differences in Students' Perception of the Learning Environment between the Two Schools before the Programme----Mann-Whitney Test

Scale	Institution	N	Mean Rank	U	Z	p
Appropriate assessment	HK	45	46.09	716.00	-1.457	.145
	SH	39	38.36			
Good teaching	HK	45	41.68	840.50	-0.333	.739
	SH	39	43.45			
Appropriate workload	HK	45	40.23	775.50	-0.921	.357
	SH	39	45.12			
Clear goals and standards	HK	45	50.90	550.00	-2.960	.003
	SH	39	35.22			
Emphasis on student independence	HK	45	46.90	679.50	-1.785	.074
	SH	39	37.42			
Entire CEQ	HK	45	41.63	838.50	-0.350	.726
	SH	39	43.50			

6.3.3 Differences in students' perceptions of the learning environment between the two venues before the programme

The differences in students' perceptions of their learning environment before the programme between the students who would attend the programme in Hong Kong and the students who would attend the programme in Shanghai, were examined using the Mann-Whitney Test. The results are shown in Table 6-5. No significant difference was found in the scores for all five scales ($p > .05$). It is inferred therefore that the students had similar perceptions of the learning environment of their home School, regardless of where the students would attend the programme.

Table 6-5

Differences in Students' Perception of the Learning Environment between the Two Venues of the Programme before the Programme----Mann-Whitney Test

Scale	Venue	N	Mean Rank	U	Z	P
Appropriate assessment	HK	36	48.06	664.00	-1.818	.069
	SH	48	38.33			
Good teaching	HK	36	42.32	857.50	-0.632	.953
	SH	48	42.64			
Appropriate workload	HK	36	47.65	678.50	-1.688	.091
	SH	48	38.64			
Clear goals and standards	HK	36	44.78	782.00	-0.747	.455
	SH	48	40.79			
Emphasis on student independence	HK	36	43.72	820.00	-0.400	.689
	SH	48	41.58			
Entire CEQ	HK	36	45.47	757.00	-0.968	.333
	SH	48	40.27			

6.3.4 Differences in students' perceptions of the learning environment from different study years before the programme

The Kruskal-Wallis Test was performed to determine the differences in students' perceptions of the learning environment before the programme between students in the different study years. The results of the analysis are shown in Table 6-6 and indicate that there was no significant difference in the mean scores for all five scales ($p > .05$). It is inferred therefore that the students who were in different study years had similar perceptions of their learning environment before the programme. No pairwise

comparisons were needed (Green & Salkind, 2005), as the whole scale score showed no differences between students in the different study years.

Table 6-6

Differences in Students' Perception of the Learning Environment from Different Study Years before the Programme ----Kruskal-Wallis Test

Scale	Study year	N	Mean Rank	Chi-square	D. F.	p
Appropriate assessment	2	37	41.84	1.725	2	.422
	3	27	46.96			
	4	20	37.70			
Good teaching	2	37	44.61	1.880	2	.391
	3	27	44.43			
	4	20	36.00			
Appropriate workload	2	37	41.80	0.071	2	.965
	3	27	43.43			
	4	20	42.55			
Clear goals and standards	2	37	37.47	3.122	2	.210
	3	27	48.04			
	4	20	44.33			
Emphasis on student independence	2	37	48.72	4.365	2	.113
	3	27	38.07			
	4	20	36.98			
Entire CEQ	2	37	43.66	1.592	2	.451
	3	27	45.26			
	4	20	36.63			

6.3.5 Differences in students' perceptions of the learning environment from different groups before the programme

To determine the differences in students' perceptions of their learning environment from the different groups before the programme, the Kruskal-Wallis Test was performed. Table 6-7 shows the results of the analysis. There was a significant

difference in students' perceptions of their goals and standards between the different groups before the programme ($p < .05$).

The pairwise comparisons were conducted using the Mann-Whitney Test which yielded identical results with the Kruskal-Wallis Test for two independent samples (Green & Salkind, 2005). The results of the analysis showed that there were significant differences in students' perceptions between the group in which the students came from the School in Hong Kong and would attend the programme in Hong Kong, and the group in which the students came from the School in Shanghai but would attend the programme in Hong Kong; ($U=65.00$, $Z=-3.05$, $p < .01$) and between the group in which the students came from the School in Hong Kong but would attend the programme in Shanghai and the group in which the students came from the School in Shanghai but would attend the programme in Hong Kong ($U=163.00$, $Z=-2.616$, $p < .01$). It is inferred therefore that the students who came from the School in Shanghai but would attend the programme in Hong Kong had clearer goals and standards than the students who came from the School in Hong Kong but would attend the programme either in Hong Kong or in Shanghai.

Table 6-7

Differences in Students' Perception of the Learning Environment from Different Groups before the Programme ----Kruskal-Wallis Test

Scale	Group	N	Mean Rank	Chi-square	D. F.	p
Appropriate assessment	1	16	51.38	6.760	3	.080
	2	29	43.17			
	3	19	30.95			
	4	20	45.40			
Good teaching	1	16	41.47	0.127	3	.988
	2	29	41.79			
	3	19	43.92			
	4	20	43.00			
Appropriate workload	1	16	39.03	7.133	3	.068
	2	29	40.90			
	3	19	35.18			
	4	20	54.55			
Clear goals and standards	1	16	32.22	10.225	3	.017
	2	29	36.88			
	3	19	46.76			
	4	20	54.83			
Emphasis on student independence	1	16	52.31	4.446	3	.217
	2	29	43.91			
	3	19	38.03			
	4	20	36.85			
Entire CEQ	1	16	42.31	1.541	3	.673
	2	29	41.26			
	3	19	38.76			
	4	20	48.00			

6.3.6 Students' perceptions of the learning environment after the programme

After the programme, the CEQ was again administered to the students in order to gain the students' perceptions of their learning environment in the programme. All 84 students completed the questionnaire and answered all the questions. The descriptive

statistics of range, minimum and maximum values, mean, and standard deviations were computed to obtain a whole picture of the distribution of the scores for each scale. The results are shown in Table 6-8.

Table 6-8
Description of Students' Perception of the Learning Environment after the Programme (N=84)

Scale	Range	Min.	Max.	Mean	SD	95%CI
Appropriate assessment	3.67	1.33	5.00	3.357	.657	3.215-3.500
Good teaching	2.50	2.38	4.88	3.842	.519	3.730-3.955
Appropriate workload	3.00	1.80	4.80	3.483	.642	3.344-3.623
Clear goals and standards	2.80	2.20	5.00	3.767	.518	3.654-3.880
Emphasis on student independence	3.67	1.17	4.83	3.306	.621	3.171-3.440
Entire CEQ	2.90	1.80	4.70	3.566	.455	3.467-3.664

The mean scale CEQ score for the whole sample ranged from 1.80 to 4.70. Overall, the students perceived the learning environment in the programme positively as all five means of the scale scores and the whole scale score were greater than 3, the average of the scale score. The scale Good teaching had the highest mean score (Mean=3.842, SD=.519, 95%CI: 3.730-3.955), while the scale Emphasis on students' independence had the lowest mean score (Mean=3.306, SD=.621, 95%CI: 3.17-3.44).

Spearman's Rank Correlation coefficients were computed between the scales of the CEQ. A direct relationship between the two sets of scales is shown in Table 6-9. A very strong positive correlation between each of two sets of scales ($p < .01$), except between the scale Appropriate assessment and the scale Emphasis on students'

independence was exhibited. A positive relationship between the scales Appropriate assessment and Emphasis on students' independence was found but was not significant ($p > .05$).

Table 6-9

Correlations between Scales of CEQ after the Programme (N=84)----Spearman's rho

Scale	1	2	3	4	5
1. Appropriate assessment	—	.395**	.572**	.402**	.207
2. Good teaching		—	.432**	.562**	.498**
3. Appropriate workload			—	.466**	.296**
4. Clear goals and standards				—	.507**
5. Emphasis on student independence					—

** . Correlation is significant at the .01 level (2-tailed).

6.3.7 Differences in students' perceptions of the learning environment between the two Schools after the programme

To determine if there were differences in students' perceptions of the learning environment in the programme between the two Schools, the Mann-Whitney Test procedure was conducted to compare the mean scores of each pair of five scales. The results are shown in Table 6-10. A significant difference was found in the scale Good teaching ($p < .05$). The students from the School in Shanghai scored a higher value in this scale than the students from the School in Hong Kong. It is inferred therefore that the students from the School in Shanghai had a more positive perception about the teaching in the programme than the students from the School in Hong Kong.

Table 6-10

Differences in Students' Perception of the Learning Environment between the Two Schools after the Programme----Mann-Whitney Test

Scale	Institution	N	Mean Rank	U	Z	p
Appropriate assessment	HK	45	38.21	684.50	-1.740	.082
	SH	39	47.45			
Good teaching	HK	45	36.51	608.00	-2.426	.015
	SH	39	49.41			
Appropriate workload	HK	45	38.48	696.50	-1.633	.102
	SH	39	47.14			
Clear goals and standards	HK	45	38.79	710.50	-1.509	.131
	SH	39	46.78			
Emphasis on student independence	HK	45	38.50	697.50	-1.622	.105
	SH	39	47.12			
Entire CEQ	HK	45	35.84	578.00	-2.688	.007
	SH	39	50.18			

6.3.8 Differences in students' perceptions of the learning environment between the two venues after the programme

The Mann-Whitney Test was performed to examine the differences in students' perceptions of the learning environment in the programme between the two venues in which the students attended the programme. The results are shown in Table 6-11. A significant difference was found in the scale score for Appropriate assessment ($p < .05$). The students who attended the programme in Hong Kong scored a higher value in that scale than the students who attended the programme in Shanghai. It is inferred

therefore that the students who attended the programme in Hong Kong had more positive feelings about the appropriateness of the assessment in the programme than those who attended the programme in Shanghai.

Table 6-11

Differences in Students' Perception of the Learning Environment between the Two Venues of the Programme after the Programme----Mann-Whitney Test

Scale	Venue	N	Mean Rank	U	Z	p
Appropriate assessment	HK	36	48.57	645.50	-1.985	.047
	SH	48	37.95			
Good teaching	HK	36	40.21	781.50	-0.749	.454
	SH	48	44.22			
Appropriate workload	HK	36	44.44	794.00	-0.636	.524
	SH	48	41.04			
Clear goals and standards	HK	36	45.85	743.50	-1.098	.272
	SH	48	39.99			
Emphasis on student independence	HK	36	46.46	721.50	-1.294	.196
	SH	48	39.53			
Entire CEQ	HK	36	45.44	758.00	-0.959	.338
	SH	48	40.29			

6.3.9 Differences in students' perceptions of the learning environment from different years of study after the programme

The Kruskal-Wallis Test was performed to determine the differences in students' perceptions of the learning environment in the programme from different study years. The results of the analysis are shown in Table 6-12. The results of the Kruskal-Wallis

Test indicated that there were significant differences in the mean scores for the scales: Appropriate assessment ($p < .01$), Appropriate workload ($p < .05$), and Clear goals and standards ($p < .05$) while no significant differences were found in the mean scores for the scales, Good teaching ($p > .05$) and Emphasis on student independence ($p > .05$). Pairwise comparisons of mean scales among the three different study years were conducted to determine which groups of the students had different views on good teaching, workload, and goals and standards.

Table 6-12***Differences in Students' Perception of the Learning Environment from Different Study Years after the Programme----Kruskal-Wallis Test***

Scale	Study year	N	Mean Rank	Chi-square	D. F.	p
Appropriate assessment	2	37	36.93	9.403	2	.009
	3	27	54.30			
	4	20	36.88			
Good teaching	2	37	39.50	1.993	2	.369
	3	27	47.89			
	4	20	40.78			
Appropriate workload	2	37	38.34	6.103	2	.047
	3	27	51.98			
	4	20	37.40			
Clear goals and standards	2	37	35.64	6.990	2	.030
	3	27	51.83			
	4	20	42.60			
Emphasis on student independence	2	37	39.77	0.846	2	.655
	3	27	44.33			
	4	20	45.08			
Entire CEQ	2	37	35.84	8.755	2	.013
	3	27	53.72			
	4	20	39.67			

Comparing the means of the scores for the Appropriate assessment scale, the results of the Mann-Whitney Test showed that there were significant differences between year two students and year three students ($U=291.00$, $Z=-2.852$, $p<.01$) and between year three students and year four students ($U=160.00$, $Z=-2.380$, $p<.05$). It is inferred therefore that year three students had more positive perceptions about the assessment procedure in the programme than year two and year four students.

Comparing the means of the scores for the Appropriate workload scale, the results of the analysis showed that there were significant differences between year two students and year three students ($U=335.50$, $Z=-2.248$, $p<.05$) and between year three students and year four students ($U=178.00$, $Z=-1.991$, $p<.05$). It is inferred therefore that year three students had more satisfaction with their workload in the programme than year two and year four students.

Comparing the means of the scores for the scale Clear goals and standards, the results of the analysis showed that the only significant difference was between year two students and year three students ($U=303.50$, $Z=-2.692$, $p<.01$). This indicated that the year three students had more positive views on goals and standards in the programme than year two students.

6.3.10 Differences in students' perceptions of the learning environment from different groups after the programme

The Kruskal-Wallis Test was performed to examine the differences in students' perceptions of the learning environment in the programme. The results are shown in Table 6-13 which indicates that there was a significant difference in the mean score for the scale Emphasis on student independence ($p<.05$), while no significant difference was found in the scores for the other scales ($p>.05$). The pairwise comparisons test showed that there were significant differences in two sets of groups. One was between the group of students who came from the School in Hong Kong and attended the programme in Hong Kong and the group of students who came from the School in Shanghai but attended the programme in Hong Kong ($U=76.50$, $Z=-2.671$,

$p < .01$). Another was between the group of students who came from the School in Hong Kong but attended the programme in Shanghai and the group of students who came from the School in Shanghai but attended the programme in Hong Kong ($U=165.00$, $Z=-2.563$, $p < .01$). It is inferred therefore that the students who came from the School in Shanghai but attended the programme in Hong Kong had a more positive view on independence in the programme than the students who came from the School in Hong Kong and attended the programme in Hong Kong. Meanwhile, the students who came from the School in Shanghai but attended the programme in Hong Kong had a more positive view on independence in the programme than the students who came from the School in Hong Kong but attended the programme in Shanghai.

Table 6-13

Differences in Students' Perception of the Learning Environment from Different Groups after the Programme ----Kruskal-Wallis Test

Scale	Group	N	Mean Rank	Chi-square	D. F.	p
Appropriate assessment	1	16	41.25	6.810	3	.078
	2	29	36.53			
	3	19	40.11			
	4	20	54.43			
Good teaching	1	16	30.91	7.424	3	.060
	2	29	39.60			
	3	19	51.26			
	4	20	47.65			
Appropriate workload	1	16	36.13	3.995	3	.262
	2	29	39.78			
	3	19	42.97			
	4	20	51.10			
Clear goals and standards	1	16	36.19	5.798	3	.122
	2	29	40.22			
	3	19	39.63			
	4	20	53.58			
Emphasis on student independence	1	16	34.16	9.296	3	.026
	2	29	40.90			
	3	19	37.45			
	4	20	56.30			
Entire CEQ	1	16	32.16	10.195	3	.017
	2	29	37.88			
	3	19	43.97			
	4	20	56.08			

6.3.11 Differences in students' perceptions of the learning environment before and after the programme

One of the aims of administering the CEQ was to examine the differences in students' perceptions of learning environment between the conventional and the programme.

The Wilcoxon Signed Ranks Test was performed to test the differences between the whole sample, the two Schools, the two venues, and between different study years and different groups. Table 6-14 shows the statistical results for all 84 students.

Table 6-14

Differences in Students' Perception of the Learning Environment before and after the Programme (N=84)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	15	66	3	21.33	45.47	-6.321	.000
Good teaching	22	55	7	35.34	40.46	-3.681	.000
Appropriate workload	0	84	0	0.00	42.50	-7.962	.000
Clear goals and standards	0	84	0	0.00	42.50	-7.962	.000
Emphasis on student independence	26	54	4	32.65	44.28	-3.707	.000
Entire CEQ	13	67	4	27.62	43.00	-6.049	.000

†A.the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;

†C.the mean in post-test=the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

The results showed that there were significant differences in students' perceptions on the scores for all five scales ($p < .01$) before and after the programme. It is inferred therefore that the students perceived their learning environment in the programme more positively than their conventional learning environment.

6.3.12 Differences in students' perceptions of the learning environment in the two Schools before and after the programme

To determine if there were differences in students' perceptions of learning environment of each of the two Schools before and after the programme, the Wilcoxon Signed Ranks Test was conducted to compare the mean scores of all five scales. The results are shown in Table 6-15 and Table 6-16. Table 6-15 shows the differences in the perceptions of the students who came from the School in Hong Kong. There were significant differences in students' perceptions on the scores for all but one of the five scales ($p < .05$), the exception being the score for the scale Emphasis on student independence ($p > .05$). It is inferred therefore that the students who came from the School in Hong Kong had more positive views on assessment, teaching, workload, and clear goals and standards for learning in the programme than in their conventional learning environment.

Table 6-15

Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Hong Kong before and after the Programme (N=45)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	9	33	3	11.17	24.32	-4.400	.000
Good teaching	16	27	2	19.38	23.56	-1.973	.048
Appropriate workload	5	35	5	14.00	21.43	-4.581	.000
Clear goals and standards	10	30	5	21.75	20.08	-2.601	.009
Emphasis on student independence	18	26	1	20.14	24.13	-1.554	.120
Entire CEQ	10	32	3	13.05	24.14	-4.015	.000

†A. the mean in post-test < the mean in pre-test; †B. the mean in post-test > the mean in pre-test;

†C. the mean in post-test = the mean in pre-test.

*Neg.=Negative Ranks. *Posi. =Positive Ranks

Table 6-16 shows the differences in the perceptions of the students who came from the School in Shanghai before and after the programme. Significant differences were found in the scores for all but one of the five scales ($p < .01$), the exception being the score for the scale Clear goals and standards ($p > .05$). It is inferred therefore that the students who came from the School in Shanghai had more positive views on assessment, teaching, workload, and emphasis on student independence in the programme than in their conventional learning environment.

Table 6-16

*Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Shanghai before and after the Programme (N=39)---
-Wilcoxon Signed Ranks Test*

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	6	33	0	11.83	21.48	-4.457	.000
Good teaching	6	28	5	21.17	16.71	-2.918	.004
Appropriate workload	9	30	0	12.72	22.18	-3.852	.000
Clear goals and standards	15	19	5	15.50	19.08	-1.117	.264
Emphasis on student independence	8	28	3	15.69	19.30	-3.264	.001
Entire CEQ	3	35	1	20.83	19.39	-4.468	.000

†A. the mean in post-test < the mean in pre-test; †B. the mean in post-test > the mean in pre-test;

†C. the mean in post-test = the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

6.3.13 Differences in students' perceptions of the learning environment in the two venues before and after the programme

Table 6-17 shows the differences in the perceptions of the learning environment of the students who attended the programme in Hong Kong before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p<.01$), Good teaching ($p<.05$), Appropriate workload ($p<.01$), and Emphasis on student independence ($p<.05$). It is inferred therefore that the students who attended the programme in Hong Kong had more positive views on assessment, teaching, workload, and student independence in the programme than in their conventional learning environment.

Table 6-17

Differences in Students' Perception of the Learning Environment of the Students Who Attended the Programme in Hong Kong before and after the Programme (N=36)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	6	28	2	5.17	20.14	-4.565	.000
Good teaching	0	21	6	13.89	16.19	-2.215	.027
Appropriate workload	8	26	2	11.50	19.35	-3.522	.000
Clear goals and standards	12	18	6	12.08	17.78	-1.810	.070
Emphasis on student independence	12	23	1	13.88	20.15	-2.439	.015
Entire CEQ	6	26	4	8.42	18.37	-3.993	.000

†A. the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;

†C. the mean in post-test=the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

The results of testing the differences in the perceptions of the learning environment of the students who attended the programme in Shanghai before and after the programme

are shown in Table 6-18. Significant differences were found in the scores for the scales, Appropriate assessment ($p<.01$), Good teaching ($p<.01$), Appropriate workload ($p<.01$), and Emphasis on student independence ($p<.01$). It is inferred therefore that the students who attended the programme in Shanghai had more positive views on assessment, teaching, workload, and student independence in the programme than in their conventional learning environment.

Table 6-18

Differences in Students' Perception of the Learning Environment of the Students Who Attended the Programme in Shanghai before and after the Programme (N=48)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	9	38	1	16.56	25.77	-4.399	.000
Good teaching	13	34	1	21.88	24.81	-2.962	.003
Appropriate workload	6	39	3	15.92	24.09	-4.774	.000
Clear goals and standards	13	31	4	25.81	21.11	-1.869	.062
Emphasis on student independence	14	31	3	19.18	24.73	-2.819	.005
Entire CEQ	7	41	0	20.07	25.26	-4.591	.000

†A. the mean in post-test<the mean in pre-test; B. the mean in post-test>the mean in pre-test; C. the mean in post-test=the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

6.3.14 Differences in students' perceptions of the learning environment from the different study years before and after the programme

Table 6-19 shows the differences in the perceptions of year two students before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p < .01$) and Appropriate workload ($p < .01$), while no significant differences were found in the scores for the scales Good teaching ($p > .05$), Clear goals and standards ($p > .05$), and Emphasis on student independence ($p > .05$). It is inferred therefore that year two students had more positive views on assessment and workload in the programme than in their conventional learning environment.

Table 6-19

Differences in Students' Perception of the Learning Environment of the Year Two Students before and after the Programme (N=37)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	6	30	1	7.67	20.67	-4.520	.000
Good teaching	12	22	3	18.25	17.09	-1.346	.178
Appropriate workload	4	29	4	11.25	17.79	-4.218	.000
Clear goals and standards	10	23	4	18.50	16.35	-1.716	.086
Emphasis on student independence	14	20	3	15.32	19.02	-1.425	.154
Entire CEQ	7	28	2	13.57	19.11	-3.605	.000

†A. the mean in post-test < the mean in pre-test; †B. the mean in post-test > the mean in pre-test;

†C. the mean in post-test = the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

Table 6-20 shows the differences in the perceptions of the learning environment of year three students before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p < .01$), Good teaching ($p < .01$), Appropriate workload ($p < .01$), and Emphasis on student independence

($p < .01$), while no significant differences were found in the score for the scale, Clear goals and standards ($p > .05$). It is inferred that year three students had more positive views on assessment, teaching, workload and student independence in the programme than in their conventional learning environment.

Table 6-20

Differences in Students' Perception of the Learning Environment of the Year Three Students before and after the Programme (N=27)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	4	21	2	6.25	14.29	-3.705	.000
Good teaching	7	19	1	9.29	15.05	-2.813	.005
Appropriate workload	4	22	1	7.25	14.64	-3.730	.000
Clear goals and standards	8	15	4	10.19	12.97	-1.725	.085
Emphasis on student independence	7	20	0	10.14	15.35	-2.846	.004
Entire CEQ	4	22	1	5.88	14.89	-3.861	.000

†A. the mean in post-test < the mean in pre-test; †B. the mean in post-test > the mean in pre-test;

†C. the mean in post-test = the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

Table 6-21 shows the differences in the perceptions of the learning environment of year four students before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p = .01$), Good teaching ($p < .05$), Appropriate workload ($p < .05$), and Emphasis on student independence ($p < .05$), while no significant differences were found in the score for the scale, Clear goals and standards ($p > .05$). It is inferred therefore that year four students had more positive

views on assessment, teaching, workload and student independence in the programme than in their home School.

Table 6-21

Differences in Students' Perception of the Learning Environment of the Year Four Students before and after the Programme (N=20)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	5	15	0	7.30	11.57	-2.564	.010
Good teaching	3	14	3	11.00	8.57	-2.062	.039
Appropriate workload	6	14	0	7.58	11.75	-2.227	.026
Clear goals and standards	7	11	2	8.86	9.91	-1.027	.304
Emphasis on student independence	5	14	1	8.70	10.46	-2.076	.038
Entire CEQ	2	17	1	10.50	9.94	-2.979	.003

†A. the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;
 †C. the mean in post-test=the mean in pre-test.
 *Neg.=Negative Ranks. *Posi.=Positive Ranks

6.3.15 Differences in the perceptions of the learning environment of the students from the different groups before and after the programme

The differences in the students' perceptions of the learning environment in the four different groups were also examined using the Wilcoxon Signed Ranks Test. The results are shown in Table 6-22 to Table 6-25. Table 6-22 shows the differences in the perceptions of the students who came from the School in Hong Kong and attended the programme in Hong Kong before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p<.05$) and

Appropriate workload ($p < .05$). It is inferred therefore that the students who came from the School in Hong Kong and attended the programme in Hong Kong had more positive views on assessment and workload in the programme than in their conventional learning environment.

Table 6-22

Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Hong Kong and Attended the Programme in Hong Kong before and after the Programme (N=16)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	4	10	2	3.50	9.10	-2.428	.015
Good teaching	7	7	2	6.86	8.14	-0.283	.777
Appropriate workload	3	11	2	5.17	8.14	-2.327	.020
Clear goals and standards	5	8	3	5.40	8.00	-1.300	.194
Emphasis on student independence	9	7	0	8.44	4.70	-0.416	.677
Entire CEQ	5	8	3	4.70	8.44	-1.538	.124

†A. the mean in post-test < the mean in pre-test; †B. the mean in post-test > the mean in pre-test;

†C. the mean in post-test = the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

The results of the analysis on differences in the perceptions of the students who came from the School in Hong Kong but attended the programme in Shanghai before and after the programme are shown in Table 6-23. There were significant differences in the scores for the scales Appropriate assessment ($p < .01$), Good teaching ($p < .01$), Appropriate workload ($p < .01$) and Emphasis on student independence ($p < .01$). It is

inferred therefore that the students who came from the School in Hong Kong and attended the programme in Shanghai had more positive views on assessment, teaching, workload and student independence in the programme than in their conventional learning environment.

Table 6-23

Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Hong Kong and Attended the Programme in Shanghai before and after the Programme (N=29)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	5	23	1	9.10	15.67	-3.597	.000
Good teaching	9	20	0	12.56	16.10	-2.266	.005
Appropriate workload	2	24	3	8.75	13.90	-4.026	.000
Clear goals and standards	5	22	2	18.90	12.89	-2.284	.085
Emphasis on student independence	9	19	1	11.72	15.82	-2.231	.004
Entire CEQ	5	24	0	8.40	16.38	-3.797	.000

†A. the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;
 †C. the mean in post-test=the mean in pre-test.
 *Neg.=Negative Ranks. *Posi.=Positive Ranks

Table 6-24 shows the differences in the perceptions of the students who came from the School in Shanghai and attended the programme in Shanghai before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p<.05$) and Appropriate workload ($p<.01$), while no significant differences were found in the scores for the scales Good teaching ($p>.05$), Clear goals and standards ($p>.05$), and Emphasis on student independent ($p>.05$). It is inferred therefore that the students who came from the School in Shanghai and

attended the programme in Shanghai had more positive views on assessment and workload in the programme than in their conventional learning environment.

Table 6-24

Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Shanghai and Attended the Programme in Shanghai before and after the Programme (N=19)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	4	15	0	7.88	10.57	-2.558	.011
Good teaching	4	14	1	11.13	9.04	-1.787	.074
Appropriate workload	4	15	0	6.63	10.90	-2.760	.006
Clear goals and standards	8	9	2	8.56	9.39	-0.380	.704
Emphasis on student independence	5	12	2	8.80	9.08	-1.541	.123
Entire CEQ	2	17	0	14.25	9.50	-2.678	.007

†A. the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;

†C. the mean in post-test=the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

Table 6-25 shows the differences in the perceptions of the students who came from the School in Shanghai but attended the programme in Hong Kong before and after the programme. Significant differences were found in the scores for the scales Appropriate assessment ($p<.01$), Good teaching ($p<.05$), Appropriate workload ($p<.01$) and Emphasis on student independent ($p<.01$). It is inferred therefore that the students who came from the School in Shanghai but attended the programme in Hong Kong had more positive views on assessment, teaching, workload and students' independence in the programme than in their conventional learning environment.

Table 6-25

Differences in Students' Perception of the Learning Environment of the Students Who Came from the School in Shanghai and Attended the Programme in Hong Kong before and after the programme (N=20)----Wilcoxon Signed Ranks Test

Scale	Frequency			Mean Rank		Z	p
	A†	B†	C†	Neg.*	Posi.*		
Appropriate assessment	2	18	0	2.00	11.44	-3.777	.000
Good teaching	2	14	4	10.25	8.25	-2.462	.014
Appropriate workload	5	15	0	6.50	11.83	-2.718	.007
Clear goals and standards	7	10	3	7.21	10.25	-1.241	.215
Emphasis on student independence	3	16	1	6.83	10.59	-3.003	.003
Entire CEQ	1	18	1	3.00	10.39	-3.703	.000

†A. the mean in post-test<the mean in pre-test; †B. the mean in post-test>the mean in pre-test;

†C. the mean in post-test=the mean in pre-test.

*Neg.=Negative Ranks. *Posi.=Positive Ranks

6.4 THE STUDENTS' PERCEPTIONS OF THE EFFECTIVENESS OF VIDEOCONFERENCING

The three scales of presentation, teaching issues and educational value in the Videoconference Participant Questionnaire (VPQ) were used as the variables to investigate the students' perceptions of the effectiveness of videoconferencing. For each respondent, responses to the items belonging to the same scale were combined to form a scale score by calculating the mean. The mean score for each of the three scales from each of the 84 students were grouped according to the School the students came from, the venue where the students attended the programme, the study year of the students and the group the students belonged to, as the unit for analysis. The

following dimensions in respect of students' perceptions of the effectiveness of videoconferencing were examined:

- the perception of the effectiveness of videoconferencing;
- the differences in students' perceptions of the effectiveness of videoconferencing between the two Schools;
- the differences in students' perceptions of the effectiveness of videoconferencing between the two venues;
- the differences in students' perceptions of the effectiveness of videoconferencing from different years of study; and
- the differences in students' perceptions of the effectiveness of videoconferencing from different groups.

6.4.1 The perception of the effectiveness of videoconferencing

In the first stage of data analysis, the distribution of the scale scores was described. An overview of the distribution provided essential information on the extent to which the data met the assumptions of the intended analysis. To obtain a whole picture of the distribution of the scale scores for each student in the sample, descriptive statistics were computed, including the minimum and maximum values, sample mean, median, mode, standard deviations, measures of skewness and kurtosis. These statistics, calculated from the sample data, were useful to describe the central tendency, the spread and the shape of the distribution of the data and to facilitate comparisons between the three sets of scale scores. The results are shown in Table 6-26 and Table 6-27.

The VPQ scores for the whole sample ranged from 2.00 to 4.50. Overall, the students' perceptions of the effectiveness of all three aspects of videoconferencing were positive, as all mean scale scores were greater than 3. The mean scores were highest for presentation and lowest for teaching issues. However, the differences in the means of the scores among the three scales were insignificant. It is therefore inferred that the students had similar views on all three aspects of the effectiveness of videoconferencing: Presentation, Teaching issues and Educational value.

Table 6-26

Descriptive Statistics of Mean Scores for Scales of the VPQ (N=84)

Scale	Mean	Median	Mode	Skewness	Kurtosis
Presentation	3.176	3.200	3.80	-0.128	-0.901
Teaching issues	3.057	3.000	3.40	0.105	-0.794
Educational value	3.169	3.167	3.17	0.387	2.429
Entire VPQ	3.136	3.125	3.00	-0.068	-0.220

Table 6-27

Description of Students' Perceptions of the Effectiveness of Videoconferencing (N=84)

Scale	Range	Min.	Max.	Mean	SD	95%CI
Presentation	2.60	1.80	4.40	3.176	.657	3.034-3.319
Teaching issues	2.60	2.00	4.60	3.057	.619	2.923-3.192
Educational value	3.00	2.00	5.00	3.169	.457	3.070-3.268
Entire VPQ	2.50	2.00	4.50	3.136	.486	3.031-3.242

The mean, median, and mode values of each of the scale scores were compared and the measures of skewness were examined. It was found that the scale scores on Teaching issues and Educational value were slightly positively skewed, whereas the scale score on Presentation was slightly negatively skewed, as the value of the mode was greater than the median and the median was greater than the mean. Also, a negative value of kurtosis indicated a platykurtic distribution, while a positive value indicated a leptokurtic distribution. The more negative value of kurtosis for the scale score on Presentation indicated that its distribution was the more platykurtic which meant that the tails of its distribution were thicker. The normality of the scales in the sample was examined by performing the one sample Kolmogorov-Smirnov Test of normality. The results showed that all the mean scale scores were normally distributed ($p > .05$).

Spearman's Rank Correlation Coefficients were computed between the scales of the VPQ. A direct relationship between the two sets of scale is shown in Table 6-28. A very strong correlation between the two scales was exhibited ($p \leq .01$). This indicates that if the teaching material can be presented more effectively, there would be a higher quality of teaching and a higher educational value will be achieved.

Table 6-28

Correlations between Scales of the VPQ (N=84)----Spearman's rho

Scale	1	2	3
1. Presentation	—	.650**	.570**
2. Teaching issues		—	.492**
3. Educational value			—

** . Correlation is significant at the .01 level (2-tailed).

6.4.2 Differences in students' perceptions of the effectiveness of videoconferencing between the two Schools

To determine if there were differences in students' perceptions of the effectiveness of videoconferencing between the two Schools from which the students came, the Mann-Whitney Test procedure was conducted to compare the mean scores of the three scales. The results are shown in Table 6-29. Significant differences were found in all three scales, Presentation ($p < .01$), Teaching issues ($p < .01$) and Educational value ($p < .05$). The students from the School in Hong Kong scored lower values in all three aspects of videoconferencing than the students from the School in Shanghai. This therefore implies that the students from the School in Shanghai had more positive views on the effectiveness of videoconferencing than the students from the School in Hong Kong.

Table 6-29
Differences in Students' Perceptions of the Effectiveness of Videoconferencing between the Two Schools ----Mann-Whitney Test

Scale	Institution	N	Mean Rank	U	Z	p
Presentation	HK	45	31.96	403.00	-4.283	.000
	SH	39	54.67			
Teaching issues	HK	45	31.84	398.00	-4.324	.000
	SH	39	54.79			
Educational value	HK	45	36.37	601.50	-2.503	.012
	SH	39	49.58			
Entire VPQ	HK	45	30.97	358.50	-4.661	.000
	SH	39	55.81			

6.4.3 Differences in students' perceptions of the effectiveness of videoconferencing between the two venues

The Mann-Whitney Test was also performed to determine if there were differences in students' perceptions of the effectiveness of videoconferencing between the two venues where the programme was implemented. The results are shown in Table 6-30. No significant difference was found in each of the three scales' scores ($p > .05$). The students who attended the programme in Hong Kong and those who attended the programme in Shanghai scored similar values on the effectiveness of videoconferencing. It is inferred therefore that the students had similar views on the effectiveness of videoconferencing, irrespective of where they attended the programme.

Table 6-30
Differences in Students' Perceptions of the Effectiveness of Videoconferencing between Two Venues ----Mann-Whitney Test

Scale	Venue	N	Mean Rank	U	Z	p
Presentation	HK	36	42.36	859.00	-.045	.964
	SH	48	42.60			
Teaching issues	HK	36	44.43	794.50	-.632	.528
	SH	48	41.05			
Educational value	HK	36	42.90	849.50	-.133	.895
	SH	48	42.20			
Entire VPQ	HK	36	43.47	829.00	-.317	.751
	SH	48	41.77			

6.4.4 Differences in students' perceptions of the effectiveness of videoconferencing from different years of study

The Kruskal-Wallis Test was performed to determine whether there were differences in students' perceptions of the effectiveness of videoconferencing among the students from different study years. The results of the analysis are shown in Table 6-31. The Kruskal-Wallis Test indicates that there were significant differences in the mean scales' scores for Presentation ($p < .05$) and Teaching issues ($p < .05$), while no significant difference was found in the mean scale score for Educational value ($p > .05$). Because the difference in the whole scale score was significant, pairwise comparisons from students in the three different study years were conducted.

Table 6-31
Differences in Students' Perceptions of the Effectiveness of Videoconferencing from Different Study Years----Kruskal-Wallis Test

Scale	Study year	N	Mean Rank	Chi-square	D. F.	p
Presentation	2	37	35.68	6.894	2	.032
	3	27	43.96			
	4	20	53.15			
Teaching issues	2	37	35.59	6.576	2	.037
	3	27	44.57			
	4	20	52.48			
Educational value	2	37	36.32	4.860	2	.088
	3	27	49.56			
	4	20	44.40			
Entire VPQ	2	37	34.22	8.707	2	.013
	3	27	45.87			
	4	20	53.28			

The pairwise comparisons were conducted using the Mann-Whitney Test, which yielded identical results with the Kruskal-Wallis Test for two independent samples. In comparing the means of the Presentation scale score, the results of the analysis showed that there was a significant difference between year two students and year four students ($U=214.50$, $Z=-2.616$, $p<.01$), while there was no significant difference between year two students and year three students ($U=402.50$, $Z=-1.328$, $p>.05$) or between year three students and year four students ($U=212.50$, $Z=-1.250$, $p>.05$). It is inferred therefore that year four students placed a higher value on the Presentation aspect of the effectiveness of videoconferencing than did year two students.

In comparing the means of the Teaching issues scale score, the results of the analysis showed that there was a significant difference between year two students and year four students ($U=222.00$, $Z=-2.491$, $p<.05$) while there was no significant difference between year two students and year three students ($U=392.00$, $Z=-1.469$, $p>.05$) or between year three students and year four students ($U=218.50$, $Z=-1.114$, $p>.05$). It is inferred therefore that year four students placed a higher value on teaching performance in the videoconferencing lectures than did year two students.

6.4.5 Differences in students' perceptions of the effectiveness of videoconferencing from different groups

The Kruskal-Wallis Test was performed to determine whether there were differences in students' perceptions of the effectiveness of videoconferencing from the different groups. The results of the analysis are shown in Table 6-32. The Kruskal-Wallis Test

indicated that there were significant differences in the mean scale scores for Presentation ($p < .01$) and Teaching issues ($p < .01$), while no significant difference was found in the mean scale score for Educational value ($p > .05$).

Table 6-32

Differences in Students' Perceptions of the Effectiveness of Videoconferencing from the Different Groups----Kruskal-Wallis Test

Scale	Group	N	Mean Rank	Chi-square	D. F.	p
Presentation	1	16	30.59	19.008	3	.000
	2	29	32.71			
	3	19	57.71			
	4	20	51.78			
Teaching issues	1	16	30.50	18.814	3	.000
	2	29	32.59			
	3	19	53.97			
	4	20	55.58			
Educational value	1	16	36.91	6.528	3	.089
	2	29	36.07			
	3	19	51.55			
	4	20	47.70			
Entire VPQ	1	16	29.59	21.907	3	.000
	2	29	31.72			
	3	19	57.11			
	4	20	54.58			

The pairwise comparisons were conducted using the Mann-Whitney Test, which yielded identical results with the Kruskal-Wallis Test for two independent samples. In comparing the means of scale scores between the students who came from the School in Hong Kong and attended the programme in Hong Kong, and those who came from the School in Hong Kong but attended the programme in Shanghai, the results of the

analysis showed that there was no significant difference in the scores for Presentation (U=222.50, Z=-0.228, $p>.05$) and Teaching issues (U=217.50, Z=-0.347, $p>.05$).

In comparing the means of scale scores between the students who came from the School in Hong Kong and attended the programme in Hong Kong and those who came from the School in Shanghai and attended the programme in Shanghai, significant differences were shown in the scores for two scales, i.e. Presentation (U=61.50, Z=-3.029, $p<.01$), and Teaching issues (U=65.50, Z=-2.890, $p<.01$). It is inferred therefore that the students who came from the School in Shanghai and attended the programme in Shanghai placed higher values on the effectiveness of these two aspects of videoconferencing than the students who came from the School in Hong Kong and attended the programme in Hong Kong.

In comparing the means of scale scores between the students who came from the School in Hong Kong and attended the programme in Hong Kong and those who came from the School in Shanghai but attended the programme in Hong Kong, the results of the analysis showed that there were significant differences in the scores for two scales, Presentation (U=69.50, Z=-2.916, $p<.01$) and Teaching issues (U=69.00, Z=-2.911, $p<.01$). It is inferred therefore that the students who came from the School in Hong Kong and attended the programme in Hong Kong placed lower values on the effectiveness of these two aspects of videoconferencing than the students who came from the School in Shanghai but attended the programme in Hong Kong.

In comparing the means of scale scores between the students who came from the School in Hong Kong but attended the programme in Shanghai and those who came from the School in Shanghai and attended the programme in Shanghai, the results

showed that there were significant differences in the scores for two scales, i.e. Presentation ($U=118.50$, $Z=-3.325$, $p<.01$) and Teaching issues ($U=128.50$, $Z=-3.119$, $p<.01$). It is inferred therefore that the students who came from the School in Shanghai and attended the programme in Shanghai placed higher values on the effectiveness of these two aspects of videoconferencing than the students who came from the School in Hong Kong but attended the programme in Shanghai.

In comparing the means of scale scores between the students who came from the School in Hong Kong but attended the programme in Shanghai and those who came from the School in Shanghai but attended the programme in Hong Kong, the results showed that there were significant differences in the scores for two scales, i.e. Presentation ($U=153.50$, $Z=-2.793$, $p<.01$) and Teaching issues ($U=135.00$, $Z=-3.168$, $p<.01$). It is inferred therefore that the students who came from the School in Shanghai but attended the programme in Hong Kong placed higher values on the effectiveness of these two aspects of videoconferencing than the students who came from the School in Hong Kong but attended the programme in Shanghai.

In comparing the means of scale scores between the students who came from the School in Shanghai and attended the programme in Shanghai and the students who came from the School in Shanghai but attended the programme in Hong Kong, the results showed that there was no significant difference in the scores for two scales, i.e. Presentation ($U=148.50$, $Z=-1.183$, $p>.05$) and Teaching issues ($U=174.50$, $Z=-0.443$, $p>.05$).

6.5 THE STUDENTS' LEARNING OUTCOMES IN THE PROGRAMME

Two subjects, i.e. Health Counselling and Interpretation of Clinical Data, were studied by all students in the programme. Just prior to completion of the programme, students were assessed on both subjects in order to evaluate the outcomes of teaching and learning. The aim in describing the assessment scores and in examining the differences in students' scores between these two subjects, the two Schools, the two venues and from different study years and different groups was to indicate indirectly the students' learning experiences in the programme. The following dimensions were examined:

- the description of students' assessment scores;
- the difference in students' assessment scores between students' assessment scores on the two subjects;
- the differences in students' assessment scores between the two Schools;
- the differences in students' assessment scores between the two venues;
- the differences in students' assessment scores from the different study years;
- and
- the differences in students' assessment scores from the different groups.

6.5.1 The description of students' assessment scores

To obtain a whole picture of the distribution of the assessment scores, expressed as the GPA, for each student in the sample, descriptive statistics were computed, including the minimum and maximum values, sample mean, and standard deviations. The results are shown in Table 6-33. The mean of the assessment GPA score for the subject of Health Counselling for the whole sample ranged from 2.00 to 4.00, while

the mean of the assessment GPA score for the subject of Interpretation of Clinical Data ranged from 3.00 to 4.50. The mean assessment GPA score for Health Counselling was greater than the average score of 2.5 and reached nearly 3 (2.98) which is the score for grade B, whereas the mean assessment score for Interpretation of Clinical Data was also greater than the average score of 2.5 and reached 4.39, which is the score for grade A to grade A+.

Table 6-33

Descriptive Statistics of Assessment Scores Expressed as the GPA (N=84)

Scale	Min.	Max.	Mean	SD
Health counselling	2.00	4.00	2.98	.512
Interpretation of clinical data	3.00	4.50	4.39	.308

6.5.2 Difference in students' assessment scores between the assessment scores for the two subjects

The difference in the assessment scores, expressed as the GPA, between the two subjects was computed by performing the Wilcoxon Signed Ranks Test. The results indicated that the students gained higher marks in the assessment GPA score for Interpretation of Clinical Data than for Health Counselling (Mean Rank=42.50, Z=-8.038, $p < .01$).

6.5.3 Differences in students' assessment scores between the two Schools

To determine if there were differences in students' assessment scores, expressed as the GPA between the two Schools, the Mann-Whitney Test was conducted to compare the means of scores. The results are shown in Table 6-34. A significant difference was found in the subject assessment GPA score for Health Counselling ($p < .01$). The students from the School in Hong Kong gained a higher GPA score in the subject of Health Counselling than the students from the School in Shanghai. There was no significant difference in the GPA score for the subject of Interpretation of Clinical Data ($p > .05$).

Table 6-34

*Differences in Assessment Scores for the Two Subjects between Two Schools----
Mann-Whitney Test*

Subject	Institution	N	Mean Rank	U	Z	p
Health counselling	HK	45	49.33	570.00	-2.890	.004
	SH	39	34.62			
Interpretation of clinical data	HK	45	45.30	751.50	-1.930	.054
	SH	39	39.27			

6.5.4 Differences in students' assessment scores between the two venues

The Mann-Whitney Test was also performed to determine the differences in students' assessment scores, expressed as the GPA, between the two venues in which the programme was implemented. The results are shown in Table 6-35. There was a significant difference in the assessment GPA score for Health Counselling ($p < .01$). No significant difference was found in the assessment GPA score for Interpretation of Clinical Data ($p > .05$). It is inferred therefore that the students who attended the

programme in Hong Kong had the same assessment GPA score in the subject of Interpretation of Clinical Data as the students who attended the programme in Shanghai. However, the students who attended the programme in Hong Kong had a higher assessment GPA score for the subject of Health Counselling than the students who attended the programme in Shanghai.

Table 6-35

*Differences in Assessment Scores for the Two Subjects between Two Venues----
Mann-Whitney Test*

Subject	Venue	N	Mean Rank	U	Z	p
Health counselling	HK	36	50.44	578.00	-2.709	.007
	SH	48	36.54			
Interpretation of clinical data	HK	36	40.13	778.50	-1.320	.187
	SH	48	44.28			

6.5.5 Differences in students' assessment scores from different study years

The Kruskal-Wallis Test was performed to determine the differences in students' assessment GPA scores for the two subjects from different study years. The results of the analysis are shown in Table 6-36. The results indicated that there was no significant difference in the subject assessment GPA scores from different study years ($p > .05$). It is indicated therefore that the students who were in different study years had similar assessment GPA scores for both subjects.

Table 6-36

Differences in Assessment Scores for the Two Subjects from Different Study Years---Kruskal-Wallis Test

Subject	Study year	N	Mean Rank	Chi-square	D. F.	p
Health counselling	2	37	43.05	0.157	2	.925
	3	27	43.07			
	4	20	40.70			
Interpretation of clinical data	2	37	44.42	1.396	2	.497
	3	27	41.80			
	4	20	39.90			

6.5.6 Differences in students' assessment scores from different groups

The Kruskal-Wallis Test was conducted to determine the differences in students' assessment GPA scores for both subjects from the different groups. The results are shown in Table 6-37. The Kruskal-Wallis Test indicated that there was a significant difference in students' assessment scores for Health Counselling from the different groups ($p < .01$), whereas no significant difference was found in students' assessment scores for Interpretation of Clinical Data from the different groups ($p > .05$). Because there was a significant difference in students' assessment scores for Health Counselling from the different groups ($p < .01$), the pairwise comparisons procedure using the Mann-Whitney Test was done and this yielded identical results.

Table 6-37***Differences in Assessment Scores for the Two Subjects from Different Study******Groups----Kruskal-Wallis Test***

Subject	Group	N	Mean Rank	Chi-square	D. F.	p
Health counselling	1	16	48.81	30.600	3	.000
	2	29	49.62			
	3	19	16.58			
	4	20	51.75			
Interpretation of clinical data	1	16	42.94	4.796	3	.187
	2	29	46.60			
	3	19	40.74			
	4	20	37.88			

The Mann-Whitney Test for pairwise comparisons was conducted. The result showed that there were significant differences in the students' assessment GPA scores for Health Counselling between the group of students who came from the School in Hong Kong and attended the programme in Hong Kong, and the group of students who came from the School in Shanghai and attended the programme in Shanghai ($p < .01$); between the group of students who came from the School in Hong Kong but attended the programme in Shanghai, and the group of students who came from the School in Shanghai and attended the programme in Shanghai ($p < .01$); and between the group of students who came from the School in Shanghai and attended the programme in Shanghai, and the group of students who came from the School in Shanghai but attended the programme in Hong Kong ($p < .01$). It is inferred therefore that the students who came from the School in Hong Kong and attended the programme in Hong Kong, the students who came from the School in Hong Kong but attended the

programme in Shanghai and the students who came from the School in Shanghai but attended the programme in Hong Kong had higher assessment scores than the students who came from the School in Shanghai and attended the programme in Shanghai.

CONCLUSION

This chapter has presented the results obtained from the analysis of the quantitative data. There were three quantitative data sources: the Course Experience Questionnaire, the Videoconference Participant Questionnaire and the students' assessment scores for each of the two subjects. The CEQ was used to explore the students' learning experiences in the programme while the VPQ was used to examine the students' perceptions regarding the effectiveness of videoconferencing used in the programme. The assessment GPA scores were used to indicate the students' learning experiences indirectly.

The results showed that the students perceived the learning environment in the programme positively, as the mean scores for all five scales and the mean scores for the whole scale were greater than the average point of 3. With the exception of the result of the mean score for the scale of good teaching, which indicated that Shanghai students placed a higher value on this than Hong Kong students, no other significant difference was found in value between the Hong Kong students and Shanghai students. The students who attended the programme in Hong Kong had a higher value in the scale of appropriate assessment than the students who attended the programme in Shanghai. The year three students had more positive views regarding the assessment, workload and goals and standards than year two and year four students. No significant

difference was found for four scales among the different study groups, except for the scale of Emphasis on student independence. The Shanghai students who attended the programme in Hong Kong had a more positive view on independence in the programme than the Hong Kong students, no matter where they attended the programme. However, all the students had more positive perceptions in all five scales regarding the learning environment in the programme compared with their views on their conventional learning environment. It is shown that the students were more satisfied with the learning environment in the programme than with the learning environment in their home School.

Overall, the students' perceptions of the effectiveness of videoconferencing were positive, as the mean scores on all three scales were greater than the average point of 3. However, the mean scores on each of the three scales were a little higher than 3. This indicated that the students did not agree strongly that the videoconferencing had a good effect on the conduct of teaching in the programme, although there were many factors to affect its effectiveness. The Hong Kong students scored lower values in all three scales of the effectiveness of videoconferencing than the Shanghai students did. However, there was no significant difference in perception regarding the effectiveness of videoconferencing between the two venues where the students attended the programme. The year four students had more positive perceptions than the year two students. It should be noted, however, that the year four students were all from Shanghai and it is concluded that the Shanghai students overall had a more positive perception than the Hong Kong students. The results in relation to the differences found among different study groups showed that the Hong Kong students had more

negative perceptions regarding effectiveness of videoconferencing no matter where they attended the programme.

It is found that the students had good learning outcomes for both subjects. They gained higher scores in the assessment of the subject of Interpretation of Clinical Data than in the subject of Health Counselling. The Hong Kong students gained higher scores for the subject of Health Counselling than Shanghai students, but not in the subject of Interpretation of Clinical Data. The students who attended the programme in Hong Kong had higher assessment scores for the subject of Health Counselling than the students who attended the programme in Shanghai, but not in the subject of Interpretation of Clinical Data. The Shanghai students who attended the programme in Shanghai gained lower assessment scores than the students in the other three study groups.

It is noted that both the CEQ and VPQ had some limitations in exploring the students' learning experiences in the programme. These questionnaires did not cover all aspects of the learning experiences that the students could potentially gain in the programme. On the other hand, there are also limitations in the use of quantitative data alone when seeking a deep understanding of the students' learning experiences in the programme. In order to gain deeper and wider information regarding the students' learning experiences in the programme, qualitative data were obtained from the interviews with students and teachers and from the students' reflective journals. The results of the analysis of these qualitative data are presented in the next chapter.

CHAPTER SEVEN

THE RESULTS OF THE MAIN STUDY: QUALITATIVE APPROACH

INTRODUCTION

The programme brought students from Hong Kong and Shanghai together in two ways, both of which were innovative. Firstly, the class of students in both places contained a mix of exchange and non-exchange students. Exchange students from Hong Kong studied together with non-exchange students in Shanghai, while exchange students from Shanghai studied together with non-exchange students in Hong Kong. Secondly, videoconferencing was the teaching medium used to link the two classes, one in Hong Kong and the other in Shanghai, which enabled the students in both places to receive the lectures concurrently. The aim of this research was to evaluate this innovative student exchange programme by exploring the students' learning experiences regarding their achievement of seven of the eight elements of Strategic Objective One of the University in Hong Kong, the effectiveness of videoconferencing, and perceptions of teaching, learning and the health care service in the other location.

The students' experiences in the programme were explored using the research method of triangulation. Both quantitative and qualitative data were used to support each other in examining the different aspects of teaching and learning widely and deeply. The results obtained from the quantitative data were presented in the previous chapter. This chapter primarily presents the results from the analysis of the qualitative data

provided by the students. However, a semi-structured interview was conducted with the small sample of three teachers who were involved in the programme. The results from the analysis of these data are also presented here. The qualitative data from students came from three sources, semi-structured interviews, students' reflective journals and the open-ended questions in the Videoconference Participant Questionnaire. The reason for using three sources of data was to ensure the results were as comprehensive as possible. For example, not all programme participants were interviewed, but all completed the reflective journals, making it possible to capture information about students' experiences which may not have been gained from the interviews. The use of journals may also have helped students to express feelings and experiences which they might have been hesitant to reveal in a face to face interview. The use of additional open-ended questions in the Videoconference Participant Questionnaire enabled students to express their perceptions regarding aspects of their experience which may not have been covered in the closed questions.

The semi-structured interviews were conducted with 27 students although one interview was not recorded due to a technical failure. The interviewees included exchange and non-exchange students from both Hong Kong and Shanghai. The students were asked about activities in which they had been involved, e.g. attendance at lectures with videoconferencing; their feelings about studying together; their experience of using two languages, as all the teaching and discussions in the Health Counselling subject were conducted in English and all the teaching and discussions in the Interpretation of Clinical Data subject were conducted in Putonghua; their perception of the style of teaching and learning in the other site; and, for exchange students, their perception of the host health care services and delivery systems. The

guidelines given to the students about writing their reflective journals were that they should recount their feelings and experiences regarding theory input, clinical visiting and taking part in the social activities.

The learning experiences and feelings described by the students were multi-dimensional, reflecting what they experienced, perceived and thought. The data from these experiences and feelings were organised into three major themes, firstly the Strategic Objective One of the University in Hong Kong, secondly, videoconferencing, and thirdly the teaching, learning and health care service in the other location. The categories in relation to Strategic Objective One included 7 of the 8 elements of that objective, i.e. global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy, and leadership. The categories in relation to videoconferencing were the students' learning experiences and feelings associated directly with this teaching medium. The categories in relation to local nursing education were the students' perceptions of learning, teaching and the health care service.

All three data sources, the interviews, reflective journals and open-ended questions, were analysed separately using the same method of categorisation. This process is described in detail in section 4.6.2.6. Because the results from all three sources were similar, i.e. they did not conflict, they are integrated in this presentation in order to prevent repetitive reporting.

7.1 LEARNING EXPERIENCES ASSOCIATED WITH THE ASPECTS OF STUDENTS' ALL-ROUND DEVELOPMENT

As noted above, the aim of the programme was to examine its effect in enhancing students' development of global outlook, critical thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and leadership which constituted the major part of the University's Strategic Objective One. The students attended different activities, experienced different cultural events and situations, shared thoughts and ideas and achieved growth in many aspects of their development. These experiences were expressed in their communication with the interviewer and in their reflective journals.

The above aspects of students' learning experiences were the main categories in the analysis of the data from interview transcripts and reflective journals. There were several sub-categories under each of these categories. Table 7-1 lists the categories and the sub-categories and indicates the number of quotations under each sub-category from each source of data. This section describes students' learning experiences gained from the programme in relation to the above seven aspects.

Table 7-1

The Number of Quotations Related to the Learning Experiences Associated with Students' All-round Development under Categories and Sub-categories and under Sources of Data

Categories	Sub-categories	Number of quotes	
		Interview	Journal
Global outlook	Enjoyment of very different scenery		11
	Exploration of the characteristics of students from the other University	6	5
	Exploration of teaching and learning	6	11
	Development of cultural competence	15	5
	Total	27	32
Critical thinking	Stimulation for development of critical thinking	35	27
	Total		
Social and national responsibility	Recognition of the need for learning for the society	11	13
	Being a good ambassador	3	3
	Comment in relation to improvement of society	3	4
	Total	17	20
Cultural appreciation	Knowledge of local people	13	11
	Understanding about nursing students from the other School	52	31
	Realisations about life styles, including the local food, clothing, shelter and transportation and other aspects	23	13
	Recognition of social culture	31	48
	Total	119	103
Life-long learning	Total	8	11
Biliteracy	Difficulties in language learning	27	46
	Facilitation of the learning of language skills	6	7
	Strategies in the learning of language skills	37	36
	Improvement of language skills	30	17
	Total	100	106
Leadership	Exhibition and appreciation of leadership skills	15	8
	Learning and practice of leadership skills	10	22
	Attainment of leadership skills	5	5
	Total	30	35

7.1.1 Global outlook

Global outlook refers to broadening one's horizon beyond the home or existing environment to gain knowledge and understanding of other environments and cultures and to learn to appreciate and value differences. The programme exposed both the exchange and the non-exchange students to a new environment as they were studying and working together. The exchange students looked at different landscapes, interacted with local people who were different from their own, and explored different life styles. Both exchange and non-exchange students experienced different teaching and learning methods, and explored different health care services. All of these differences helped the students to gain new perspectives, form new concepts, and change their ideas, and so contributed to the enhancement of global outlook for the students who attended the present exchange programme.

The enhancement of global outlook was expressed in different aspects. Firstly, on arriving at the other city, the exchange students gained a sense of the differences in the scenery between the host city and their home city. Secondly, after interacting with local students and local people, the exchange students learned not only about the local people's appearance, but also what the local customs and life style were. As a result of their day to day living together, the non-exchange students also came to know about the customs and life style of the city where the exchange students came from. Thirdly, because the programme provided both exchange and non-exchange students with opportunities to study and work together, they came to know each other and found out about differences between them in relation to ways of learning and of thinking. They also shared the experience of the different teaching styles because the lectures were conducted by the teachers from two different Schools using concurrent

videoconferencing. Fourthly, the exchange students explored local health care practices and the health care system which were different from those in their own city. Lastly, the students, when they commenced in the programme, had existing ideas about the people and culture of the other location but they often changed these ideas after taking part in the programme. The exchange students had direct experience of life in the other location and non-exchange students, although not living in the other location, interacted day by day with students from that different city and culture.

7.1.1.1 Enjoyment of very different scenery

Very few students from Hong Kong had been to Shanghai before taking part in the programme, and likewise, very few of the Shanghai students had been to Hong Kong before taking part in the programme. All of the Hong Kong students were born and had grown up in Hong Kong, although a few had been overseas or to cities of Mainland China other than Shanghai. Some of the Shanghai students had been born in Shanghai and grown up there, and others had come to Shanghai from other provinces in Mainland China to attend the nursing degree programme. All of the exchange students were curious to look at and come to know the city which was new to them. They were aware of the very different historical development of the two cities and knew a little about the similarities and differences in the physical environment of the two places.

In spite of this, on arrival in the new place, the exchange students were very surprised at what they saw which was beyond anything they had imagined. The first impression

for the exchange students in both places was the very different scenery. One Shanghai student described her feeling as:

Everything here is different from Mainland China – and it gave you a sense of coming into another world. (3FH4)

Some students found differences regarding the environment of the new place and mentioned it in their journals. One Shanghai student said of Hong Kong:

Like many big cities, there are also many tall buildings and cars. Certainly, there are also many differences compared with Shanghai. Many mountains circle the city. The streets are narrower than Shanghai's. The roads are cleaner. The biggest difference is that no people ride bikes on the street. (4FH4)

A Hong Kong student described Shanghai and expressed the feelings in her journal:

This place is different from Hong Kong. It has a vast expanse of land and a larger space between the buildings. As most buildings are shorter than those in Hong Kong, Shanghai is not so crowded. I liked this city when it was shown to me the first time. (2PS1)

After looking at more and more places and hearing more and more stories about the city, the students became more familiar with their new location. What the students saw and heard helped them know about and create ideas about this city. They no longer spoke about the visible differences such as the special scenery, but about less visible aspects of life in the city. One Shanghai student wrote:

To be frank, I think I am deeply fascinated by Hong Kong. It is not only a high-tech, modern and vivid district, but also a flourishing area full of open minds and opportunities for assiduous hearts. (3FH1)

Like the Shanghai students, the Hong Kong students also experienced many feelings about the city which they were just coming to know. One Hong Kong student wrote in her journal:

You would be wrong if you think only that Shanghai is a fully developed modern city. Historical architecture preserves very well here. There are many museums, memorable stadiums and homes of famous figures here. You can see tall, fashionable and modern shopping malls but also traditional and historical buildings. I adore its elegant quality. It is a city of contrasts. (3PS7)

7.1.1.2 Exploration of the characteristics of students from the other University

Besides forming ideas about the new place, both exchange and non-exchange students, after interacting with each other, came to know their classmates from the other city. They studied and worked together, chatted together and relaxed together. All of these 'together' experiences helped them to get to know each other, find out about differences between them and form ideas about what it is to be a nursing student in the other city and culture. Both Hong Kong and Shanghai students described their classmates from the other University as follows:

The Hong Kong students are always very dynamic and active, full of vigour. They always cooperated harmoniously with the teacher, and were active in volunteering. (4FH12)

Before meeting with mainland students, they were described as quiet and passive. However, you can find that they are just as talkative as Hong Kong's students and they are even more active than we, both inside and outside the classroom. (3PH1)

7.1.1.3 Exploration of teaching and learning

The students absorbed the new teaching style when they attended the lectures conducted by the teacher from the other School. Most of the students, no matter where they came from, recognised that the teaching and learning styles were different in the two Universities. One Hong Kong student described the differences in teaching clinical nursing knowledge as:

Another difference in teaching between us is that once they learned about specific clinical signs and symptoms or diagnosis in Shanghai, Shanghai students would immediately have the chance to go to the hospital and find a real case who had such signs and symptoms or medical diagnosis, in order to let them to have a sense of what these are and how this medical problem presents. Although we can still have laboratory simulators with which to practise, it would be better to learn from a real case for practical purposes. (3PH5)

When reflecting on the teaching in the programme, a Shanghai student described the classroom teaching conducted by the Hong Kong teacher:

During the lecture, I found the teaching style in Hong Kong was different from that in Shanghai. In Hong Kong, the atmosphere of the class is very relaxed ... his means of teaching were various, such as giving examples, role playing, demonstration, and so on. (4FH11)

The programme enabled the students to recognise that there were other teaching and learning styles which they had not thought of before. Therefore, the programme provided opportunities for the students to explore different teaching and learning

styles or approaches in nursing education and so to broaden their horizons toward internationalisation.

7.1.1.4 Development of cultural competence

New perspectives were developed by the exchange students after they were exposed to the new environment, involved in many different activities and had interacted with local students and local people. The formulation of such new perspectives acts as a basis for the development of cultural competence. The students liked to compare their conventional learning environment with the environment they experienced in the programme. One Shanghai student commented:

When studying in Shanghai, I just thought I should learn in this way, but when I saw the learning environment in Hong Kong, I thought we can learn in that way. When I looked at Shanghai and Hong Kong, I wondered why they were different. When I saw the teachers in Hong Kong, I thought, how they could teach in that way. I would not have gained such new perspectives if I had not visited Hong Kong. (4FH8)

Another student mentioned in the interview:

When we do something after returning home, we will ask, 'How will they do that in Hong Kong? How do we do it here in Shanghai?' We certainly would not have such a kind of awareness if we had not visited Hong Kong. If we had only stayed in Shanghai, we would have had nothing to compare with. (4FH2)

All students felt they learned a lot in the programme. These first hand experiences of both exchange and non-exchange students not only shaped the students' new

perspectives but also helped develop their cultural competence as they came to appreciate differences in the students from the other School, for example, in their ways of studying, working and living and, for the exchange students, in the wider aspects of life in the two places. This development of cultural awareness was seen from the students' comments in the interviews and in their entries in their reflective journals which indicated they were becoming more culturally sensitive.

Another aspect of the development of cultural competence was indicated by the change in the students' perspectives and views after the programme. None of the Hong Kong students who went to Shanghai had been there before, nor had any of the Shanghai students been to Hong Kong. Some of the students knew a little about the other place from reading books and newspapers, watching television or movies. They therefore had some perspectives and views about that city and its people before they came. After seeing what actually existed with their own eyes, experiencing what happened and interacting with the local students and people, their ideas and views changed. Most of the feelings they reported regarding these changes were positive. The following quotations give some examples of what the students said:

I originally thought that the Shanghai hospital would not be as advanced as Hong Kong, but after visiting it, I think they are similar. Their medical facilities and staff training are similar to Hong Kong. It is not as out-dated as I thought. (3PS4)

The programme is a very good opportunity for us and we have seen a place with a different culture which let me think: oh, we can also live in that way. And there's much in their way that we can make use of. (3FH3)

Not only did the exchange students show a development in their global outlook but the non-exchange students also enhanced their global outlook. The design of the programme, which brought a mix of students from two different Schools together, provided non-exchange students with opportunities to interact with exchange students, discuss common interesting topics, and both ask and answer questions between each other. The non-exchange students, as a result, came to know the students from the other place and learned about their culture. They also were exposed to the teaching style and methods of the teachers from the other University through the use of videoconferencing. They too therefore developed their cultural competence. However, as the non-exchange students could not be involved in the social environment in the other place, they knew the culture of the other society only through what the exchange students said and did, and through what and how the teachers from the other School taught. One Shanghai non-exchange student said:

They (Hong Kong students) told us about what would be done in Hong Kong when we encountered something in clinical visiting. They might say: Er, we in Hong Kong do this like.... but they did not talk much because we were not in that situation nor were we in the atmosphere or environment of Hong Kong. I *felt* that they went to hospital for practice more frequently than we did, and it *seems* that the nurses had less work stress than the nurses in Shanghai. (3FS2)

Both exchange and non-exchange students believed that first hand experience of a different country or culture was very important for the development of a global outlook. They thought it was a good experience to go out and look at differences. One Shanghai exchange student said:

Firstly I have really seen the situation in Hong Kong in person, and secondly, I will make comparisons between Hong Kong and

Shanghai after knowing the differences. I at least have concepts about what is good and what is bad now. (4FH2)

One Shanghai non-exchange student said:

I do want to visit Hong Kong if I have a chance, because I can compare Shanghai and Hong Kong by myself after visiting. My feeling is not strong if I simply listen to what my fellow classmates who have come back from Hong Kong say and simply look at pictures. What the others see and say is not objective, but is subjectively affected by their own personal thoughts. It is totally different if I can see and experience it by myself...We cannot have such kinds of personal insight if we do not experience it by ourselves. (4FS5)

The exchange students' insight into the new situation and new environment was formed by experiencing these in person and such insight is the basis for the development of global outlook. Quite a number of exchange and non-exchange students, in the interviews and their reflective journals quoted two famous sentences used by Chinese people – 'knowing a thing for one hundred times by repute is not as good as seeing it in the flesh' and – 'reading a million books is not as good as walking a million miles' graphically to express their feelings about gaining new concepts, insights and views, as a result of participating in the programme.

Although both exchange and non-exchange students gained insights, concepts and views about the other place, this must be seen as just an initial step in the students' development of an outlook on the world and their lives because, after all, they had been to only one different place for a relatively short time. However, even although Hong Kong and Shanghai are both part of the same country, i.e. China, the students noticed differences as well as similarities between the two places.

7.1.2 Critical thinking

Critical thinking is “the intellectually disciplined process of actively and skilfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information, gathered or generated by observation, experience, reflection, reasoning, and/or communication as a guide to belief or action.” (Paul, 1995, P.1). In the programme, the students’ critical thinking ability was developed by observing, analysing, and evaluating the information and phenomena they encountered.

Students faced some situations and events which they had never known about or experienced before. These ‘new’ events and situations stimulated the students to think and initiated their ability to critique. The learning environment and the interactions with people from a different cultural background also facilitated the development of students’ critical thinking abilities.

7.1.2.1 Stimulation for the development of critical thinking

Use of English and Putonghua in teaching Both Hong Kong and Shanghai students appreciated the fact that they had to use either Putonghua or English as the language medium in teaching because all of them recognised the importance of mastering English or Putonghua skills for their lives. In the programme, the subject of Health Counselling was taught in English by the teacher from Hong Kong, while the subject of Interpretation of Clinical Data was taught in Putonghua by the teachers from Shanghai. The issue that the students raised here was in relation to which language was more appropriate for the teaching and learning of specific subjects.

Some students believed that English should be used as the language medium in the teaching of the subject of Health Counselling, but others thought that Putonghua should be used in teaching that subject. Students from both Universities who held different opinions stated their reasons for preferring the use of a specific language. The students who believed that it was better to use English rather than Putonghua in the teaching of Health Counselling stated that counselling was more widely used in Western countries. The cases and videos presented in the teaching of that subject were mostly from overseas and therefore in English and also there were more written materials and journals from Western countries. One Hong Kong exchange student said “This subject is more developed in the West.” (3PS9). However, the students who believed that it was better to use Putonghua in teaching Health Counselling thought that the knowledge and skills regarding counselling would be used in patient care in clinical settings. The patients, both in Hong Kong and China, are Chinese speakers. If the students could learn more Chinese terms in relation to counselling, this would facilitate communication between nurse and patient, and so improve the quality of care. The same situation applied in relation to the language used as the teaching medium for the subject of Interpretation of Clinical Data. The students who agreed that the subject should be taught in Putonghua stated that Chinese is the patients’ native language in both Hong Kong and Shanghai. “We should know more about Chinese terms to facilitate communication with patients in future, Otherwise, we will not be able to explain to the patients, as we only know the English terms for this subject” (4FH13).

It can be seen that the students did not only learn the language but thought over why they learned and how to learn well. They did not simply follow what was arranged for them, but also commented if, in their view, it was good or not. The students thought about how they could do something to improve things when they faced or encountered a situation or event.

The teaching styles or methods The teaching styles or methods in the two Schools were different. The students believed that the teachers in Shanghai presented the teaching content in the lectures in more detail than the Hong Kong teacher did. The Shanghai students were used to getting all their information from what the teachers said. They seldom went to the library to read books and other references or challenged what the teachers said. For example, the teachers from Shanghai followed the standard of the North American Association in teaching the students how to make a nursing diagnosis and how to write a nursing diagnosis, whereas the teachers from Hong Kong taught about the principle of how to make a nursing diagnosis, and the students could then use any one of various models, i.e. whichever they preferred to write a nursing diagnosis or alternatively to state the patient's health problem. The students in Hong Kong were therefore more flexible in their learning and doing. After exploring these two different teaching styles, one Hong Kong student critiqued them, and pointed out the advantages and disadvantages. She stated:

There are merits in their (Shanghai's teaching) style: doing it again and again and becoming very familiar with it. However, we are not like this. We experience different teaching styles and methods and so we are not as familiar with any one style or method as they are. Once they come to do the course work, they know, for example, exactly how to write a nursing diagnosis.
(3PS2)

Structure of classroom and clinical practice The Hong Kong nursing students had their lectures in the classroom and practice in the clinical settings in 'blocks'. They might have clinical practice one day per week in year one, and two to three days per week in year two and three and a longer period in year four. However, Shanghai students had all their classroom teaching in their first four years and had clinical placements for the whole of their final study year. There were differences therefore between the two places in arranging theoretical learning and clinical practice. Students from both places critiqued these two methods and pointed out:

There are merits in our method. We (Shanghai) spend the time to get the whole of the knowledge needed and then go to clinical for practice. We may have more confidence to work in the clinical settings. Of course, their method also has merits in practice. They can apply the knowledge they get from the classroom to the clinical situation immediately and thus master the knowledge from their clinical experiences. (2FS5)

One Hong Kong non-exchange student stated, after knowing how the classroom teaching and clinical practice were arranged in Shanghai:

After knowing, I felt we may have more clinical experiences than they have. The learning model here is more suitable for me because I can master the knowledge only after practising in clinical. (2PH9)

Clinical visits Exchange and non-exchange students from both places learned from their visits to local health care facilities, systems and from observing practice and were able to distinguish merits and weaknesses. For example, one Hong Kong student criticised the medical insurance system in Hong Kong after comparing it with the one in Shanghai and addressed this in the interview:

I think the medical insurance system in Hong Kong should be changed and we cannot rely on the government for the majority of expenses. The quality of health services would be improved if insurance companies, government, and the patient would share the medical payment. (3PS2)

The programme thus promoted the development of the students' critical thinking by enabling them to explore new situations and events which stimulated them to think and compare these matters between their own and the other place.

7.1.3 Social and national responsibility

The development of social and national responsibility refers to the gaining of a sense of duty to help or take care of individuals in the society and nation where they live and belong. The students expressed their view that they had a social and national responsibility to try their best to learn more, to work hard to master language skills in order to meet health and social needs, to open these up before others' eyes and help others, to show concern and make suggestions for social and national development.

7.1.3.1 Recognition of the need for learning for the society

As a result of being exposed to the strange place and gaining new experiences, the exchange students became aware that there were many things which they should learn. Because their time in the host place was limited, they used all their available time to see, to learn and to explore. Even although the outdoor temperature in both places was very hot: higher than 37⁰C in Shanghai for more than ten days during the programme, and approximately 33⁰C in Hong Kong, the exchange students travelled extensively in

the cities and looked at many scenic spots and historical sites with their local student guides. One Hong Kong student in Shanghai said that, because they wanted to leave more time for these social activities, they were motivated to do their homework more efficiently in Shanghai than they did in Hong Kong.

The students knew before the programme began that they would use both English and Putonghua in their learning as the teachers would use either English or Putonghua as the teaching language medium in the lectures. However, the students appreciated that the way in which their language learning was arranged not only helped them improve their language skills but contributed to their understanding of their social and national responsibility. For example, the Shanghai students believed that nursing practice in Mainland China should take account of global developments in nursing and the trend towards internationalisation of the profession. To fulfil this goal, they felt the development of language skills was very important. If the students could read and speak English fluently, they could more easily communicate their ideas and share their opinions internationally and gain the advantages of such sharing, in order not only to improve themselves but improve their ability to contribute to nursing care in China. Meanwhile, the Hong Kong students thought that they needed to learn Putonghua because “there is a trend for local citizens to use the medical units in the Mainland. Also there is an increasing number of Mainland immigrants who use the public health service (in Hong Kong).” (2PH3). Learning Putonghua is “particularly important in taking care of some patients who are using Putonghua as their mother tongue.” (2PH3). The students recognised that today’s learning is for tomorrow’s contribution to the society. One Shanghai student expressed “I cannot help thinking

that we should study hard and do something to help our hometown to improve the medical treatment standard.” (3FH4).

7.1.3.2 Being a good ambassador

The non-exchange students did not only study and work together with the exchange students, but acted as student ambassadors to help exchange students learn how to live in the new place. This action represented part of their social and national responsibility because they were able to demonstrate they were proud of their nation and society and wished to help the exchange students to get to know and appreciate it.

One Hong Kong student mentioned what they had done as student ambassadors:

Besides, this programme allows me to learn how to be a good student ambassador. To be a good student ambassador, we need to approach the exchange students in a friendly way. When they have any problem, we should try our best to help them. Also, we need to introduce them to places that are famous in Hong Kong, places where they can buy things they want and places where they can have food to eat. On the whole, a good student ambassador needs to help and facilitate the exchange students to adapt to the life and culture in Hong Kong and so enable them to have good memories after the exchange programme is completed. (3FS1)

Although the non-exchange students did not mention directly the relationship between being a student ambassador and their social responsibility, they believed that they, as citizens of the society, should try to open up their society and way of life to the exchange students and help them to appreciate it. One Shanghai student said “I will naturally want them to have a good impression of Shanghai.” (2FS5). From the interviews it was clear that the non-exchange students all had a real sense of their personal responsibility for the exchange students.

7.1.3.3 Comments in relation to improvement of society

Making suggestions for the improvement of society reflected students' social and national responsibility. These suggestions were mainly related to the health care service in their home society. Both exchange and non-exchange students visited different clinical settings in the programme. This visiting broadened their horizons regarding the local health care systems and services. The exchange students thus compared what they knew in the host city with what they were used to in their home city and thought over whether one was better than the other. For instance, when a Hong Kong student learned that every employee in Shanghai had medical insurance and how it was operated, they then compared this with the Hong Kong situation and concluded that medical insurance was done well in Shanghai and that the Shanghai system could have lessons for Hong Kong. Meanwhile, as a result of visiting different hospitals and community services in Hong Kong, the Shanghai students were deeply impressed by the Hong Kong health care environment, which focussed on patient need and on health care providers working hard for their patients. They compared these with Shanghai's health care environment and services and felt that Hong Kong was better than Shanghai in these aspects. One Shanghai student wrote in her journal:

In a big city where good hospitals are located, I think doctors and nurses should make some changes in their attitudes and in the environment so as to give the patient more respect and care. Shanghai should do more about this. (3FH3)

As a result of the visiting, the students also came to know about some health care practices in the host hospitals, especially nursing practices. They also compared these

and decided which one seemed better. One Hong Kong student reflected on this issue in his journal:

In the hospital in Mainland China, the role of nurses includes that they can take a blood sample from a patient, based on their own decision, not the physician's. I think that this role can lead to a reduction in the time taken to reach the patient's diagnosis, compared to waiting for the physician's order. I think the Nursing Council and Hospital Authority (Hong Kong) should consider and learn from them (Shanghai). (2PH1)

The students did not explicitly state that the programme enhanced their awareness of their social and national responsibility. They focused on the teaching and learning which they encountered every day in the programme. However, when the students faced the need to help their guest students, they acted as ambassadors; when they faced new situations and events, they thought these over and compared them with their previous experiences and expressed their opinions as to what they should or what the society should do. All of these actions reflected that the students had developed an enhanced awareness of their social and national responsibility, as a result of participating in the programme.

7.1.4 Cultural appreciation

Cultural appreciation refers to the pleasure gained when one recognises, understands and enjoys the customs, beliefs and behaviours of one's own and others' cultures. In this research, cultural appreciation is defined as the students' recognition, understanding and enjoyment of personal and social customs and beliefs in the other place and this definition applied to both exchange and non-exchange students in the programme.

Hong Kong and Shanghai both belong to China. Both Hong Kong and Shanghai people are Chinese. Hong Kong is China's richest region in terms of GDP per capita and Shanghai is the most developed city in China. However, each has a different history and different processes of social development. These different histories and ways of social development led to the formation of their own distinctive social customs and beliefs, which together represent their local culture.

These local customs and beliefs were experienced by both exchange and non-exchange students. The innovative structure of the programme meant that the exchange students from one School studied and worked together in the same class as the non-exchange students from the other School and therefore both groups of students were able to experience the culture of the other society. The exchange students appreciated the local culture by being directly involved in the local cultural environment and events, while the non-exchange students appreciated the other culture vicariously through studying, working and interacting day by day with the exchange students.

The exchange students lived in the other place for six weeks. During this period, they looked at views and scenes in the local social and physical environments, communicated and interacted with local people and students when they ate, shopped and travelled in the local land. They thus explored, experienced and came to an early understanding of local culture, its people and society. Therefore, they formed ideas and created concepts regarding the culture of the host society and began to accept some of these customs into their own lives.

The non-exchange students studied and worked together with exchange students from the other place. They had many opportunities to communicate with and interact with each other in daily life. In these ways they came to know the customs and beliefs of the other place even although they did not go there in person. In contrast to the exchange students, the non-exchange students could only begin to know and understand the culture of the other place by listening to what the exchange students said and observing their behaviour, rather than by being directly involved in the culture in the other place.

A growing appreciation of the cultures of Hong Kong and of Shanghai was therefore gained by the students as one of the results of their experiences in the programme. Cultural appreciation as described by the students included four aspects: knowledge of local people, knowledge of understanding of the local nursing students with whom they shared the programme, realisations about the four elements of daily life in China, i.e. food, clothing, shelter and transportation, and recognition of the wider culture of the society.

7.1.4.1 Knowledge of local people

When shopping, eating at restaurants, travelling through scenic spots, and visiting places of historic interest and scenic beauty, the exchange students communicated and interacted with local people. What the local people said and what the local people did made a lasting impression on them. They experienced local people's kindness, enthusiasm and help.

Shanghai students who exchanged to Hong Kong commented that Hong Kong was a warm society where people seemed all to be friendly and enthusiastic. Besides that, in general, the people could speak English with ease and were very polite. They always respected them and never caused them to feel hurt. The following paragraphs give Shanghai exchange students' experiences, as described in their journals and interviews:

I feel the people in Hong Kong are very kind and warm-hearted. When we get lost and ask the way, the one we ask will tell us the way in detail, even though his Putonghua is not very good. Sometimes, he will even lead us there himself. (4FH11)

The service in many shops is very good. The seller will smile at you when you go into the shop and say goodbye before you leave, no matter whether you bought something or not... (4FH4)

The Shanghai students believed that the Hong Kong people had a positive attitude towards their job, as they all seemed to love their job and worked hard. For example, the shop assistants in Hong Kong always see themselves as a provider of service and a helper. A Shanghai student appreciated this attitude towards work and said:

The city of Hong Kong is full of people who are hard-working, whatever what their job is. Once a person gets to do a certain job, he will try his best. This is my belief. Here, I see thousands, even millions of people who take their jobs seriously, which I appreciate a lot. (3FH2)

This work attitude or spirit impressed the Shanghai students and encouraged them to do as the Hong Kong people did. One student expressed her view that this spirit would affect her career in future (4FH13).

Not only did Hong Kong people work hard during their working hours, but many had colourful recreational activities in their leisure time and the students noticed the particular differences between week days and the weekends when the Hong Kong people enjoyed these recreational activities. Another cultural phenomenon in Hong Kong which impressed the Shanghai students was that the Hong Kong people seemed to treat each other as equals and respect each other, and this also applied to tourists and non-Hong Kong people. The impression that the students gained was that people in Hong Kong were equal no matter what job they had or what beliefs they held. Two Shanghai students mentioned:

Customer service staff in shopping malls in Hong Kong are very nice and wear a smile on their face. No one will cheat you because you don't know Cantonese, no matter whether you bought something or not. (4FH2)

When going shopping, the attendants in Hong Kong always serve you well, although clients are troublesome sometimes. They still will not judge you according to how you dress and talk. This is better than in Shanghai. (4FH3)

Hong Kong people generally had a higher income than Shanghai people and even although general living expenses were higher than in Shanghai, the Hong Kong people were richer than Shanghai people. However, Hong Kong people seemed to be more frugal than Shanghai people. This made a deep impression on the Shanghai students and many mentioned it in their journals and interviews. One student explained this frugal habit:

They did not waste any food at a restaurant. This did not mean that they were reluctant to spend money, but that they made good

use of materials. We waste a lot of food from what we see from our canteen and restaurant but they eat all food, both in the canteen and when eating outside. They will take the food home if they cannot finish it. (2FS8)

The students not only appreciated this good habit but adopted it during the period of the programme and after returning home. At the beginning of the programme, some Shanghai students threw food away if they could not finish it. After looking at the Hong Kong students' good habits, the Shanghai students tried to eat all their food, or took it to their room in the hall if they could not finish it. Sometimes, two students would share one serving of food between them when they felt that a whole serving was too large. Therefore, the students not only appreciated the local culture but accepted it, providing they believed it was worthwhile.

Like the Shanghai students, the Hong Kong students, after communicating and interacting with Shanghai people, also described their impressions of Shanghai people which were that they were stalwart in appearance, polite, nice, earnest and kind-hearted, but that they spoke loudly even when just chatting. At the beginning, Hong Kong students found it difficult to accept this and believed that Shanghai people were rude and impolite. However, as they had more and more communication with them and more experiences, the Hong Kong students changed their minds about this and, as one student said "it is one of the characteristics of Shanghai people, and talking loudly is not meant to be rude or impolite" (3PS2).

The Hong Kong students thought that Shanghai people in general were taller than Hong Kong people. Most of the people they observed in the street were tall, no matter how old they were.

Hong Kong exchange students generally felt that Shanghai people did not consider other people around them sometimes. For example, one Hong Kong student mentioned that a person, when he or she stood in front of someone in a supermarket or shop, did not seem to be aware that he or she was blocking the view of that person who might be wanting to look at or to do something, and, even when he or she was aware of the other person, never said. "Excuse me".

However, Hong Kong students believed that most Shanghai people were nice and helpful. If they lost their way and asked someone in the street, Hong Kong students said they always got an answer and help from Shanghai people. One Hong Kong student described one experience which happened in the supermarket:

We wanted to buy biscuits in the supermarket one day. One biscuit that we liked and wanted to buy came in two types, one with a milk flavour and one with a chocolate flavour. We wanted to buy the chocolate flavoured biscuits but nothing was available on the shelf. A woman, who was near us, had just taken two packets of the biscuits with the chocolate flavour and wanted to take one more. When she knew that we wanted it too, she gave one of the packets that she already had in her hand to us and said: one is enough for me and this one is for you. So nice! Hong Kong people could not do it like this and neither did we. We were deeply touched. (3PS8)

The Hong Kong students thought that Shanghai people were earnest. The shop assistants there would introduce the goods warmly and let you choose what you liked. They never forced you to buy something. One Hong Kong student described one experience which happened in a restaurant:

I didn't feel anything particularly good at the beginning in Shanghai, but then I came to think Shanghai people are nice. Hong Kong cannot compare as they are more indifferent. In Shanghai, if you leave something and they notice it, they will tell you. If you enter a restaurant and ask the proprietor "Could you introduce genuine Shanghai food into your restaurant for us?" they will serve you enthusiastically and plan for you with enough but not too much food. If they see you order too much, they will tell you, instead of asking you to order more. We had the same experiences in different restaurants. (3PS8)

One of the interesting findings for the Hong Kong students was that many people in Shanghai were not born and brought up there. These people came to Shanghai from different provinces and lived in Shanghai because they had a job there or were attending a study programme there. Most of these people were not good at speaking in the Shanghai dialect. The Hong Kong students believed that the Shanghai tongue was popular in Shanghai and was thought of as a symbol of a Shanghai person. They also believed the people in Shanghai took pride in being a Shanghai person. One Hong Kong student said:

I think they feel superior about the fact that they were born and living in Shanghai. It seems that Shanghai people are more competent and more clever than the people who came from other provinces. For example, when you see a group of girls you don't know, you can easily recognise who is a Shanghai person. They may dress more fashionably and they show their confidence through their talk and manners. (3PS8)

Compared with the Shanghai students' descriptions in relation to Hong Kong people, the Hong Kong students gave fewer descriptions regarding Shanghai people. The reason may be that the Hong Kong people made a deeper impression on the Shanghai exchange students when they studied and lived in Hong Kong, although both Hong

Kong and Shanghai exchange students had a similar number of opportunities and practice at interacting and communicating with the local people and nurses.

7.1.4.2 Understanding about nursing students from the other School

As the students from the two Schools studied and worked together for six weeks, they came to know each other well. They knew about each others' interests and hobbies, and came to recognise each others' strengths and weaknesses, characters and style. After comparing these things together, they concluded that they were similar in many aspects and different in others. The following illustrates some of the similarities and differences, as seen by the students from the two places.

Students from both places thought they were both full of vigour, dynamic and active. They had many common interests, such as finding entertainment in karaoke, attending activities such as parties, watching TV and being outdoors in their leisure time, going window-shopping, and shopping generally. They also thought that they were all talkative and active in communicating with others and believed that they shared a common recognition and experience of city life, as they all lived in a big city.

The Shanghai students considered that the Hong Kong students had a more 'open' personality, and were more sociable. They liked to make themselves widely known and were extroverts. They were very energetic and did not seem to feel tired. They knew where, when and how to play well, and took every opportunity to use any leisure facilities. However, they worked hard during work time. In fact, they were

easy to get along with and did not have a strong defensive sense, which the Shanghai students had thought would be the case before the programme commenced.

Regarding personal development, the Shanghai students believed that the Hong Kong students were more mature, more independent and that their ability to adapt was strong, as they had adapted to their new environment very quickly. They felt the Hong Kong students did not rely on others and liked to do things by themselves. They were also more concerned about their personal development, had a strong sense of self-protection, and were concerned about personal privacy. When addressing the nature of the Hong Kong students, one Shanghai student said:

Those students have a variety of interests. They consider things from different angles from us. Our thought is confined and a bit self-centred. They think from a broader perspective and are more future-oriented. (4FS5)

Hong Kong students made a deep impression on the Shanghai students concerning security matters. One Shanghai student described her experience regarding this:

I was impressed that, when they came, the first thing they did was to check the windows and doors to make sure that they could be opened and closed properly. They checked the facilities in the students' hall to see if they worked well. Many students did that and this indicated that they were used to doing so. They were also concerned about privacy. When discussing a patient care plan, they would show concern about patient privacy and human rights. It seems that it is more similar to some Western concepts. (4FS5)

The Shanghai students concluded that, although the Hong Kong students looked westernised and apparently outgoing, they were traditional inside. They would laugh or joke when having a chat with you, but were silent when they were working.

The Hong Kong students recognised that the Shanghai students were enthusiastic and friendly. They were impressed to see that they could do housework tasks well, such as cooking food and washing clothes, even although they were all the only child in their family and had always been taken care of by their parents. Shanghai students, they felt, were often quite quiet although they were pro-active in sharing in activities. Most of Hong Kong students thought every Shanghai student was outstanding, demonstrated all-round development and worked hard. In tutorial times, they were willing to enter into discussions. One Hong Kong student said about the Shanghai students:

When they found that they had different opinions from others, they would raise questions. On the other hand, if they were challenged, they were willing to accept others' opinions.
(B3PH1)

7.1.4.3 Realisations about life styles, including the local food, clothing, shelter and transportation and other aspects

Although both Hong Kong and Shanghai belong to China and all the people are Chinese, the students came to realise that they were quite different in life style and habits. Some students recognised that there might be two factors which contributed to these differences. One was that the historical development of Hong Kong and Shanghai was quite different and, as a result, Hong Kong had been more influenced by Western culture. The other was that the culture in Hong Kong represented the culture of south China and most people in Hong Kong are Cantonese, whereas the

culture in Shanghai was not so specific. Some Shanghai students commented that a factor in these differences was that Shanghai had a long history as an immigration city, whose people came from different provinces of China, and who formed its more diverse culture. This section describes the differences the students observed between the cultures of Hong Kong and Shanghai, with an emphasis on daily life in relation to food, clothing, shelter, transportation and other aspects.

Food The Hong Kong students made quite a lot of mention about Shanghai's food, including its style, type and price. The food in Shanghai is of many different types, from the food styles of north China to those of south China, and from Chinese food to Western food. The most popular food in Shanghai is that of south China. However, the Hong Kong students said that it was difficult to taste all kinds of food over in Shanghai because there was such a variety. They were full of praise for the Shanghai food, and particularly mentioned steamed stuffed bun (小笼包), raw fried stuffed bun (生煎包), and fermented glutinous rice with dumpling which is made of glutinous rice flour (酒酿圆子). Most of the Hong Kong Students were enchanted with these foods and snacks and, in their journals and interviews, mentioned them as very delicious. In general, the food in Shanghai was saltier than food in Hong Kong and the Hong Kong students recognised this and could not get used to it.

An example of daily food which was quite different between two places was soup. Soup making and soup drinking in Shanghai were quite different from that in Hong Kong. Hong Kong soup is famous in Mainland China. It is cooked for several hours and is drunk at the beginning of a meal. Most Hong Kong people drink the soup and leave the more solid content or ingredients. It is said that this kind of soup is healthy

and suitable to the local climate. Compared with the soup in Hong Kong, the preparation and content of the soup in Shanghai is simpler and Shanghai people drink the soup at the middle or the end of the meal, not at the beginning. The most common soup in Shanghai was chicken egg soup with tomato and the Hong Kong students could not get used to it at the beginning. They said they missed their own kind of soup.

The food in Shanghai was less expensive than in Hong Kong and this situation deeply impressed students from both places. The price of food in Hong Kong was approximately fourfold the price in Shanghai. The Hong Kong students were surprised and pleased about the low prices and enjoyed eating out in Shanghai whereas the Shanghai students felt that to eat out was too expensive. That was why the Shanghai students who exchanged to Hong Kong did not often go to a restaurant and made less mention about the food in Hong Kong. The Shanghai exchange students could cook in the students' hall in Hong Kong. The Hong Kong students who exchanged to Shanghai could not cook food in the dormitory and had every meal either in the students' canteen or in a restaurant.

Clothing Students from both places believed that the style of dressing was similar for people in both places and that most people and all their fellow students dressed in a simple and smart style. The price of clothing in Hong Kong was cheaper than in Shanghai, and Shanghai students bought a lot of clothes when they were in Hong Kong. The Hong Kong exchange students made little comment about the clothing.

Shelter Both groups of students stayed in the University student accommodation and so had only a few ideas of what local people's residences were like. By talking

together about this topic, the students learned that the price of houses in Shanghai had increased quickly and would soon catch up with the price of houses in Hong Kong. A house in Shanghai was more commodious than a house in Hong Kong, and its price was relatively lower. Quite a number of Hong Kong students who exchanged to Shanghai were invited to visit a Shanghai student's home and they felt excited and happy to be able to be with the student's family. However, the Shanghai students who exchanged to Hong Kong expressed disappointment that they did not visit a Hong Kong student's home when they were in Hong Kong.

Transportation Transportation in both cities was convenient and accessible. There were many kinds or means of transport, including bus, minibus, Mass transit railway (MTR), ferry and taxi. However, no-one rode a bicycle in the streets in Hong Kong, whereas many did so in Shanghai. The cost of transportation in Hong Kong was more expensive and buses and cars were driven more quickly in Hong Kong than in Shanghai. Due to the special nature of Hong Kong topography, the exchange students needed time to adapt to using the transportation. One Shanghai student described the experience of taking a bus or taxi in Hong Kong:

When we enjoyed being outdoors on sunny days, we felt a 'big atmosphere' here which is totally different from Shanghai. Many mountains encircle the city so that the roads are usually not on the same level as the sea. Many of us got dizzy when going up and down or turning corners in a bus or a taxi. (4FH7)

The traffic rules in Hong Kong were very different from those in Shanghai, for example cars were driven on the left in Hong Kong, and the students noticed that Hong Kong people, both drivers and pedestrians, observed the traffic rules strictly, whereas many Shanghai people would not look at the traffic lights when crossing the

road. The minibus drivers in Hong Kong did not take extra passengers, but took only as many as could find a seat in the bus, whereas the Shanghai minibus drivers took as many passengers as possible.

Shopping Both Hong Kong and Shanghai were rich in the amount and variety of goods in the shops and had a lot of shops, in which there were different levels of quality of goods and of prices. However, shopping in Hong Kong and Shanghai was different. There were many chain stores or shops in Hong Kong, i.e. shops which were part of the same chain or group, and in which the pricing of items would be the same in the different outlets belonging to the same chain or group. Shopping in Shanghai was different. The price for a similar item would be different in different shops, and shoppers commonly compared the prices in at least three different shops before buying. One Shanghai student mentioned about shopping in Hong Kong:

When walking in the street, we are surprised by the vast range of choice available. Hong Kong has a huge number of top quality, reasonably priced products and we always can get special offers. (4FH10)

One Hong Kong student described the shopping experience in Shanghai:

We can bargain when shopping in Shanghai and we got some experience with that. When shopping, we always bargain with the shopkeeper. If we could not buy the goods at the price we expected to pay, we would go away. At this point, the shopkeeper would call you back and ask you what price you wanted. We thus bargained again and got goods at a good price. (2PS15)

Climate The climate in both places in summer, which was when the exchange programme was conducted, was hot, but there were some differences between the two cities. The highest temperature in Hong Kong was approximately 33⁰C, but 39⁰C in Shanghai. The difference in the degree of temperature between the highest (day time) and the lowest (night time) was greater in Shanghai than in Hong Kong. Therefore, in the hottest days in summer, the weather in Hong Kong was more comfortable than in Shanghai. One Shanghai student mentioned about this as follows:

In fact, we are surprised that it is not as hot as we had expected. Although Hong Kong is located almost on the equator, the sea wind seems to bring comfort to the people here by blowing the hot air away. It's enjoyable to have this kind of weather in this season. (4FH7)

Lifestyle The life style was different in Hong Kong and Shanghai. The exchange students recognised that the life rhythm in Hong Kong was quicker than in Shanghai. Both Hong Kong and Shanghai students believed that Hong Kong people did things more quickly than Shanghai people, and they felt this was indicated by the fact that they walked quickly in the street. The exchange students in each place experienced what was, for them, a new life style and adapted to it. One Shanghai student mentioned in the interview that her classmates said she walked faster after she came back from Hong Kong (3FH2).

Shanghai people have a habit of having a nap after lunch. This was not the habit in Hong Kong. Hong Kong students were surprised to see this at the beginning of their time of living in Shanghai. After coming to know about this habit, some Hong Kong students wanted to know why Shanghai people did this. They searched for

information about the noontime snooze and found that having a nap in the middle of the day is considered to be of benefit to health. Some Hong Kong students accepted this style, and thereafter, during their days in Shanghai, they had a nap. One Hong Kong student said that he kept this habit after returning from Shanghai and could not get used to life without having a nap.

The daily living time clock in Shanghai was different from Hong Kong. Shanghai people got up earlier in the morning and went to bed earlier at night. The three daily meals were also earlier. Shanghai people would commonly have breakfast at 7-8 and lunch at 11:30-12:00 while most Hong Kong people had their lunch at 1-2 pm. At the beginning of the exchange programme, Hong Kong students were surprised that there was no breakfast available in the students' canteen at 9 am. Hong Kong people had more activities at night compared to Shanghai people. Students from both places believed that there was no need to judge which daily living time clock was better than the other, but that it was important to adapt to the different times when you were living in that cultural environment. In fact, the exchange students from both places tried to adapt to this as soon as possible.

7.1.4.4 Recognition of social culture

Many students observed that there were both similarities and differences in the social culture of the two cities. The similarities were that each was a metropolis and a harbour city and each had a developed economy. Both cities had beautiful sights, many tall buildings and crowds of people.

However, there were also many differences between the two cities and their societies. Hong Kong was more crowded, had more narrow streets, and had taller buildings. However, the streets in Hong Kong were cleaner. Although there were many dogs in the streets of Hong Kong, no excrement was left lying in the streets. There were more cars in the streets and heavy traffic on the roads in Hong Kong, but fewer traffic jams. Everyone would observe the public rules in everything they did so that the society was in good order. One Shanghai student described the environment in Hong Kong:

...When walking along the street, I can't find even a piece of paper on the ground. Wherever I go, I can feel fresh air around me. When I go to the beach, the sea is always blue and the sky is always very bright, if it is not raining. (4FH11)

The structural environment in Hong Kong seemed to the Shanghai students to be designed to focus on people's needs, for example, on the needs of disabled people or the elderly. It was, as some students said, 'a humanistic environment'. The government of Hong Kong seemed to the Shanghai students to show concern for the people and provided many facilities for the people's comfort. There were many shelters in the streets in Hong Kong so that, if it was raining, the people did not need to stand out in the rain. Also, there were many public washrooms with advanced equipment and management. There were many terraces in Hong Kong. One Shanghai student analysed the advantages of these terraces:

I think the Hong Kong people are very clever. The surface area of Hong Kong is very small, so they build foot bridges which can link the buildings and people can walk on them. Then the traffic jams and noise can be reduced. They also build gardens on some terraces. These terraces are useful to enlarge the surface area of Hong Kong. (3FH6)

Hong Kong was also an open city which accepted people from all over the world, many of whom had different opinions and voices. Shanghai students described the city spirit of Hong Kong as one of ‘tolerance and pluralism’. The people always smiled and were ready to hear a different opinion or view. One Shanghai student described this environment in Hong Kong thus:

Every one here seems to have the opportunity to search for their interest. That is to say, if you want to be successful in one area, you work hard and get a remarkable mark, and then in return you can fulfil your own dream. (3FH1)

Compared with Hong Kong, which had a more Western culture and modern life style, Shanghai was more traditional. The people of Shanghai kept many traditional manners and habits and “the society kept much traditional or historic architecture” (3PS7). At the same time, Shanghai had increased the speed of its economic development and was becoming more and more advanced, for example, in its buildings and its application of technology. Two Hong Kong students described the cultural environment in Shanghai:

Shanghai is really a prosperous city, a place where the east and the west meet. It has the tallest hotel in the world and also the oldest regions. It has the latest shopping malls and is the hometown of many famous persons. (2PS3)

Historic architecture preserves very well here. There are many museums, memorable stadiums and homes of famous figures here. You can see tall, fashionable buildings and the latest shopping malls but also traditional and historic buildings. I adore its elegant quality. It is a city of contrasts. (3PS7)

The students concluded that many types of electronic machines and fashionable clothes were sold in shops in Hong Kong, but more historic and famous architecture and art products could be looked at or bought in Shanghai. That is the picture which the exchange students had of the two cultures in their social context. Both Hong Kong and Shanghai exchange students liked the different culture of their host city. They appreciated and enjoyed visiting local scenic spots and historic sites and being involved in life in the local culture.

7.1.5 Life-long learning

Life-long learning refers to “the activity of seeking out new knowledge or developing a skill, and participating in educational activities over the course of a person’s entire life” (Sustainable City, 2006). In the programme, the students’ enhancement of life-long learning was indicated by their awareness of their need to learn, of finding out what to learn, working hard to learn and being motivated to learn.

According to the students’ views, the exchange programme was a special chance for learning. When facing new events and situations, interacting with new classmates and making new friends, the students not only appreciated the local culture and the style of teaching and learning of the host teacher and students, but also became aware of what they did not know, and therefore needed to learn. The students illustrated some of these kinds of learning experiences using examples of language learning. One Shanghai student mentioned in the interview:

The lectures in the programme were given in either English or Putonghua as the teaching language medium. Few lectures here (in Shanghai University) are given in English. After my second year of study in the University, I did not learn English any more and my English is not good. Attending the lectures in the programme made me aware that my English is not good and encouraged me to read and speak English. (4FH3)

One Hong Kong student also mentioned about the language learning in the programme:

...In the programme, we have a learning situation in which I use Putonghua. I think it is a good chance to learn. I need to have more chances to practise Putonghua. .. (2PH2)

The students, both exchange and non-exchange, felt they learned a lot in the programme and gained not only nursing knowledge but personal life experiences. All of these positive feelings they felt motivated them to continue to learn in the future. The students themselves recognised that the timeframe of the programme was limited and that it would soon end. However, learning is endless; it continues throughout life.

There are many things to be learned and explored in one's life. One student said:

I think the health counselling will be very helpful to my future work. As the programme lasted only a short period, the knowledge the teacher taught us was limited. I will find some more books on health counselling to study after I go back to Shanghai. (4FH1)

Another student mentioned:

I don't feel learning English is a kind of burden and, after returning from the programme, I am not afraid of it. Originally I thought that English was difficult, but because of my experience in Hong Kong, I will consciously read English books and magazines at night, and don't feel that it is a burden now. (4FH5)

7.1.6 Biliteracy

In the programme, biliteracy was defined operationally as the ability to use both English and Putonghua in listening, reading, speaking and writing.

After the handover of Hong Kong from Britain to China in 1997, communication and exchanges between Hong Kong and Mainland China quickly increased. Hong Kong citizens therefore had more and more opportunities to use Putonghua in talking and in writing, and the government of Hong Kong called upon and encouraged Hong Kong citizens to learn and practise using Putonghua. The Universities in Hong Kong thus emphasised the importance of learning Putonghua and addressed this as one of the strategies of University development (The Hong Kong Polytechnic University, 2001, P.10). In Shanghai, English is the most popular foreign language and Shanghai people recognise more and more the importance of learning English. The most important reason for doing so is to facilitate communication and exchange internationally and to improve the internationalisation of Shanghai society, as a developed city in China. Shanghai children are now required to learn English from the beginning of their primary school studies and English learning is emphasised in the curriculum in all kinds of schools.

As more and more Mainland China people study, work and live in Hong Kong and use the medical and health care services there, the Hong Kong nurses who work in the clinical settings have more and more opportunities to use Putonghua. The situation in Shanghai is similar to that in Hong Kong and the nurses in Shanghai too therefore have increased opportunities to speak and write in English. Therefore, both Hong Kong and Shanghai nursing students are motivated to learn the second language, i.e. Putonghua or English.

In the programme, biliteracy or language learning was one of the objectives and so was organised into the classroom teaching. English was used as the teaching language medium for the subject of Health Counselling, while Putonghua was used as the teaching language medium for the subject of Interpretation of Clinical Data. The students also practised using either English or Putonghua after class. Both Hong Kong and Shanghai students thus had many language learning experiences and developed positive feelings about this. The main experiences they reported regarding their language learning can be described in four aspects, i.e. difficulties, facilitation, strategies and achievements. The students faced difficulties at the beginning of the programme, they then took advantage of various facilitation methods offered and developed their learning strategies. Finally, the students felt they achieved improvement in their language skills by the end of the programme.

7.1.6.1 Difficulties in language learning

The Hong Kong students learned and practised Putonghua before commencing on the programme and, because they were selected from all applicants according to the

criterion of Putonghua skill, they were better in their use of Putonghua than those who did not attend the programme. The Shanghai students had all learned English for several years, from their primary school education through later schooling and in University. However, students from both places mentioned that they experienced difficulty in using the other language, Putonghua for Hong Kong students and English for Shanghai students in the classroom and in daily communication in the programme. The main difficulties that the students encountered were: difficulty in comprehending due to the speed at which others talked, difficulty in expressing themselves, difficulty in reading the subject material and difficulty in understanding special terms, such as medical terms.

Most students felt that it was difficult to understand the lecture content when the lecture was conducted by the teacher from the host School - in English for the Shanghai students and in Putonghua for the Hong Kong students. When the teacher spoke slowly, they could understand what was said. However, most of the time, they felt that the teacher spoke too quickly, even although each teacher tried to control his/her speed of speaking. The students felt it more difficult when the teacher departed from his/her lecture notes in order to explain or elaborate on some concept or phenomenon, because the teacher tended to speak faster at that time, and the students were unable to get help from the lecture notes which they had received. Prior to taking part in the programme, none of the students, no matter where they came from, had had any opportunity to attend a lecture which, for the Shanghai students, used English, or, for the Hong Kong students, used Putonghua. It was the first time therefore for most of the students to attend such a class and they “could not catch up with the speed of the teacher” (4FH4). One student said:

When we had the lessons in Putonghua, if the teacher spoke too quickly, I might need time to think about what she is just talking about, and this made me miss the later part. (3PH6)

Besides the difficulty in keeping up with what the teacher said in the class, most students experienced difficulty in communicating with others in what was for them the second language. Before the programme began, Hong Kong students used Cantonese in daily communication and English in the classroom, while Shanghai students used Putonghua in both daily communication and in the classroom. One Hong Kong non-exchange student stated:

When there were tourists using Putonghua to ask me where a place was, I would subconsciously use Cantonese to answer their question. (2PH3).

At the beginning of the programme, when the students first met each other, the first thing they were concerned about was how to communicate with each other, i.e. what language should be used in communication. One Shanghai student described the situation at their first time of meeting each other:

Hong Kong students came into the classroom with different personalities from us. We were surprised and excited. However, the fresh impression when we first met was blocked, because we couldn't communicate. We couldn't understand their Cantonese and also couldn't talk to them in English fluently. (2FS5)

The students continued for several days to feel stressed in expressing themselves, although they regularly communicated with each other in the classroom and in daily life. At this early stage, they could not use the other language fluently and were not

confident. Both Hong Kong and Shanghai students described their feelings and experiences as follows:

I am always afraid that they are unable to understand what I am talking about. Also, I found that if I always used English, it was not easy for us to communicate as they were not used to it as I was. (2PH2)

Although they did have some knowledge and vocabulary in the other language, the students also encountered difficulty in writing in the other language, when they tried to express their ideas and do their homework. The homework for the subject of Interpretation of Clinical Data was a case analysis, using the nursing process model, and the students were required to write their case analysis reports in Chinese. This was difficult for the Hong Kong students because they had learned about nursing process and how to make a nursing diagnosis in English, using English terminology for these special terms, and they could not freely express these special terms in writing in Chinese.

Another difficulty experienced by the Hong Kong students was in reading simplified Chinese. Simplified Chinese means that the strokes of the Chinese characters are simplified compared with those used in traditional Chinese and are therefore different from traditional Chinese. Simplified Chinese is used in Mainland China and all the teaching and learning material for the subject of Interpretation of Clinical Data was written in simplified Chinese. The Hong Kong students usually used English as the teaching and learning medium for their course work and used traditional Chinese in more general reading and writing, such as reading the newspaper or writing a letter.

The Hong Kong students therefore found it difficult to see the relationship between traditional Chinese and simplified Chinese.

In the teaching and learning of both subjects in the programme, the students encountered many medical terms, in listening, reading, speaking and writing. Both Hong Kong and Shanghai students experienced difficulty in understanding these terms, even although, respectively, they had studied either Putonghua or English for some years. The Hong Kong students for example had not learned and come to know these special medical terms in either spoken or written Chinese, and the Shanghai students had not learned these in English before the programme commenced. It was noted that the Hong Kong students expressed this difficulty more strongly than the Shanghai students did. One reason for this might have been that the subject which was taught in Putonghua, i.e. Interpretation of Clinical Data, utilised more medical terms than the subject which was taught in English, i.e. Health Counselling. Both Hong Kong and Shanghai students expressed this difficulty in their journals and interviews:

We must concentrate to listen to what the teacher says in the lecture taught by the Hong Kong teacher. If we do not concentrate we can understand in general, but not understand the special terms used in this subject. We can only guess the meaning of these, rather than have an exact understanding. (2FS5)

The Shanghai lecturer taught in fluent Putonghua and her lecture notes/assignments were given in Chinese with only a few of our commonly used English terms. Then, we had to try our best to understand and discuss what the English symbols/terms for each Chinese medical term were. (2PH3)

...In many times of discussion, when we had chosen drugs for the patient's treatment, the Shanghai students said the name of the drug in Putonghua, and told about the effects and side effects of its use for the patient. The Hong Kong students then pointed

out another name of a drug in English, and described its effects and side effects. We then discussed them and found lastly that we had said the same drug. (3PS9)

7.1.6.2 Facilitation of the learning of language skills

Most of the students mentioned that the programme provided a good environment for language learning. The students commented that they had found it difficult to improve their learning of another language before their experience in the programme, because of the lack of a learning environment. In the programme, because the two subjects were taught, each in a different language, and because all of the related teaching and learning activities, including the spoken language used in the classroom and in any discussion, the lecture notes, doing their homework and taking the final examination were done using the language in which the lectures had been given, they were provided with many opportunities which facilitated their learning of the other language. One student said:

In Hong Kong, I just use Cantonese in daily living, use English in the lecture and have not had a chance to practise using Putonghua. In the exchange programme, we have a learning situation in which we use Putonghua. I think it is good chance to learn. (2PH2)

The learning atmosphere in the natural living environment together with the availability of helpers were also identified as factors which facilitated their language learning. The exchange students had many more chances than the non-exchange students to listen, read and practise the language that they needed to learn because they had more opportunities to communicate and interact with the local people, with

whom they were in daily contact. They felt that this environment facilitated their learning and development of language skills. One Shanghai student described her experience of language learning in the host city:

The people surrounding you always give you a cue to learn, because they speak a lot of English in daily life. The material that we read was all written in English. When shopping in the shops in Hong Kong, we had to speak English because we did not know Cantonese and they did not know Putonghua. We had no problem in communication with them and improved our oral English. However, we never speak English in the shops in Shanghai. (4FH2)

The way in which the programme was organised meant that the exchange and non-exchange students studied and worked together and played the role of helper for each other. For example, the Hong Kong students played a helper's role in helping their classmates, i.e. the Shanghai students, learn English and vice versa. Both exchange and non-exchange students benefited from this kind of class organisation and from the use of role play. One Hong Kong student described the experience as follows:

Because we are familiar with one of the two languages, we can communicate more with students from the other side and help them when the class is held in our language, and vice versa. We can teach English to them and they teach Putonghua to us. (2PS13)

7.1.6.3 Strategies in the learning of language skills

By encountering both difficulties and facilitations, the students developed their strategies for language learning. These strategies helped them learn more effectively

and efficiently. The most common learning strategies were the use of multi-languages, multi-methods, helping each other, translation, speaking from low speed to high speed, getting more practice, concentration, and getting help from available resources.

At the beginning of the programme, in communicating with each other, the students usually used both English and Putonghua, in order to try to establish effective communication. Usually, both groups of students would use Putonghua in daily communication, either in Hong Kong or in Shanghai, as they believed that, as they were all Chinese, it was better for them to use Putonghua, rather than English. When having difficulties in understanding each other, they would switch to using English or even Cantonese to try explain the meaning of what they had said. Of course, only the Hong Kong students were fluent in the use of Cantonese, but sometimes they found they could explain something to the Shanghai students better using some Cantonese words rather than English words. The students enjoyed and appreciated this pattern of communication. One Hong Kong student described this:

They never laugh at me but try their best to use their imagination to understand my terrible accent. (2PH2)

Sometimes, the students would use multi-methods to try to understand the meaning of words in their communication. They would use both speaking and writing, and would use body language when the problem could not be solved by an oral or written explanation. Sometimes, they would seek a classmate's help with translation. One Hong Kong student stated:

They really do not understand what I am talking about. What I can do is just try my best and explain in more detail, and even write the messages down on paper in order to try to give them exactly. It is really an unforgettable experience and I am so happy I can do it myself. (3PH9)

To overcome the difficulty in understanding special medical terms, the students used multi-methods. They would seek help from classmates, from a dictionary, from lecture notes and/or books. The Hong Kong students, when doing their homework, usually translated these terms to English first, and then tried to write them in Chinese again.

An important strategy for language learning was helping each other. In doing this, the students utilised their respective strengths, i.e. in each class there were students from the two places, so each student was fluent in using one or other of the two languages used in the programme. They were thus able to help each other in daily communication and course work. Most of the students, both from Hong Kong and Shanghai, had this experience in the programme. They helped each other by teaching, explaining, translating and encouraging. They taught their classmates how to pronounce words correctly, explained the actual meaning of the words, using both English and Putonghua, translated the words into English or Putonghua so that their classmates would understand, and encouraged them to practise. When describing this experience, they emphasised that this help was mutual. One student said:

They usually are willing to correct my poor pronunciation. They sometimes motivate me to speak more and give me the chance to make a class presentation. On the contrary, I also taught them some Cantonese. (2PH1)

Another learning strategy that the students used in language learning was adjusting the speed at which they spoke. At the beginning, they spoke slowly, explaining slowly and reading slowly. Sometimes, they asked the teacher to speak more slowly in the lecture, in order to catch the meaning of the lecture content. Later on in the programme, the students found that they could use the language more smoothly and fluently. They found it easier to understand the lecture content and did not mind about the speed of talking. At the same time, they paid more attention to listening during the lecture instead of relying on help from others.

In order to develop their language skills, the students made an effort to practise more and utilised all opportunities to learn. As part of their learning of the two subjects, the students were required to give a presentation in tutorial time and to take part in group discussions. However, they were not involved in giving a presentation in the other language at the beginning of the programme, as they had not yet mastered their language skills. In the early stage of the programme, the Hong Kong students gave a presentation in English on behalf of their group and vice versa, i.e. the Shanghai students, on behalf of their group, gave a presentation in Putonghua. As time went on, the Hong Kong students gave their presentations in Putonghua and the Shanghai students tried to give their presentations in English. The Hong Kong students were more active than the Shanghai students in giving presentations in the other language, and so there were more opportunities for them to present in Putonghua.

7.1.6.4 Improvement of language skills

After making these efforts, the students felt they had much improved their language skills and, when mentioning their achievement of language skills, they were excited and satisfied. They felt that their most important achievements were their learning of many medical and other special terms, improving their listening, speaking and writing skills, and being able to understand the lectures which were given in the different language.

When talking of their achievements in listening skills, the following two comments came from students' interview transcripts and journals:

I have had the chance to speak in and listen to Putonghua. Although I still cannot speak Putonghua very well, I think my listening skills have improved a lot; at least I knew what they said without having to ask them to repeat words. (3PH3)

My English standard rose, at least my listening skills. If I can understand sixty to seventy percent in the first week, then I can understand ninety percent at last, and we speak faster and more naturally then. (4FH2)

A Hong Kong exchange student described her improvement in speaking Putonghua:

At the beginning, I could not even use Putonghua to ask people how to go from one place to another. Then I lived there, where Putonghua is popular, for some time, and now I can use it well. (2PS13)

Some students felt they gained improvement in their writing skills after studying in the programme. For the Hong Kong students, they normally had less opportunity to write in Chinese because they used English in their course work, such as homework or a term paper, and used Cantonese as their oral language in communication. In the

programme, they were required to do their homework, such as their case analysis report, in Chinese. They found that difficult at the beginning of the programme, but easier by the end of the programme. One student stated:

After two to three weeks' practice, and with the help of the exchange students, I was able to write the nursing diagnosis in Chinese more easily than before, and finally, I am able to write the nursing diagnosis by myself. (3PH3)

In general, the students believed that they improved in their language skills, and they had positive feelings regarding language learning. These positive experiences, they felt, would encourage them to continue with their language learning and to practise. One student addressed this as follows:

It is really a funny and exciting experience. My Putonghua was quite poor before joining this programme. This programme has given me a chance and forced me to communicate with the other University's students in Putonghua. Although my Putonghua could not be described as fluent after this course, I can see the improvement from the first day to the last day. To practise a language effectively, we need to use it more in our daily life. (3PH1)

However, a very few students thought that they had not improved in their language skills, for example, some students, on commencing the programme, were relatively better than others in their ability with language skills and it was therefore hard for them to recognise any improvement. For example, one Hong Kong student had previously systematically learned Putonghua, and thought her experience in the programme only helped her recall it.

7.1.7 Leadership skills

Leadership has been defined as influencing and directing the performance of group members towards the achievement of organisational goals (Beech & Chadwick, 2006). In the present research, leadership was defined and expressed, in relation to the non-exchange students in Hong Kong and in Shanghai, as an ability to be a good student ambassador in helping the exchange students to live, study and work in the host city. Although not defined prior to commencement of the programme, it became evident during the programme that the exchange students, as well as the non-exchange students, demonstrated leadership skills in the team work and group work in which they shared in the programme.

The learning environment of the programme was different from the students' conventional learning environment. The students came to know new classmates, studied two different subjects, and attended a number of clinical visits and social activities. They therefore experienced many new situations and new events and had to handle or deal with these, and with any difficulties or problems which arose, for themselves and/or for the exchange students. During this process, the non-exchange students learned, exhibited, practised and enhanced their leadership skills.

Although the exchange and non-exchange students shared some common roles in the programme, e.g. studied the same subjects and attended the same activities, they played different roles in some aspects, e.g. exchange students played a guest role, while non-exchange students played a host role. These similar and different roles were reflected in their learning, exhibition and practice of leadership skills.

7.1.7.1 Exhibition and appreciation of leadership skills

The non-exchange students demonstrated leadership skills by introducing their exchange student colleagues to the new environment, guiding them in relation to the clinical visits, organising the various activities and helping them in their daily living and studying. As the hosts, the non-exchange students in both places met the exchange students soon after they arrived. After giving a welcome greeting, they showed them around the campus in order to help them become familiar with their new surroundings. One of the non-exchange students said of her work during that time:

Of course, as a student here, I introduced them to the University, the canteens, the services and facilities, and also the role of the University hospital... I took them to different places so that they could settle down more quickly. (2PH2)

All of these activities were organised by the non-exchange students themselves. They not only helped the exchange students familiarise themselves with the physical environment on campus and the living environment in the students' hall, but also gave advice about how to live well in the local place, and explained about such things as transportation and shopping.

The non-exchange students played the role of guides in relation to the clinical visits. Both Schools had organised visits to several clinical settings and health care organisations. It was arranged that non-exchange and exchange students went to these visits together and the non-exchange students were responsible for ensuring that the exchange students got safely and in time to the place for the visit. In this way, the

non-exchange students became guides, and to be a good guide, they had to prepare well before each visit and to organise things well during the visit. They usually first found, on the map, the location of the place to be visited, and then got information about how to get there, such as which bus could take them there. They were then responsible for dividing the class into several smaller groups and they arranged that at least one non-exchange student would act as the group leader for the visit. On the day of the visit, the group leader met the exchange students at the students' hall and took them to the visit. The following paragraph described this kind of experience in relation to one visiting activity:

Today's activity is visiting the Info World which is located in the Health Authority building. After searching before the visit, we found that there was no bus which could take us from the students' hall to there directly. We then decided to take a taxi. (3PH6)

After each visit, the group leader brought the students back and said goodbye to them in the students' hall, because they treated the safety of the exchange students as their responsibility. One group leader pointed out:

I should ensure their safety, so that they cannot get lost and should arrive back at their hall after the activity. If leaving them on the way back, I should be sure that they all knew how to get home. I know they are adults, but they are all in Hong Kong for the first time. So I had some worries about them and must do well to ensure their safety. (2PH9)

Besides exhibiting leadership skills in relation to the visiting activities, non-exchange students exhibited their leadership skills in organising many social activities. They

were involved in the whole process relating to each activity, including initiating an activity, selecting a meaningful place to go or designing a valuable activity, planning an activity and managing an activity.

To help the exchange students understand and appreciate the local culture and help them enjoy their life in the other place, the social activities the non-exchange students organised included visiting places of historic interest and scenic beauty, and going to karaoke. The non-exchange students from both sides initiated these activities for their exchange classmates, even although the weather was very hot in both cities. Some Hong Kong students abandoned their original plan of doing a part-time job at the weekends in order to accompany their exchange classmates in the social activities, while the Shanghai non-exchange students renounced their chance to go back home in the summer holidays. As there were many meaningful sites which could be visited in both cities, and as the time was limited, the non-exchange students had to make a selection, i.e. choose only some of the famous places to visit. The strategies that they took were to introduce their exchange student classmates to the places that they thought were valuable and should be visited first, and then to work together with them to come to a joint decision as to where they would go. The following paragraph describes the experience of a non-exchange student in organising a social activity:

...Before we plan some of the social activities for mainland students, we have to cooperate and communicate with each other in order to have that activity well organised, such as how many Hong Kong students would be available on that day and how many mainland students would attend the activity, so that we can have enough manpower in case we need to handle possible accidents. The most important thing is that all of us have to reach a consensus for each activity, so that we can meet most of the mainland students' needs of where they want to go and what they would like to see. (3PH5)

After designing the activity, the students planned the entire activity, including transportation, food, the detailed content of activity and so on. In this process, the non-exchange students managed well. The farewell party organised by the Hong Kong non-exchange students was an example of good organisation which made a deep impression on all students who attended. A Shanghai exchange student described the activity as follows:

All of the Hong Kong students tried their best to organise games and to make food for us. I learned to organise a party, starting from the preparations and division of labour, groupings and implementing the plans... When discussing the planning of the activity, all the group mates would try to voice their different points of view, stating whether they agreed or disagreed with certain points. Then clarification of their own opinions was required and they had to show evidence to support the idea. As a result of this debate with different people, we voted for one of the choices, and could come up with a final decision as to which was the most suitable choice, and in that way, all the group mates were convinced of it. (3PH2)

At the times when the non-exchange students exhibited their leadership skills, the exchange students recognised and appreciated this and learned from each other. One student expressed her feelings towards the activities organised by the host classmates:

They (host classmates) were responsible for the whole process of activity organisation. They organised well. They were very much concerned about us and arranged all items comprehensively. The farewell party made a deep impression on me. How nice it was. The atmosphere there was very good. Every one enjoyed it and was excited and nobody wanted it to stop. We were all deeply involved in the party, no matter whether you were an introvert or an extrovert. We expressed our happiness in our own way and

told them endlessly after the party about how good a party they had organised. (4FH2)

During the programme, when studying the two subjects, the students experienced cooperative learning. Tutorials were arranged to facilitate students' learning. In the tutorial sessions, the teachers who taught the subject of Interpretation of Clinical Data presented one or two cases each time for discussion and required the students to analyse the data, make the nursing diagnosis, and plan nursing actions for the patient described in the case. The teacher who was responsible for teaching Health Counselling gave examples to demonstrate how to be a health counsellor in the clinical setting and then required the students to 'back-demonstrate' using role play. All of these learning activities required the students to cooperate and work together. They thus all experienced how to organise team working, how to communicate and collaborate in their studies, and how to work efficiently as a team. Their leadership skills were indicated in the process of this team working. Therefore, exchange and non-exchange students from both places exhibited and appreciated leadership skills in team working with each other. The following example illustrates the students' appreciation of their effective team work in the classroom:

What made a deep impression on me was a group discussion. The teacher gave us a paper written in classical Chinese and requested that we translate it into English. 'My God! How to do it?' I thought. However, the division of labour in the group was already finished before I had sat down properly. It was done by local students within one minute. Our group was divided into several smaller groups and each smaller group was responsible for translating one paragraph. We translated the traditional Chinese into contemporary Chinese first, and then translated the contemporary Chinese into English. In this process, each person in each smaller group is in charge of one part of the work, although we work together. For example, one is in charge of

translating classical Chinese to contemporary Chinese, one is in charge of translating contemporary Chinese to English, and one is in charge of recording and checking. The strengths of each group member were mutually beneficial. This process enabled me to recognise the importance of effective team work. (3FS2)

Team work was also implemented in daily living activities. It was not only used in activity organisation, which required group discussion and decision making, but in dealing with daily living situations. The students believed that two persons' power is greater than one plus one. When encountering a difficulty or problem, the students liked to put it out to others and discuss it with them in order to find the solution. As a result, the exchange students overcame any difficulties and adapted quickly to their new life. The non-exchange students very much appreciated this effective team work. One student described this kind of team work in her journal:

When they (Hong Kong students) first came, they very quickly got to know which restaurant was good, which one was not, because more than one person went out to try different restaurants and shops. One went to this shop and another to another shop and they shared their experiences afterwards. Therefore, they have a stronger team spirit. (2FS8)

It was noted that most comments about the appreciation of leadership skills occurred in the direction from Shanghai students towards Hong Kong students, which meant that the Shanghai students thought that the Hong Kong students showed stronger leadership skills than the Shanghai students. The Shanghai students recognised that they were weaker in leadership skills and analysed the reasons for that. They thought that they had had less opportunity previously to organise a group activity by themselves, even although all the Shanghai students were living in the students' dormitory of their University. The system that they were used to was that the

University arranged an instructor for each of the classes and the instructor was responsible for organising each activity for the students. The instructor planned and managed the entire process of each activity, according to the instructions from the University, and gave the instruction to the students. The students therefore did not need to make any decisions about the activity. In their course work, the students had little homework or group papers to do and had less group work. They also had only individual examinations each term. These situations meant that the students had less opportunity to develop their leadership or team working skills in their University life. The Shanghai students, no matter whether they exchanged to the other place or stayed in Shanghai thought that the exchange programme gave them a chance to learn and master some leadership skills.

7.1.7.2 Learning and practice of leadership skills

Both the Hong Kong students and the Shanghai students believed that they learned and developed their leadership skills through taking part in the programme. They faced new situations, entered a new environment and co-operated with new partners in the programme. Some students said this was their first time to go to so many places and lead the visit, while others mentioned that they had not participated in launching an activity for a large group of people before. They all learned and practised leadership skills in these processes. By summarising what the students said in the interviews and journals, it was found that the development of a leadership skill consisted of several components: to be aware of responsibility for the classmates, to find out the problems and difficulties that needed to be resolved, to think over the strategies for problem solving, and to learn how to co-operate with others.

The non-exchange students had no previous experience of helping and working with the classmates who came from the other city and from a different culture. Some of them did not know what they should do, although they were willing to help them. One student mentioned her feelings about helping the exchange students prepare for the clinical visits:

At the beginning of the programme, I did not know I have such great responsibilities (accompany exchange students to visit). When starting to visit the hospital, we found that the transportation will be a problem. As we did not know the place before, we have to learn about how we can get a better outcome and learn to solve the problems before the following visits. (2PH2)

The students therefore learned their leadership skills through practice. As they had no experience of organising group clinical visiting with exchange students, they could not forecast what would happen in the activity, although they made some preparation before the activity. After encountering a difficulty, they tried to find out what the problems were and discussed possible solutions in order to overcome them. The following paragraphs described the process of problem solving in relation to students' development of leadership skills:

For the clinical visiting, the most convenient way to go there was by bus. However, some students got sick when the bus was going uphill since they were not used to travelling by bus like this and there were many turnings... On that day, we had to visit three settings and we needed to take transport in between these. The visiting time for each place is limited and we have to leave for the next place without recovering from the last episode of travelling. This arrangement made us feel confused at first, since we had not been informed that we had to take transport to the other places. I would like to suggest having a private coach next time. (2PH5)

I must say that it is a learning process to lead the visit. The visit to Princess Margaret Hospital was quite horrible. As we had to go to many places that are not in the main building of PMH, we needed to get on and get off the taxi quite a number of times, so we have learned that it is much better to book a shuttle bus for transportation... So, the next time we went to Tai Po, we booked a shuttle bus. The flow was very smooth and well coordinated.
(2PH9)

Through organising activities, the students also learned how to cooperate with other. As they had not organised such large group activities before and they needed to take care of the exchange students, the non-exchange students not only had to make a decision about what kind of activity they should lead, and how to organise the activity, but had to allocate the manpower and tasks for the activity and work together with other classmates. The students said they learned a lot in this process. One non-exchange student described her experiences regarding being an organiser in the programme:

We worked together to organise activities for all of the exchange students. We learned how to handle conflicts, how to communicate in groups, and how to work with each other.
(3PH4)

7.1.7.3 Attainment of leadership skills

The students, especially the non-exchange students, felt that they had learned a lot regarding leadership skills and had positive feelings about this. They believed that this experience would affect their life in a positive way in future. One Hong Kong student expressed his feeling as follows:

I have a great improvement in my organising skill. In these six weeks, we need to organise the trips, travels and activities among the exchange students. We need to think how to use less resource in order to hold the events in the faster and happy way. This skill is valuable to us as nurses also need to manage the patient care and other activities in the ward. (2PH6)

As non-exchange students had special responsibilities in the programme, they learned and demonstrated more leadership skills than did the exchange students. The exchange students much appreciated the leadership skills shown by the non-exchange students. The exchange students believed that they not only learned how to manage their lives as exchange students, but learned a lot about leadership skills from the non-exchange students.

7.2 LEARNING EXPERIENCES ASSOCIATED WITH THE USE OF VIDEOCONFERENCING

This programme used videoconferencing to connect two classes, one of which was located in Hong Kong and the other in Shanghai. The lectures in the programme were conducted concurrently in the two places. It is believed that the way in which videoconferencing was used in the programme is innovative. Both students and teachers were asked to evaluate the effectiveness of videoconferencing in the programme. For all students, this was their first experience of being taught and of learning using the medium of videoconferencing. Their overall reactions to this medium were expressed as surprise, excitement, puzzlement, concern and expectation. Their perceptions of the advantages and disadvantages of videoconferencing, the effect of this medium on the teaching they received and on

their learning, and their feelings about videoconferencing are described in this section. The teachers' perspectives regarding the use of videoconferencing are also presented in this section. Table 7-2 indicates the number of relevant quotations from the students found in the three sources of data.

Table 7-2

The Number of Quotations under Categories and Sub-categories and under Sources of Data about the Learning Experiences Associated with the Videoconferencing

Categories	Sub-categories	Number of quotes		
		interview	journal	questionnaire
Videoconferencing	Perception of the advantages of videoconferencing	25	27	95
	Perception of the disadvantages of videoconferencing	36	34	95
	Positive and negative influences of videoconferencing on teaching and learning	34	10	79
	Feelings about attendance at the videoconferencing	8	18	0
	Total	103	89	269

7.2.1 Perception of the advantages of videoconferencing

Almost all of the students and all the teachers were in agreement that videoconferencing has unique advantages in education. The advantages which students identified included learning together with students from another country without having to travel to that country, sharing teaching resources, sharing opinions

and views with students from another country, and the convenience of linking two or more classes at one time. These advantages are described briefly below.

As videoconferencing can connect two or more places simultaneously, there was no need for the teachers and students in their respective classrooms in Hong Kong and in Shanghai to travel in order to share in the teaching and learning of the two courses which comprised the exchange programme. The students and the teachers considered that the use of videoconferencing saved money, time and energy. One teacher mentioned in the interview that she could not accept invitations to give lectures in other countries because she would not have enough time for the travelling. She noted that the travelling can take much more time than the time for the actual lecture and this makes it virtually impossible for lectures to be conducted in one University or country by teachers from a distant University or country.

Using videoconferencing, teachers can potentially conduct lectures with students anywhere in the world, provided the technology is available. Because the use of videoconferencing means that the lecture, or for example a conference speech, is conducted concurrently, students/attendees can share views there and then in discussion and in question and answer sessions. In so doing, the students felt there would seem to be no distance between Schools and Universities wherever in the world they were. Lectures mediated by videoconferencing also make it possible to teach larger numbers at the same time, thus utilising often limited teaching resources to their maximum potential.

Again, provided the technology is available, the time required to plan, set up and deliver a lecture or series of lectures via videoconferencing bears no comparison to the time required not only to plan a teacher's travel to another country, but the time taken in such travelling. The information obtained from interviewing the teachers who conducted the lectures via videoconferencing indicated that using this medium did not mean that they had required to spend any more time in preparation of their lectures than they usually spent in preparing lectures to be delivered in the conventional manner. The relative ease with which videoconferencing can be set up also fosters collaborations between Nursing Schools.

Using videoconferencing, the teachers said they could conduct lectures with students who were anywhere in the world. The advanced technology enabled this spread of knowledge and interaction between teacher and student. As a lecture mediated by the videoconferencing could enable a large class to be taught at same time, they felt that limited teaching resources could be utilised to their maximum. In addition, by the use of videoconferencing, both students and teachers mentioned that the students can potentially experience different teaching methods and styles.

7.2.2 Perception of the disadvantages of videoconferencing

Although both students and teachers had relatively positive experiences with the videoconferencing used in the lectures, they identified some problems or disadvantages. These were all related to the technology. The main problem was the time taken to set up the connection between the two sites. In spite of the fact that several trial exercises had been conducted before the programme began, this problem

persisted. As a result, many classes did not begin on time and teachers and students spent a considerable time waiting in class for the connection to be set up.

Another disadvantage reported was that the technicians in Shanghai were not familiar with the equipment and the techniques of setting up videoconferencing and so were unable to resolve problems quickly. This happened in spite of the fact that the technicians had been given instruction in videoconferencing prior to the commencement of the programme. However, the problem was exacerbated by the timing of the programme, which took place in the summer holiday period in Shanghai. This meant that there were frequent changes in the technician staff. As a result some problems occurred. These included difficulties in achieving the right focus of the camera on the teacher, in ensuring the microphone and loudspeaker worked effectively, and that the images and writing on the screen could be clearly seen.

7.2.3 Positive and negative influences of videoconferencing on teaching and learning

The influences of videoconferencing on teaching and learning are addressed in this section. The students mentioned these influences when answering the questions in the questionnaire, writing their reflective journals and attending the interviews.

In general, the students had positive views of the influences of videoconferencing, as used in conducting the lectures. The results from the students' answers to the closed questions in the VPQ, (see section 6.4.1) were indicators of this positive view. The students believed that they could achieve their learning objectives by attending the lectures mediated by videoconferencing in much the same way as they could by

attending face-to-face lectures, and that similar interactions could take place between the teacher and the students who were situated in a different location as happened when, as in the practice they were used to, students were in the same room as the teacher. The teacher could ask the students questions and the students could answer these questions and vice versa. In other words, bi-directional feedback between teacher and students could be immediate.

However, the experiences regarding the use of videoconferencing among the students were not identical. Some students thought that there was no difference between the face-to-face lecture and the lecture mediated by videoconferencing because video and audio communication between the two sides is concurrent. One student mentioned his experience of attending the lecture conducted by videoconferencing:

You will think it is the same when you have attended the class twice and have adapted gradually. Normally, when the teacher and you are in the same room, the teacher is talking and you are listening and taking notes. It is the same with videoconferencing. Therefore, you don't feel they are different when you adapt to it.
(3PS2)

The students thought that the teacher's skill in teaching in that environment was important because they believed that it could be difficult for the teacher, when giving the lecture, to pay equal attention to students who were in two different locations. Giving the lectures mediated by videoconferencing was a first or second time experience for the teachers in the exchange programme. Although they had all prepared for the videoconferencing and had been able to have some practice before the programme began, they were all more used to face-to-face teaching, in which they paid attention to students who were in the same room as themselves. Some students

felt that if the teachers had been able to give equal consideration to students in both locations, the class would have been more active and interactive. If this did not happen, it was possible the students in the remote site might feel neglected. One Hong Kong non-exchange student addressed this issue in her journal:

From my own point of view, videoconferencing is not quite such an effective technique for learning. Perhaps teachers are not familiar with this technique. Grasping responses from students on the other side is so limited that students in the other side might feel bored. (3PH4)

Several students cited this limitation of interaction between teacher and students. These students felt it was difficult to interrupt the teacher in the class which was mediated by videoconferencing, especially when the teacher was in the distant location. Also, the teacher's response to the student's questions would be delayed, so that the student would have to remain quiet and wait to listen to what the teacher said. This discouraged some students from asking questions in the lecture. One student mentioned her view about this issue:

The feeling will be different if you talk with the camera or talk with the lecturer and also I think, in the videoconference...the class size is huge, and it is not easy for me to raise questions and also it may not encourage me to ask a question. Therefore, it will be different. (2PH2)

Some students in the remote site felt a sense of distance from the teacher in the videoconferencing classroom, although they could ask questions and answer questions just as the students could do who were in the same classroom as the teacher. They felt that it was not a 'real' classroom when the teacher was not actually present and that the lecture would be 'less brilliant' than it would be in the class in which the teacher

was physically present. They also felt the teacher was more likely to communicate with the students who were in same room. Sometimes, the students in the remote site could not see clearly the teacher's facial expression and could not hear the response from the students there, so that they would feel they were watching TV in the classroom. One student said:

When you ask a question to the teacher and the teacher is explaining to you, it seems that the teacher is explaining the things to the students at his/her side and is not talking directly to you. There is no clear eye contact. (3FH3)

7.2.4 Feelings about attendance at the videoconference

As it was the first time for all students to attend a lecture mediated by videoconferencing, they were excited and many different feelings towards it were evoked. Most of these feelings were positive, although students were aware that there are limitations in using videoconferencing.

Most of the students thought that using videoconferencing in their education was an advanced and new technology. They had never thought they could attend this kind of lecture before and had some expectations for it before the programme began. Their first impressions were of curiosity; they wanted to know what would happen in the class. They were interested in and enjoyed the classes, but some said they felt agitated. When they encountered problems, such as waiting for connection, finding it difficult to watch and to hear, and at times feeling neglected, they would feel a little

disappointed and unhappy. However, they all felt it was an unforgettable and valuable experience in their lives.

7.3 LEARNING EXPERIENCES ASSOCIATED WITH NURSING EDUCATION AND PRACTICE

The programme arranged for exchange and non-exchange students to study together and visit different clinical settings together. Teachers from both Schools taught the subjects for the students who were living and studying either in Hong Kong or in Shanghai. The students mentioned a lot about their experiences in attending the lectures, tutorials and the other activities included in the programme. This section describes the students' experiences regarding teaching and learning in nursing education in the two places and does so in three parts: teaching, learning and clinical visits. Table 7-3 summarises categories and sub-categories in this section and the number of quotations under each of the sub-categories from the two data sources, the interview with students and students' reflective journals.

Table 7-3

The Number of Quotations under Categories and Sub-categories and under Sources of Data about the Learning Experiences Associated with Teaching, Learning and Health Care Service in Nursing Education

Categories	Sub-categories	Number of quotes	
		Interview	Journal
Teaching in nursing education	Acquaintance with teachers	10	15
	Comparisons of curriculum and teaching content	9	4
	Distinctiveness of teaching styles and methods	29	27
	Total	48	46
Learning in nursing education	Appreciation of different learning attitudes	13	10
	Differentiation of learning methods	49	21
	Experience of involvement in a different learning environment	10	28
	Total	72	59
Health care service	The health care environment	23	28
	Explication of health care practice	29	24
	Views on nurse careers	8	3
	Total	60	55

7.3.1 Teaching in nursing education

In the programme, all students took two credit-bearing subjects, i.e. Health Counselling and Interpretation of Clinical Data. For the teaching of these two subjects, lectures and tutorials were arranged. Using videoconferencing, all lectures were conducted concurrently for the students who were in two classes, one in Hong Kong and the other in Shanghai, while the tutorials were arranged separately in the two places. Therefore, all students, no matter which School they came from and where they attended the programme, experienced how the teachers from the two

Schools taught in the lectures and tutorials. They experienced and gained an understanding of the teaching styles of the teachers from the two Schools and compared them. The main experiences which the students gained regarding teaching are described in this next section, including their views about the teachers, the teaching content, teaching methods, and evaluation of teaching and learning.

7.3.1.1 Acquaintance with teachers

Three teachers were responsible for the teaching of the two subjects, one was in Hong Kong and was responsible for the subject of Health Counselling and two were in Shanghai and were responsible for the subject of Interpretation of Clinical Data. Three tutors were responsible for organising and leading the tutorials in the two places, one in Hong Kong and two in Shanghai. The teacher who delivered the lectures on the subject of Health Counselling was also the tutor for that subject in Hong Kong and the researcher was the tutor for the subject of Interpretation of Clinical Data in Hong Kong. The tutors in Shanghai were responsible for the tutorials for both subjects.

The exchange and non-exchange students made a number of comments about their teachers, but less frequently mentioned their tutors. Therefore the term ‘teachers’ mentioned in this section refer to the lecturers in both sites. However, in the students’ views, the teachers who delivered the lectures in the programme represented the teachers generally in that particular School, and even teachers in the other parts of the Universities or city.

The students from both Schools believed that the teachers were kind, nice, friendly and helpful. They thought that all the teachers worked hard in their lecture preparation and presentation, although they used different methods and had different styles. When students encountered a problem or difficulty and asked for the teacher's help, the teachers in both Schools would provide help, assistance, make recommendations and try to solve the problems with the students.

The students, whether exchange or non-exchange students, noticed some differences in the way in which the teachers from the two Schools delivered their lectures. In comparing these differences, they concluded that the Hong Kong teacher was more 'amiable', while they felt that the Shanghai teachers were more 'serious'. The Hong Kong teacher seemed more like a 'mentor' of the students, while the Shanghai teachers had what some students termed 'teachers' dignity'. Therefore, the students felt that the Hong Kong teacher was more 'cordial' towards them, while the Shanghai teachers were more 'distant'. One Shanghai student described the differences between the teachers in the two places:

The Hong Kong teacher gave a brief introduction of his name and background to the students at the beginning of his first lecture and that made the students feel amiable and think 'we are friends', rather than teacher and students in the interaction. The teachers here (in Shanghai) just stand at the lectern and talk and talk...totally transfer the knowledge to us... (3FH3)

The Hong Kong teacher often smiled and was humorous, so the students felt that the teacher was 'approachable' and 'easier to go along with'. However, the Shanghai teachers were more 'solemn' and always concentrated on delivering the lecture, their only interaction with the students was to ask them some questions occasionally during

the lecture. One Shanghai student said that she was surprised to see that the Hong Kong students had a joke with their teacher. The Hong Kong students believed that the Shanghai teachers were experienced and skilful in teaching and had clinical experiences in specific areas as they always gave examples and experiences about their care of patients.

7.3.1.2 Comparisons of curriculum and teaching content

Although the students were all enrolled in the nursing study programme of their respective Schools, they believed that there were some differences in the curriculum and in the teaching content of the programmes between the two Schools. These were indicated in the emphasis on different subjects, in the lecture notes and other materials, and in the teaching of nursing skills.

The Nursing Studies programme curriculum in the two Schools was different. The Shanghai nursing curriculum included many fundamental subjects, such as physics, chemistry, and advanced mathematics, and, in the social sciences, philosophy, history and politics. It also allocated more hours to subjects, such as anatomy, physiology, immunology, microbiology, pathology and pharmacology than the Hong Kong nursing curriculum. The Hong Kong curriculum included more applied subjects, such as sociology of health, applied psychology, fundamental concepts of health, and, more specifically, general and mental health nursing, caring concepts and ethical and legal aspects in health care. In summary, the curriculum of the Nursing School in Hong Kong took, as its primary focus, a nursing orientation, whereas the curriculum of the Nursing School in Shanghai took, as its primary focus, a medical orientation.

In relation to the teaching content, students from both places believed that the lecture notes given by the Shanghai teachers were detailed, well organised and helpful. For example, when teaching about nursing care for a patient with a pressure sore, the teacher would begin with the anatomy and physiology of the normal structure of the skin, followed by the reasons for development of a pressure sore, the usual areas where pressure sores occur, the different stages of a pressure sore, the factors that influence the healing or otherwise of a pressure sore, how to prevent the development of a pressure sore and the detailed nursing process for caring for a patient suffering from a pressure sore. All lecture content was presented in a handout from the teacher, which was given to the students at the close of the lecture. The Shanghai teachers' handouts contained many updated clinical examples and cases. These deeply impressed the Hong Kong students. Below are three paragraphs extracted from interview transcripts:

The Shanghai teacher teaches in great detail. I think it is clear when she talks about symptoms. She explains the whole rationale very well. But the teacher in Hong Kong just talks about several main points and it is not clear what it is and what nursing is in it. (3PS8)

The Shanghai teacher's teaching is comprehensive. There is a lot of information and also notes which are useful. We have learned many new things about the topic. The Hong Kong teacher is different. She/he gives you a subject and we understand it by ourselves and put our understanding in our assignment. We usually learn by ourselves. (2PS19)

There are lots of graphs and pictures to show us in the classes. The teachers went to clinical settings and took these photos by themselves (with the permission gained from the patient). The photos are taken very well and clearly. They talk to us about many nursing experiences and cases which are interesting. Many

times, the Hong Kong teachers usually copy the picture from books and other sources instead of making them, so they cannot tell us so much about the background of nursing care for this kind of patient. (2PS2)

In the teaching of nursing skills, the emphasis of the two Schools was different. The School of Nursing in Hong Kong placed more emphasis on the skills involved in providing holistic nursing, while the School of Nursing in Shanghai placed more emphasis on technical nursing skills. For example, the Hong Kong teachers taught their students more about how to assess the individual problems of patients with specific health care conditions, how to take care of the psychological aspects and how to teach the family or significant others to take care of the patient in their own home. The Shanghai teachers focussed more on how to care for patients who were receiving different treatments, such as how to deal with the different tubes a patient might have in situ and how to administer different types of medications, such as giving a chemotherapeutic drug. One Shanghai student gave her conclusion about this:

I think Hong Kong is more brilliant in terms of person-centred services and it emphasised the human factor. On the other hand, our knowledge base is strong and we emphasised the technical factor. (3FS2)

7.3.1.3 Distinctiveness of teaching styles and methods

The students thought that the basic method of delivering a lecture was similar in the two Schools. The teachers in both Schools used PowerPoint, sometimes also using the overhead projector to display additional graphs. However, the students believed that the teaching styles in delivering lectures were quite different between Hong Kong and

Shanghai. These differences were indicated in the atmosphere in the class, the degree to which the students were involved during the class and the teachers' expectations of how the students would then master the knowledge. The following paragraphs discuss these differences in detail.

Single vs multi-method The teacher from the School of Nursing in Hong Kong used lectures, seminars, tutorials, case studies, laboratory sessions, workshops, project work and field experience to help the students master the required knowledge and skills, while the teachers from the School in Shanghai used lectures, laboratory sessions and case studies. Also, as part of the lecture sessions, the Hong Kong teacher used role play, discussion and demonstration to help the students grasp the content of the lecture, while the teachers in Shanghai used only the lecture, i.e. they talked throughout the whole session. One Shanghai student commented on the multi-method used by the Hong Kong teacher:

When he gave his lessons, what he told us was far more than was on the lecture note handouts we received. In order to make himself more clearly understood, his means of teaching were various, such as giving examples, role playing, demonstration and back demonstration and so on. Through that, we could quickly understand and master the main principles and the basic skills of nursing counselling. (4FH11)

Participation vs acceptance In the lecture conducted by the Hong Kong teacher, most of the students would be actively involved in some way in the class, while, in the lecture conducted by the Shanghai teachers, the students were accustomed simply to listen and to accept what the teachers said. The Hong Kong teacher would ask questions during the lecture, to stimulate the students' thinking, and the students also

would ask the teacher questions. In listening to and answering their questions, the teacher came to know what problems or difficulties the students had and whether they were understanding what he had taught. In other words, the students would clarify what their teacher said by questioning him. The Hong Kong teacher also used the discussions in the class to let the students express their views and opinions regarding a specific topic and to develop their knowledge by learning from each other. However, as noted above, the Shanghai teachers usually talked throughout the whole lecture and the students therefore had to listen, instead of having the opportunity to ask questions. One Hong Kong student described the class conducted by the Hong Kong teacher:

He requests students to respond to him, not only in words, but also asks students to participate in the role play, to act out what the student wants to, so that we can learn from the role play.
(2PH9)

One Shanghai student compared two classes, one conducted by the Hong Kong teacher and one by a Shanghai teacher:

I think their (Hong Kong students) teacher is active and knows how to maintain a good atmosphere. He makes sure all of us are participating. He will expect that you are involved and you will naturally want to say something in his class. However, in the class conducted by the Shanghai teacher, the teacher would talk and talk again, while what the students need to do is listen and listen again. (4FS5)

Memory vs understanding The students believed that the teacher from Hong Kong liked to put forward different opinions about a concept, and let the students think these over and make their own decision about which opinion they thought was right or more suitable or rational. However, the Shanghai teachers liked to teach the students what they considered to be the correct concept and ask them to memorise it. If asked

questions, the students were expected to ‘respond step-by-step according to what the teacher taught’ and were ‘not expected to be creative’. Therefore, the Shanghai students could recall the knowledge, rather than necessarily understanding it. They called this process of getting information as ‘duck-in’ (spoon-fed).

Strict vs flexible The students thought that the teaching and learning atmosphere of the classroom was different between Hong Kong and Shanghai. The atmosphere in Hong Kong was more flexible and relaxed, while in Shanghai it was more strict and serious. The Hong Kong teacher interacted with the students in the class, even making jokes to maintain the students’ interest. The Shanghai teachers followed a certain format in their teaching and required the students to learn following their instruction. One Shanghai student summarised this difference in the teaching and learning atmosphere in the classroom and tutorial room:

We are free in the class conducted by the Hong Kong teacher and can ask questions. We can master the knowledge by discussion in the afternoon, during which we can think over and judge which is correct from many references, rather than follow what the book said or what the teacher said. (2FS5)

Laboratory model vs real case The Hong Kong students were deeply impressed by their opportunities in Shanghai to go to the hospital and visit specific patients to carry out case analysis, because they did not have these opportunities in Hong Kong. In Shanghai, the students normally went to the hospital on several afternoons to visit a patient who had the signs and symptoms which they had been taught about in the classroom lecture that morning. The aim of these visits was to help the students to understand these signs and symptoms, the relationship between the signs and

symptoms, and any possible deviation in the real case compared with the theoretical case. In Hong Kong, the students used the simulator, i.e. simulated patient in the nursing laboratory to review the knowledge they had learned in the classroom. The Hong Kong students liked the teaching method used in Shanghai, i.e. the visits to the patients in hospital, and most of the Hong Kong students who exchanged to Shanghai mentioned this experience in their journals and interviews. The following two quotations are examples:

Shanghai students would immediately have the chance to go to the hospital and find a real case which has such signs and symptoms or medical diagnosis, in order to let them have a sense of what it is and how this medical problem presents. Although we can still have laboratory simulators with which to practise, it would be better to learn from a real case, for practical purposes. (3PH5)

(In Shanghai) ...We can collect the medical history of and conduct a health assessment for a real patient in the hospital, who has the disease we learned about during the morning session... This is a very effective teaching style and increased the understanding and interest in learning. (2PS3)

7.3.2 Learning in nursing education

As all students who attended the programme were nursing students, they had similar goals, needs and requirements in their learning. However, because they lived in different social and cultural contexts, they had some different views and behaviours in their thinking and doing. These similarities and differences were recognised by the students. This section describes some of these similarities and differences in nursing

students' learning, in relation to learning attitude, learning method, learning approach, learning resources and learning environment.

7.3.2.1 Appreciation of different learning attitudes

Both Hong Kong and Shanghai students had positive attitudes towards their learning. They all spent a lot of time studying, were serious about doing this, worked hard, and were willing to learn more. However, their ways of indicating this learning attitude were different. The Shanghai exchange and non-exchange students described the Hong Kong students' attitude as 'crazy', meaning that they could forget about everything else when they were studying, and as 'serious' and 'sincere'. The Hong Kong exchange and non-exchange students described the Shanghai students' attitude as 'anxious', 'attentive', 'concentrating' and 'responsive'. The Hong Kong students, however, would express their own opinions in the classroom and do their homework seriously and present it in an organised way, whereas the Shanghai students, although also doing their homework seriously, tended to present it in a less organised way. One Shanghai student was impressed by a Hong Kong student who "spent the noon-time break to write a detailed case assessment report".

7.3.2.2 Differentiation of learning methods

The learning method here refers to how the students mastered the required knowledge and skills. The students from both places believed that they had similarities and differences in applying learning methods in their studies. This section describes these similarities and differences.

Clarification vs critique The students were more conscious of and recognised more their classmates' strengths in learning, and tended to ignore their own strengths. For example, the Hong Kong students believed that the Shanghai students asked more questions in class. However, the Shanghai students believed that the Hong Kong students were more active in asking questions. At the same time, both Hong Kong and Shanghai students thought that they were 'hesitant' about asking questions in class. This may be explained by the purpose of asking the questions, as this was different between the students from both places. The Shanghai students might ask a question to clarify the meaning of what the teacher had talked about in the class, while the Hong Kong students' questions were more intended to be critical of the opinion the teacher seemed to hold. In the interviews and in their reflective journals both Hong Kong and Shanghai students tended to be more critical of themselves and saw the students from the other place in a more positive light. For example:

What we express and how we express are different... Hong Kong students are active and willing to voice their opinions. We are relatively more conservative and formal. (4FH12)

When the teacher asks us for a response, we (Shanghai students) will nod only and remain silent...They (Hong Kong students) will have discussions with teachers and will have debates. (4FS5).

Hong Kong students are quite passive and would be silent when the tutor asked some questions about the lecture content. They would participate in it as much as they can and voice out their idea directly. (3PH5)

When the teacher asks us the questions, not many Hong Kong classmates answered. Many times, Shanghai students answered the questions. (3PS4)

Recall vs reflection Another difference in learning between the students from the two Schools was indicated in the way in which they approached their homework. For one homework task, for example, each student was required to report on a case analysis and the nursing care plan for that patient. The Hong Kong students mentioned that the Shanghai students would complete this homework according to the knowledge given by the teachers in the lecture. On the other hand, the Shanghai students noted that the Hong Kong students liked first to analyse what the teachers had said, then to organise the material by themselves and use their own words for their presentation of the case and the nursing care plan. The students from both places had positive views and appreciated the methods used by their classmates from the other School in doing homework. One Shanghai student said:

...The way the Hong Kong students fulfil their homework is valuable for us to learn... When having homework to do, they'll go to the library to find their subject and the related material. (3FH4)

A Hong Kong student mentioned:

We (Hong Kong students) would rely on the library to find out the material. The Shanghai students were formidable because they could make the nursing diagnosis for the patient without any references. (2PS13)

The Hong Kong students were more flexible in applying their knowledge and made their decisions according to what they considered was the 'real clinical situation', while the Shanghai students were stricter in applying the knowledge according to what the teachers or textbooks said.

Knowledge of theory vs application of knowledge Both Hong Kong and Shanghai students thought that the Shanghai students were more knowledgeable in recalling theory than the Hong Kong students, but that the Hong Kong students were more able than the Shanghai students to apply their knowledge, for example in case analysis and deciding on a nursing care plan. The Shanghai students memorised the various items of knowledge and could recall these when they needed to apply them. The Hong Kong students would make a decision according to the clinical situation and patient needs. Therefore, there was a slight difference when they met a patient and then took care of him/her. The following quotations describe this difference between the students from the two places.

Our classmates from Shanghai were clearly different in assessing the patient in a real situation. For example, when going to the hospital for the first time for a case study, we, more than ten students from Shanghai and Hong Kong, stood around the patient and wanted to assess the patient. We (Hong Kong Students) would go directly to the patient when we first saw him, but they (Shanghai students) would read his medical history first by the side of the patient's bed and then discuss what they should assess for the case... Perhaps they think they should firstly understand their patient's background but we act according to what we observe from the patient. (3PS8)

They (Shanghai students) can immediately say something and know how to proceed when they see a case or a problem. We (Hong Kong students) are slower and at least have to think what it is like in reality. What is the problem? How should we help them? What tools can we use to help them? Because we practise more than them, we can respond immediately when facing a case. (2PH9)

In relation to their homework, the Shanghai students noticed that the Hong Kong students always used references, whereas the Shanghai students did not; they tried to repeat what they learned from the lecture. Two Shanghai students said:

We do the assignment (e.g. making a nursing diagnosis) more quickly than the Hong Kong students because we have had more practice in using one single model, while the Hong Kong students always like to go first to the Library to find references and then analyse the case according to what they have learned from the lecture and read in the material from the library. (4FH8)

Hong Kong students are more flexible in doing their homework than us because we will just follow what the teacher said in the lecture. Many times they use their own words to analyse a patient case and present the patient's health problems while we will follow what the teacher said in the lecture and not use our own words or opinions in doing our homework. (4FH5)

7.3.2.3 Experience of involvement in a different learning environment

The term 'learning environment' as used in the research refers to both the physical and psychological environments which the students experienced in the programme. The former refers to the physical surroundings where the students studied, such as the campus, the library, the classroom and the students' hall or dormitory. The latter refers to the learning atmosphere the students perceived, such as how they interacted with their teachers and classmates, how they communicated with each other and with their teachers, what the relationship was among classmates, and what the students' feelings were toward learning and teaching.

Campus The main campus of the University in Hong Kong was smaller than the main campus of the University in Shanghai. The Hong Kong exchange students mentioned

that the campus in Shanghai was beautiful, “not only with the trees and flowers, but also the traditional buildings and constructions”. The whole campus looked like a “park” and they all enjoyed it.

The Shanghai exchange students thought that the campus of the University in Hong Kong was beautiful too, but in a different way from their own. The buildings were all “well designed” and “convenient” for their intended use. They were particularly impressed with the many facilities on campus, which included a staff canteen and students’ canteen, lots of different kinds of sports equipment available for them to use, spaces to play different sports, a mini book store, a small ‘Seven-Eleven’ convenience store and a Bank. One Shanghai exchange student stated:

Walking in the campus, we felt the different atmosphere. I have to acknowledge that this University is great and unique, especially in the style of its construction. Although it’s smaller than some other universities we saw in Hong Kong, the unified style and colour make it seem spacious enough. (4FH8)

Library The library of the University in Hong Kong was considered by students to be much better than the one in the University in Shanghai. The collection in the Hong Kong library, at the time the programme was conducted, exceeded 1.82 million items, to which more than 40,000 volumes were added annually. The library also provided Internet access to over 35,400 unique full-text electronic journal titles, and over 3200 video programmes of teaching material. Besides this collection, it provided a comfortable reading environment and good services. One Shanghai student described the library in Hong Kong:

The design of the library is appropriate and it is convenient for readers to get the information they want. All the people there observe library discipline. However, they can do their own affairs in an orderly way, without interrupting each other. (3FH2)

The opening hours of the library were another matter that impressed the students. The library opened in summer every day, except Sundays and public holidays, from 8:30 am to 7:30 pm or 10:30 pm. This was because there were three semesters in the University in Hong Kong, so the library was open throughout the year, whereas in the University in Shanghai there was no third semester, but, at the equivalent time of year, a summer vacation. As the programme was conducted in the summer, i.e. vacation time in the University in Shanghai, the lack of library facilities was an issue for the students.

Compared with the library in Hong Kong, the Shanghai students and Hong Kong exchange students considered that the library in the University in Shanghai was inferior. It had far fewer nursing books and journals, and both were, for the most part, out of date. A key issue for the Hong Kong exchange students was the opening hours for the Shanghai library. While during semester time, it opened every day, in the summer vacation it opened only on Mondays, Wednesdays and Fridays from 8:30 am to 11:30 am and again from 1:30 pm to 5:00 pm.. The Hong Kong students said that they could not go to the library as the opening hours were consistent with their class hours.

Hall/Dormitory The normal practice, in fact requirement, was for the Shanghai students to live in a dormitory of the University during their study period. Hong Kong students were not required so to do and although there was University student

accommodation, in the student halls, many Hong Kong students lived at home. The exchange students believed that the environment and facilities of the students' accommodation in the two Universities were quite different and that the students' halls in Hong Kong were much better than the dormitories in Shanghai. However, the cost of the student accommodation in Hong Kong was much higher than in Shanghai. The following descriptions were given by the students regarding their student accommodation.

The student hall (in Hong Kong) has a reception lobby, swimming pool, fitness room, games room, computer room, large area with satellite TV, Cable TV, wireless Lan and pantry, table tennis room, karaoke room, reading room, as well as a music practice room. I think there is no one student hall which can provide so much service to students in the Mainland. It is an ideal place for residence. (4FH5)

This is my first time to visit the student dormitory in the University (in Shanghai). Four students share one room and share only one fan in such hot days. (2PS19)

Learning environment The psychological learning environment was reflected in the pattern of students' communication, interaction, and relationship with each other and with their teachers and tutors in their learning process. The students from the two different places learned together, and shared different teaching through the use of the new teaching medium, i.e. videoconferencing. The results from the quantitative data demonstrated that the students from both places preferred the learning environment in the programme compared to their conventional learning environment. In their interviews and reflective journals, they made quite a number of comments about the learning environment in the tutorial sessions and had positive feelings about these.

The students liked the tutorial sessions because they could communicate with each other actively and directly, learn from each other, share different opinions, come to a consensus, and get to know each other. They felt they benefited from the process of the tutorials. The following quotations illustrate the descriptions or feelings expressed by the students:

I like the discussion on Monday afternoon. In this session, the teacher taught us how to do health counselling, and asked us to practise using the skills he taught in the morning. Then we sat together and talked about our problems and gained suggestions from others. It provided us with the time to practise and to think about the context. (3FH4)

Hong Kong and Shanghai students get to know one another more during the tutorial session. We understand and facilitate one another. For example, when discussing cases, everyone can raise their questions and opinions, no matter right or wrong. Everybody decides together whether it is appropriate. The tutorial can not only let us apply the knowledge to the practice but also help us to understand and digest the knowledge gained from the teacher that morning. Lastly, we could share opinions and suggestions among the groups so as to broaden our views as well. (4FS3)

In the tutorial session, we are required to present for our group. I think this is a good way of learning as we can learn to bring cohesion within a group and learn how to communicate with people both from Hong Kong and from Shanghai. (2PS16)

Because we were from different places, so we had different methods to solve problems. But we were all polite. We discussed calmly and happily. Every time when we solved a problem, we felt happy and relaxed. During the discussing, we got to know each other as well as solving problems. (4FH8)

7.3.3 Health care service

In the programme, the exchange and non-exchange students in each of the two places visited several local hospitals and other health care settings together, including general hospitals, specialist hospitals, community health centres and nursing homes for the elderly. At every visit, the students were first given general information and/or a history of the development of the setting, followed by visits to selected sections or departments, after which there was a question and answer session. As a result of these visits, the students said that they learned about the environment of the setting and about health care practice and service in the different specific settings, as a result of which they formed perspectives regarding the local health care service. The students believed that the health care services in these selected organisations reflected the health care service in the local society. At the same time, by communicating with local nurses and nurse students during the visits, the students shared their views regarding nursing careers. These perspectives and learning experiences were recorded in students' journals and interviews. Three aspects of their experiences are presented in this section: health care environment, health care practice and local nurses' and nurse students' views of nursing careers.

7.3.3.1 The health care environment

Through their visits to different kinds of hospitals, other types of health care settings and services, the exchange students gained an impression of the environment of the health care services in the host city. They compared this with the hospitals, other health care settings and services in their home city. As the non-exchange students did not visit the health care services in the other place, they gained their impressions of the health care environment in the other place by talking about it with the exchange

students. Students believed that the health care environment in the two places had some differences.

The exchange students from Shanghai felt that the environment of the health care settings in Hong Kong was more humanistic in the design of the various facilities than was the case in Shanghai. When walking around the hospital, many pictures could be seen hanging on the walls, which made the surroundings very bright, especially in the wards for children and the elderly. They also noticed that some hospitals included a church, with the aim of meeting patients' spiritual needs. They felt the environment in Hong Kong was 'quiet', 'neat', 'clean' and 'relaxed'. Everything was in its allocated position and all was in order. In the hospitals in Shanghai, because families were involved in helping the nurses care for their family member, there were often many people in the wards and this meant the wards were often noisy, looked very busy and sometimes untidy.

The construction of a home for elderly people and its grounds impressed both exchange and non-exchange students deeply. There was a big garden in which the older people could have a walk and even a barbecue. Other features of the internal environment of that home for the older people were felt by the students to be very special. One student described them thus:

There are four different ornaments hanging in the corridors, used to avoid the residents losing their way, a special drug box used to indicate to the old people how many and when to take their drugs and, for some residents, a small poster is displayed by their bed with any specific instructions as to how to lift or move the patient to avoid harming themselves. (3FH6)

The Shanghai exchange students thought that the health care settings in Hong Kong were better equipped and had better facilities than those in Shanghai. The hospitals in Hong Kong had more modern and up-to-date machines and equipment, such as computer controlled beds, and patients all had a bed-table and curtains which could be pulled around their bed to give them privacy. One Shanghai exchange student addressed this:

In one hospital, I saw many advanced machines that are better than in the hospitals in Shanghai. We saw the patient beds were controlled by computer and many other machines which can help save labour. (4FH6)

The Hong Kong exchange students believed that the health care equipment and technology in Shanghai were much more advanced than they had expected and were rapidly developing. Many Hong Kong exchange students thought that, in many aspects, the equipment for health care in Shanghai was 'by no means inferior', and/or was better than they had thought it would be before coming to Shanghai. Some equipment in the Shanghai hospitals was similar to that in the hospitals in Hong Kong, although the situation in relation to equipment was not the same across all the hospitals or health care settings in Shanghai. Some hospitals and health care settings were better equipped than others. In contrast, the equipment of the health care services in Hong Kong was similar across the different kinds of settings.

According to the students' perspectives, the most important difference was in the hospital environment. Compared with the Shanghai hospitals, the Hong Kong

hospitals preferred to emphasise 'home' rather than 'hospital' and had many colourful paintings on the walls and comfortable furniture. The patients' gowns were of different and warm colours and the uniforms for the nurses and other health care workers were of different colours and styles.

In Shanghai hospitals almost everything was white, the walls were all painted white, there were no colourful paintings, all staff wore white uniforms and there was an all-pervading strong smell of disinfectant. The overall environment seemed to the Hong Kong exchange students to be 'cold'. However, one paediatric hospital in Shanghai was different and made a deep impression on students from both places. One student described that hospital and said:

The equipment is advanced and the design is humanistic. There is a big park in the hospital and there are games organised for and play rooms provided for kids in every ward. The bedding was painted with cartoon pictures and the uniform for the nurses is colourful. (3FS5)

The initial purpose of the clinical visits did not include an expectation that the students should focus on the environment of the health care settings. However, it was clear that the environment made a deep impression on the students as they made a considerable number of comments about it in their interviews and journals. The Shanghai exchange students believed that the health care environment in Hong Kong was more humanistic and thus more suitable for the patients and that the hospitals in Shanghai could learn from this. The Hong Kong exchange students thought that the health care environment in Shanghai was better than they had imagined before

commencing on the programme, and so they were able to change, but also add to their existing knowledge.

7.3.3.2 Explication of health care practice

As a result of their experiences during their clinical visits, the students learned about how care was delivered for the patients in the two different places. They thought that the emphasis or style of care delivery was different in some aspects between Hong Kong and Shanghai.

There was a limited quota for the number of patients who could be seen in a given time in outpatient departments in hospitals in Hong Kong, while there was no such quota in Shanghai. In Shanghai, the doctors were expected to see their patients during the period of the open hours of the outpatient department and patients did not need to make an appointment with the doctor before going to the hospital. The Hong Kong exchange students appreciated this service and mentioned that Hong Kong's service 'forced some people to go to the emergency unit or private clinic' because the patients there often have to wait for quite some time for an appointment. The Hong Kong students asked themselves why this could be done in Shanghai and could not be done in Hong Kong?

Health care information was provided for patients and citizens in Hong Kong. The information was available in different formats, such as a video clip, book, picture, graph, brochure and/or leaflet, and was located in a special information resource centre in each health care setting. Patients and their relatives could access this centre

and obtain the information easily. The students thought this an effective way to improve the patients' and their relatives' knowledge and skill related to health promotion, self care and disease prevention. One Shanghai student said:

All of the hospitals have many publicity materials about how to avoid unhealthy factors in every day life. It is very practical and interesting. People can understand and master it easily by reading and/or playing a video. (3FH6)

The students felt that nursing practice was more focussed on a 'total patient care orientation' in Hong Kong, while it was more 'task' oriented in Shanghai. In the hospital wards in Hong Kong, each nurse would look after several patients, providing all their general daily care needs as well as care related specifically to their illness and its treatment. In Shanghai, however, each patient's care was divided into several parts or tasks, and different nurses would be responsible for one part or task, such as giving an intramuscular injection and/or an intravenous injection, and would be responsible for this task for all patients in the ward who required it.

Another difference students commented on in relation to nursing practice between the two places was that they felt nursing care had more of a 'skills' orientation in Shanghai, while it appeared to have more of a 'caring' orientation in Hong Kong. While all the students realised that they paid attention to the patient's treatment, its effect(s) and side effect(s), the Shanghai exchange students noticed that the Hong Kong nurses practised individualised care and also focused on the patient's comfort and satisfaction, whereas the Shanghai nurses focused on the tasks to be done. One Shanghai exchange student described this difference between the two places:

In Hong Kong, the nursing work concentrated on how to help the patient to be discharged from the hospital, how to rehabilitate himself better, so nurses in Hong Kong often go into the community and visit the family to offer them and the patient guidance on self-care, while in Shanghai, the nurse spends most of her/his time in giving injections, dispensing medications and daily nursing tasks, and less time on health education and counselling. (4FH2)

Therefore, the exchange students from both places concluded that the nurses in Hong Kong had a more considerate approach and a more humanistic mode of patient care management, which were in harmony with their commitment to 'client centred' care (4FH13).

Community nursing practice in Hong Kong impressed the Shanghai exchange students very much because there is no community nursing service in Mainland China. In Hong Kong, each hospital provides a community nursing service. When one of their patients who requires care in the community is ready for discharge from hospital and their discharge plan has been prepared, their medical and nursing notes are transferred to the community nursing service. The community nurse will then be responsible for the patient and continue to care for the patient until she or he has completely recovered, or, in the event that complete recovery is not possible, is able to care for themselves. If self care is not possible, the patient would be re-admitted to the hospital. The following are two Shanghai exchange students' comments on community nursing in Hong Kong:

They (Hong Kong) not only care for a patient in hospital but also care for him/her in society. Almost all hospitals have established a community health centre to promote health maintenance,

disease prevention and care support, and they provide post-discharge community nursing support for medical and geriatric patients through follow-up calls and home visits. (4FH6)

They also have some full-time community nurses who, like the hospital nurses have all the information about the patients who need care in the community. They go to the patient's home at regular times to see whether they need help, or whenever the patient feels uncomfortable. On the other hand, patients in their own homes can call the community nurses for help. (4FH11)

The students thought that this kind of community care could 'shorten the period of hospitalisation' and thus 'save the health care resource'. At the early stages of the clinical visits, one student from Shanghai could not understand why the period of hospitalisation in Hong Kong was much shorter than in Shanghai for certain cases. After learning about health care practice in Hong Kong, she appreciated the reason and said:

Patients are discharged several days after extensive surgery. I cannot imagine it without seeing it. They rely on the community nursing service, home service and an educator to help patients learn to understand any treatment they require and take care of themselves. (4FH2)

The Hong Kong exchange students observed that community health care in Shanghai was quite different from that in Hong Kong. In Shanghai, every local residential community has a community hospital which is separate from the acute level hospital. A patient could go either to the community hospital or to the acute hospital to access the health care service. Usually, if the patient did not require surgery and/or their disease was at a stable stage, or they were in the terminal stage of their disease, they

would seek treatment and care from the community hospital. One Hong Kong student appreciated this kind of community health care and said:

The Community hospital in Shanghai is located in the local residential area, which makes it accessible and convenient for local residents. The service provided in Shanghai is delivered according to regions. (3PS8)

The patient and their family's views of hospital health care were different between Hong Kong and Shanghai. The Hong Kong patient's family members did not provide care for their relative when they were hospitalised because they thought and expected the hospital should be 'responsible for the total care of the patient'. In Shanghai, the patient's family members liked to do as much as possible for their relative while they were hospitalised because they thought that they should contribute to their care, even when they were in the hospital. The students from both places believed that the different social cultures contributed to this concept and behaviour.

In addition to these differences, the students from both Schools believed that the Hong Kong nurses were aware of the need to protect themselves while working. They would take any necessary actions to protect themselves appropriately, while the Shanghai nurses would be more hesitant to do so. One Shanghai student mentioned:

When entering the ward, we (Shanghai students) go straight inside but they (Hong Kong students) will first put on masks. They have to put gloves on when delivering care to the patient directly. (4FS2)

An important factor in this behaviour of the Hong Kong nurses was related to control of infection. The Hong Kong nurses not only did well in relation to self-protection, but also were more efficient in taking measures related to infection control in clinical areas. They were strongly aware of the concept of 'zero-bacteria' and of the requirement for 'isolation for sterilisation'. They therefore would always wear masks before entering the ward and wash their hands before and after caring for each patient. They were surprised to learn that, in Shanghai, the doctors and nurses in the wards did not wear masks or gloves when caring for the patients. One Hong Kong student said:

That nurses do not wear masks in the hospital leaves me with a strong impression. Comparing this with Hong Kong, my biggest doubt is the infection control practice in Shanghai. There is no separate place for ICU and there are many patients being cared for together, with a nurses' station in the middle. After caring for/serving a patient, they care for/serve another patient without washing their hands. (3PS8)

7.3.3.3 Views on nursing careers

During the programme, nursing students from both places talked about and shared their views on many topics. One of these was their views about nursing careers. They believed that they had similar and also different views of this. Students became aware that a career in nursing was more respected in Hong Kong than in Shanghai and that the social status of nursing was higher in Hong Kong than in Shanghai. One indicator of this was the nurse's salary, which was higher in Hong Kong.

Hong Kong students, when they enrolled in the nursing programme, did so because they wanted to study nursing and to become a qualified nurse. In contrast, Shanghai

students, when they enrolled in the nursing programme, did so because they were not able to enter the programme of their choice, i.e. in another discipline, but liked and wanted to study in the particular University. The Hong Kong students had more positive views about a nursing career than did the students from Shanghai. The Hong Kong nursing students intended to be a nurse after graduation, while many of the Shanghai nursing students thought that, if they had the opportunity, they would do something other than nursing after graduation.

The key point appeared to be that the perceived value of the nurse and of nursing was different in the two places. The Hong Kong students believed that a career in nursing was acceptable for them and that it was a worthwhile thing for them to do, while the Shanghai students thought they had no choice but to do it. The Hong Kong students mentioned that they wanted to become a nurse because nursing was a discipline that could help people. The Shanghai students believed that ‘the Hong Kong students had an in-depth understanding of nursing’ and they appreciated that attitude.

Many factors appeared to influence the students to choose or not to choose a career in nursing. Salary, social status and workload were the main factors influencing the students’ decisions. While these factors cannot be changed in a short period, as a result of the students from both places communicating and sharing their perspectives about a nursing career, some Shanghai students said that they intended to reconsider their views about a nursing career and one Shanghai student said she had changed her opinion about leaving nursing and decided to become a nurse in the future.

CONCLUSION

Exploring students' learning experiences in this unique and innovative nursing student exchange programme was the main purpose of this research. The findings from the qualitative data demonstrate that the students, no matter whether they were exchange or non-exchange students, gained abundant and unforgettable experiences while participating in the programme which many said would be very important in their lives and careers in the future.

Examining these learning experiences in light of Strategic Objective One of the University in Hong Kong, the experiences gained and the students' comments about these, in both the interviews and in their reflective journals, indicated that they felt they knew the people, environment and culture of the city, aspects which they had not known before, and that these experiences had created or changed their views and concepts about the other city. In fact, they took positive steps towards developing a global outlook. Facing the new environment and new events in the programme, the students were incited to critique what they observed and what they heard. By comparing many different issues in the two places, the students came to an understanding of what the society needs from them and what they should do in order to promote the development of society. For the exchange students, by living in another society and culture, and for the non-exchange and the exchange students, by attending social activities together and interacting with classmates from the other place, all the students gained knowledge of the culture in the other social context and thus enhanced their understanding of and competence in relation to cultural diversity. The students recognised the importance of life-long learning, and were thus motivated and encouraged to learn continually throughout their lives. The students from both

Schools developed their language skills, by learning, practising and using both English and Putonghua during the programme. By attending and taking an active part in the activities organised in the programme, the students practised, developed and improved their leadership skills.

Videoconferencing was used in the programme as the teaching medium by means of which to link the classes in the two places while the lectures were being delivered. The students experienced their feelings of surprise, excitement, interest, puzzlement and expectation about what was for them a new experience. They had positive views of the effectiveness of videoconferencing in their nursing education although they recognised the limitations of the technology in relation to the videoconferencing implementation in the programme.

By attending and taking part in the lectures mediated by videoconferencing, and by studying and working together, the exchange and non-exchange students experienced the different teaching styles and methods of the other School but also recognised differences in their own learning styles, i.e. between those from Hong Kong and those from Shanghai.

The exchange students in particular observed and learned at first hand about the health care services and nursing practice in the two places, which stimulated them to compare, critique and appreciate what they saw as the strengths and weaknesses of the different services and nursing practice. They believed that all these experiences would be unforgettable and valuable in their lives and careers in the future.

The non-exchange students in both Hong Kong and Shanghai, although not directly involved in the same way as the exchange students, came to know about the culture and health care services and practices in the other city through their regular and frequent communication, interaction and discussion with the exchange students in 'their class'. As a result, through their vicarious experiences, the non-exchange students also were enabled to take their first steps in development, although to a lesser extent than their exchange student colleagues, of a global outlook and understanding and appreciation of cultural diversity. Although, as a result of sharing the clinical visits with their exchange student colleagues, they gained some knowledge of health care services in the other place, they also felt they gained more knowledge of these services in their own society because of the time spent on the clinical visits to the different settings.

The findings from the qualitative data have been presented in this chapter, and those from the quantitative data were presented in the previous chapter. The use of the two research approaches, and of triangulation, which uses multiple data sources, has provided a wealth of data, the interpretation and discussion of which will now be presented in the next chapter.

CHAPTER EIGHT

DISCUSSION OF THE RESULTS

INTRODUCTION

This research evaluates an innovative and uniquely structured nursing student exchange programme conducted with the aim of contributing to the accomplishment of the first strategic objective of a University in Hong Kong. The data were derived from participants' responses to two questionnaires, namely the Course Experience Questionnaire (CEQ) and the Videoconference Participant Questionnaire (VPQ), from interviews with participating students and teachers, participating students' reflective journals and students' assessment scores for the two subjects which they studied during the programme. The results from the above quantitative and qualitative data have been presented separately in the two preceding chapters. These results are discussed in the following sections of this chapter.

The present research evaluated the programme in relation to the achievement of the programme objectives. These were firstly to contribute to the fulfilment of the University's Strategic Objective One, as indicated in students' enhancement in global outlook, critical thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and leadership. Secondly, and equally importantly, to explore the learning experiences of the participating students with particular relevance to the teaching medium, i.e. videoconferencing.

In all that follows, it should be borne in mind that the programme was of only six weeks duration, but none the less the results provide a valuable insight into the students' perceptions and, although to a lesser extent, those of the three teachers involved.

8.1 CONTRIBUTION TO THE FULFILMENT OF THE UNIVERSITY'S

STRATEGIC OBJECTIVE ONE

The above-noted seven aspects of Strategic Objective One were categories in the analysis of the qualitative data from the interview transcripts and journals. This section discusses these results in relation to these seven aspects.

8.1.1 Development of a global outlook

The students from both Schools believed that, by attending the programme, they were enabled to broaden their horizons in perceiving and understanding the social and cultural situation and phenomena in the other place. The students identified the following aspects which they thought contributed to their development of a global outlook. Firstly, the physical, social and cultural environment in the two places was quite different, which made the students curious and interested. Secondly, most of the students, from both places, had not been to the other place before participating in the programme and so they were impressed deeply by what they learned and saw. Thirdly, and an innovative aspect of the structure of the programme, was that each class was composed of both exchange and non-exchange students, so that the students from both places studied and worked together day by day, came to know each other

well and shared their perspectives and experiences. Fourthly, the clinical, cultural and social activities arranged in the programme stimulated the students to explore, know and understand the aspects of culture in which they were interested.

This result was consistent with research results which reported students' experiences in other exchange programmes (Carlson & Widaman, 1988; Goldberg & Brancato, 1998; Grant & Mckenna, 2003; Hutchings et al. 2002). It is suggested that the development of students' global outlook is a major benefit of participating in student exchange programmes which involve international exchanges, because such programmes enable the students to come face to face with another culture and to be stimulated by the diversity they see in other cultures. All of these benefits have been cited in one or more reports by the above authors as contributing to an increase in students' awareness of the diversity of cultures, to their recognition of global issues and to their understanding and concern about international problems. Moreover, according to Lindquist (1990) and Styles (1993), nursing student exchange programmes, such as the programme being evaluated in this research, enable the students to see themselves as participants in a world community and give them a greater interest in cross-cultural activities and in seeking to understand cultural differences and similarities. The results of this research support the views of the above authors.

The results indicated that the particular aspects of global outlook that the students developed during the programme depended on which aspects of culture they were exposed to and what kind of activities they took part in, for example, the clinical visits exposed them to the hospital environment and health care services in the other place.

The students expressed their feelings and described their experiences about the many different aspects of culture, for example in relation to the differences in the scenery between the two places, the differences in the working practices of employees such as shop assistants, the differences in the teaching styles of the teachers and in the ways in which the students from the other place went about learning the subjects they had been taught. They also commented on the differences in living style between the students from the two places.

The more cultural experiences the students gained, the more understanding they acquired of the many cultural differences. However, it is these achievements of the students in learning to think and perceive events and phenomena diversely and from a global perspective that are more important than the actual number of these experiences. The students believed that it was as a result of participating in the programme that they were able not only to observe these differences but to appreciate that there was another way to live and to think in life. This was something which most of these young students had never thought of before. During the interviews, which were conducted two to three months after completion of the programme, many of the exchange students mentioned that they continued to compare aspects of life, study and culture between that of their home environment and of the environment in the other place. This suggested that the students continued to develop their growing awareness of cultural diversity and the value of perceiving situations from various angles. However, it is not suggested that a single six-week experience of living and studying in another place and culture meant the students had fully developed their cultural appreciation but the students did develop strategies with which to take their first steps in developing a global outlook.

The structure of the programme was unique. In the literature review, all of the exchange programmes which were cited reported a programme structure in which a group of students visited another country to observe nursing practice in that country or to have a clinical placement there. None of these programmes mentioned that the student group took part in cultural or social activities nor that they were they taught the same subjects and in the same class as nursing students from the country they visited. Because, in the programme the students from both places were taught and studied together in one class, i.e. the Hong Kong exchange students with the Shanghai non-exchange students and the Shanghai exchange students with the Hong Kong non-exchange students, the structure is described as unique. This structure ensured day by day contact between students from the two places and provided many opportunities for them to interact with each other. In this way, both exchange and non-exchange students explored the differences and similarities between their cultures, although to a different extent and all developed their understanding of these differences and similarities. However, the degree of this understanding was different. The exchange students gained a deeper impression of the cultural and social differences because they were directly involved, living in the different culture and experiencing the daily living environment. The non-exchange students knew the other culture by observing, listening and discussing with the exchange students in their class and learning from what they said and how they went about their daily lives. In relation to teaching and learning, both exchange and non-exchange students had similar experiences but non-exchange students did not experience at first hand the health care services in the other place.

The unique structure of the programme therefore brought to light, in a way not previously demonstrated in the literature, the impact and importance of students being immersed in the cultural environment of another place, in order to develop their cultural understandings and global outlook. However, it also brought to light, again in a way not previously demonstrated in the literature, that cultural understandings and global outlook can be developed by non-exchange students if close interaction between them and exchange students can be brought about in an exchange programme.

8.1.2 Enhancement of critical thinking

The data from the research demonstrated that, by participating in the programme, the students' critical thinking abilities were fostered. The programme provided the students with opportunities to experience and explore diverse cultural issues in daily life, different teaching styles and methods, including videoconferencing, different ways of learning in nursing education, and to observe different health care settings and nursing practice. These experiences stimulated the students to question the differences and the similarities they noticed in relation to these and as a result they developed new ways of thinking. If the students had not noticed these differences, they would not have had questions about them. In other words, this cultural learning or confronting of the differences challenged the students' existing values and beliefs and led to deeper questioning and reflection on the concept of culture. These findings were similar to those reported by Goldberg & Brancato (1998); Ndiwane (2001);

Grant & Mckenna (2003); and Thompson and his colleagues (2000) although none of these authors elaborated on these specific findings.

The students from both places were rather more critical in relation to situations or circumstances with which they were familiar. In the programme, for example, the students critiqued the teaching and learning methods, aspects of the health care system and daily living events in their own culture. As a result of their clinical visits, they also critiqued issues in nursing practice, such as infection control and the method of preparation of injections.

In thinking critically about various situations in their home society they recognised both positive and negative aspects and in the same way in relation to the host society, the students gave both a positive and negative critique. This result which showed balance in critique, which was not consistent with the result from Carlson and Widaman's study (1988) of students' attitudes when studying abroad. These authors found that the students had positive attitudes towards their home culture and negative attitudes towards other cultures. Haloburdo and Thompson (1998) found that students from developed countries, in this case from the United States, and who went to developing countries, e.g. Dominica, returned with a greater appreciation for their own. However, the same report showed that other students, who exchanged from the United States to Holland, became more critical of their home country and its health care system, having found new and better ideas within the Dutch health care system. Because Hong Kong is a modern and developed city and because Shanghai is known as the most developed city in Mainland China, the socio-economic status of the society in the two places is not dissimilar and so the students from both places might

have been more able to appreciate and critique the strengths and weaknesses of the two cultures and so present a more balanced view.

8.1.3 Enhancement of social and national responsibility

The enhancement of the students' social and national responsibility, as expressed by them, included their becoming aware of the need to learn more about the development of society, and, for the non-exchange students particularly, of the need to be a good ambassador, showing themselves able to help others and able to offer suggestions for the improvement of their local society. The programme exposed the exchange students to a new and strange environment, so enabling them to experience what they had not known, seen, or thought about before. To a lesser extent, through their interactions with their exchange student classmates, the non-exchange students also came to understand that their respective environments were quite different. Sometimes, the students, exchange and non-exchange, were surprised and excited by this. More often, they began thinking that there were so many things they did not know and should know. The students therefore gained more understanding of the environment and social problems of their home society as well as increasing their knowledge and understanding of the other society.

Because the structure of the programme organised the days so that the exchange and non-exchange students studied and worked together in the same class, this frequent and regular interaction enhanced the non-exchange students' appreciation of their responsibility to help the exchange students whenever they encountered any difficulties, for example in studying and working or if they needed help in other ways.

As student ambassadors, the non-exchange students recognised that they had a responsibility to ‘open the exchange students’ eyes’ and help them to appreciate their new living environment. As a direct result of the unique structure of the programme therefore, the findings indicate a unique achievement by the non-exchange students, particularly in regard to enhancing their social responsibility.

It was noted that students did not use the term, ‘social responsibility’, i.e. did not express that concept directly in their interviews or journals. However, the enhancement of their social responsibility could be inferred from their descriptions, both verbally and in writing, of their experiences and thoughts about their role as student ambassadors. All of the students believed that they needed to learn more, recognise the need for helping others, show themselves as good ambassadors by helping the exchange students learn about the host culture, and be prepared to make comments, for example as to how their society could improve in regard to some social issues. In talking or writing about these aspects, the students were indicating their awareness of, and therefore enhancement in their social responsibility.

Similar results have been reported from other studies of student exchange programmes (Goldberg & Brancato, 1998; Jung et al. 1999; Racette, 1996). Goldberg and Brancato’s study, for example, showed that the exchange students, who would become qualified nurses, realised their professional responsibility to play their part in assisting their own society to provide cost-effective quality healthcare.

8.1.4 Promoting students’ cultural appreciation

Cultural appreciation is one of the major experiences the students gained from the exchange programme. This was expressed by their recognising, understanding and enjoying the social and personal customs and beliefs of the people of the other city, which appreciation was gained as a result of attending different kinds of activities. The results from the analysis of students' interview transcripts and journals indicated that the existence of cultural differences between the two cities helped students from both Hong Kong and Shanghai to develop cultural appreciation. However, there were some differences in these experiences of cultural appreciation between the exchange and non-exchange students. The daily life experiences and the structure of the programme were the basis for development of cultural appreciation. Positive attitudes and feelings toward the exchange programme could influence positively the student's understanding of cultural differences. This section discusses these aspects in detail.

8.1.4.1 Cultural differences which facilitated the development of cultural appreciation

The cultural differences between the two societies made a deep impression on students. When the exchange students studied, worked and lived with local students and interacted with local people, they recognised these differences, and then tried to understand and accept them. Prior to the exchange students' departure for the programme, they had imagined what the other city would be like and what the people there would be like. When arriving at the new place, the characteristics of the physical environment, which were different from their own, made an immediate impression. For example, the exchange students from both places experienced the routines of daily life and noticed for example the different meal times and the fact that Shanghai

people took a nap in the middle of the day, something which Hong Kong people did not do.

What the students mentioned about cultural appreciation in their interviews and reflective journals was related to the cultural differences between the two places and not the cultural similarities. They were interested in what was different in general terms such as for example, the characteristics of the people and their life style and, more specifically the differences in relation to teaching and learning in nursing education and the health care service. Both Hong Kong and Shanghai students were positive about the culture of the other society. Not only did they all develop a greater appreciation of cultural differences but also recognised what were universal human characteristics. Whether they were from Shanghai or from Hong Kong, students were aware of life style, social environment, working environment and the style of interpersonal interaction in the two different societies. The Hong Kong students particularly liked Shanghai's more traditional Chinese culture, evident in its historic architecture, while Shanghai students were more interested in the different physical construction of Hong Kong which they felt focused on human needs and on convenience for living. They were also deeply impressed with what they described as a psychological environment which was full of openness to and tolerance of different opinions and views which they felt was very different from their home culture.

This result supported previous research on international experiences in nursing and in higher education in general (Carlson & Widaman, 1988; Haebich & Wright, 1995; Haloburdo & Thompson, 1998; Lindquist, 1990; Meleis, 1985). In experiencing a different culture in the exchange programme, the students' sensitivity to other cultures

was promoted, as was their cultural appreciation. The fostering of cultural sensitivity and of cultural appreciation is one of the objectives of most exchange programmes. It is suggested that the development of cultural appreciation is related to the existence of culture differences between the host and home cultures, rather than associated with culture similarities or with the length of a particular programme. This suggestion is based on a comparison of the programme with other exchange programmes in which, although the length of the different programmes was different, one of the expected outcomes was a development in participating students' cultural appreciation.

8.1.4.2 Differences in cultural appreciation between exchange and non-exchange students

In the comments made by students in the interviews and reflective journals it was noted that there were some differences in cultural appreciation between exchange and non-exchange students. Because the non-exchange students lived in their own home city, although they interacted daily with exchange students in the programme, their exposure to the other culture was different. The non-exchange students gained a general impression of the other culture through their interaction with the exchange students. However, they could not know directly what the exchange students' home living environment was like, nor what their social culture was like, although they could glean a certain amount of information about it by communicating with the exchange students. A factor which may have diminished the non-exchange students' ability to appreciate the culture of their classmates from the other place was that the exchange students were trying to follow the host culture and did not say much about their home culture.

These results indicated that direct involvement in the cultural environment is very important to the development of culture appreciation. To understand another culture, one should ideally be immersed in that culture by living in it day by day. However, the results of the innovative programme also indicated that some cultural appreciation can be gained if the opportunity is provided for students to interact and study with students from another culture while living day by day in one's home culture context.

8.1.4.3 Life experience as the basis for cultural appreciation

The results indicated that the cultural aspects which the students indicated they had come to appreciate were related to their normal daily life experience in their home society and culture. For example, the Hong Kong students who exchanged to Shanghai mentioned a lot about the food culture in Shanghai. However, the Shanghai students who exchanged to Hong Kong made very little mention about the food culture in Hong Kong. Two reasons for this may be that the Hong Kong students ate out in different restaurants in Shanghai, as they were not able to cook in their dormitory and because to eat out was much cheaper in Shanghai than in Hong Kong. However, the Shanghai students either cooked food by themselves in the students' hall or ate in the University canteen which was cheaper than eating out. Their experiences of the local food culture therefore differed. Another example from daily life was their shopping experiences. Both Hong Kong and Shanghai exchange students were interested in shopping in the host city and both mentioned a lot about it. One difference they commented on was that shoppers in Shanghai bargained with the shop assistants whereas this did not happen in Hong Kong.

The students of course could not appreciate what they did not experience. The students from both places mentioned that they did not know much about how the local people lived in their own homes, including what their houses were like and their cooking, washing and eating habits, because they had no chance to live with a local family. They knew and mentioned more about the students' life in the Universities, as both groups had lived in the host University's students' hall or dormitory during the programme. The students' development of cultural appreciation was therefore related to what they experienced. The more they experienced, either directly or, in the case of non-exchange students indirectly, the more aspects of the other culture they came to know, understand and appreciate.

8.1.4.4 Positive attitudes in cultural appreciation

The exchange students from both places had positive attitudes towards the host culture. For example, a number of the Hong Kong exchange students mentioned the style of soup making in Shanghai was different to that in Hong Kong and they could not get used to eating the soup at first. However, they did not complain, but rather tried to adapt to it as they understood that the style of soup making fitted appropriately with the local climate and that it represented local food culture. The Shanghai exchange students suffered from motion sickness when travelling by bus in Hong Kong, particularly when the bus was going uphill and when it was turning frequently and quickly in the narrow streets of Hong Kong. However, they did not allow this to prevent them from attending the various visits and other activities, but

tried to find strategies to overcome their sickness, for example, taking travel sickness remedies.

Students from both places thought the host people were kinder than their own people. The Hong Kong students gave examples to illustrate that the Shanghai people were kind in helping them as visitors, while the Shanghai students mentioned that the Hong Kong people always gave assistance when they asked for help.

None of the students in either of the exchange groups mentioned 'culture shock', which Colling and Liu (1995) and Hutchings et al. (2002) reported had occurred in students who exchanged from a developed country to a developing country. These authors considered that this culture shock was caused by differences which the students experienced in climate, food and language in the countries they visited compared to home. Although the students in the programme may not have known of concept of 'culture shock' it is suggested that they did not experience this because all their comments in relation to adjusting to life in the host city were positive.

8.1.4.5 The time required to develop cultural appreciation

The results demonstrated that the students' appreciation of the different culture took some time to develop. When the exchange students first arrived at the host city and both exchange and non-exchange students first met and began to interact with the students from the other culture, they initially felt surprised and sometimes curious when experiencing a new situation. Afterwards, they would take some time to think this over and then come to appreciate it. For example, when they first met and spoke

with the local people in Shanghai, the Hong Kong students felt that they spoke loudly and seemed quite rough sometimes. However, as they experienced more and more communication with them, they gained more understanding about the Shanghai people and changed their view of them. They then appreciated that speaking loudly did not equate with being rough, but was an aspect of the local culture. The fact that many students mentioned that they took a little time to come to appreciate the other culture is an indication that too short a period of time spent on an exchange programme may be counter-productive to the development by students of cultural appreciation.

8.1.5 Enhancement of lifelong learning

The programme ensured that the students, both exchange and non-exchange, experienced a number of new situations and circumstances, as a result of which they became aware that they were on a continuous journey of learning. Although the enhancement of life-long learning was not expressed by the students directly, they mentioned feeling stimulated by all the different learning opportunities they had in the programme. In addition to learning in the classroom and in the tutorials they mentioned learning as a result of the many other activities, for example learning about the different hospital environments and discussing this with the teachers and their fellow students.

The classroom teaching in the two different Schools was conducted in different languages, English and Putonghua. The Shanghai students commented that, by attending the lectures in English and communicating with the Hong Kong students in

English, they had been stimulated to enhance their English skills. Their achievement also motivated them to continue to learn the language when they returned home. Some students at interview mentioned that they had actually already continued to learn English, by voluntarily seeking out and reading newspapers and magazines written in English.

8.1.6 Improvement of language skills

The Hong Kong students used English as the University language and Cantonese as their daily life language. They also used traditional Chinese in writing. The Shanghai students used Putonghua both as the University language and the language for daily communication. In the programme the Hong Kong teacher's lectures were delivered in English and the Shanghai teachers delivered their lectures in Putonghua.

Students believed that they had improved their language skills as a result of attending the programme. At the beginning of the programme, they experienced difficulties in communicating with the students from the other School, but, after having more and more practice and developing strategies, they felt they improved their skills in speaking, reading, listening and writing in the other language. The discussion which follows includes the Hong Kong students' difficulties in using Putonghua and the Shanghai students' difficulties in using English, the factors in the programme environment which facilitated their language learning, including opportunities for reinforcement and how they used the other language in their daily communication in the programme.

8.1.6.1 Difficulties in the use of language

Most students mentioned that they encountered difficulties in the use of the other language in communication. For example, they had difficulties in understanding what the teacher said in the lectures, i.e. the Hong Kong students had difficulties with the lectures which were conducted in Putonghua and the Shanghai students had difficulties with the lectures which were conducted in English. Both groups felt the teacher was speaking too quickly although they recognised that each teacher was doing her/his best to speak slowly and clearly. Because they had these difficulties during the presentation of the lecture, they seldom asked questions or answered the teacher's questions, particularly at the beginning of the programme; they were slow in reading the teaching material or handouts and found it especially difficult to understand medical terms. This result is similar to results from other research reports of student exchange programmes (Armstrong & Fischer, 2001; Colling & Liu, 1995; Colling & Wilson, 1998; Haloburdo & Thompson, 1998; Koskinen & Tossavainen, 2004; Kraemer, 1998). Koskinen and Tossavainen's (2004) study of an exchange programme conducted between Finland and the United Kingdom found that the language barrier was constantly present in communication with the local people. Colling and Wilson's report indicated that, although English was spoken by all participants in the exchange programme between U.S. and UK, various terms were expressed differently and needed to be clarified.

Although both Hong Kong and Shanghai students are Chinese, they use different spoken languages in their daily lives i.e. Cantonese or Putonghua. However, it was noted that their language difficulties did not affect their communication with each

other in classroom and daily life. This finding differed from the findings from Koskinen and Tossavainen's (2004) study, in which the exchange students tended to isolate themselves from the local people and avoided some activities at the host University because of the language barrier. The Hong Kong and Shanghai students, due to the unique structure of the programme, had no opportunity to 'isolate' themselves from each other, even had they wanted to do so. There was certainly no indication from the data that any student wished to isolate him or herself from the students from the other place.

8.1.6.2 Environment for learning

The students believed that, because they were immersed in the language atmosphere and environment, the programme provided many opportunities for them to learn and practise their language skills. They not only spoke and listened to the different language in the classroom, on campus and in the students' hall/dormitory, but in the streets, shops, restaurants and everywhere they went. The unique structure of the programme, in which the class in each place included a mix of students, i.e. exchange and non-exchange students, provided this daily immersion in the different language environment. Added to that, the fact that the teachers from each School used a different language for their teaching and related activities stimulated the students to learn the other language and enabled them to get more practice in speaking it. While the exchange students were surrounded by the language environment of the other place day by day, the non-exchange students were in daily contact with the exchange students and so all students had these further opportunities to improve their language skills. All of these different factors led to the students feeling that their environment

in the programme enabled them to use the other language naturally and subconsciously. None of the exchange programmes reported in the literature review mentioned the programme objectives in relation to language learning. The findings in relation to the improvement of the students' language skills therefore represent another unique achievement of the programme.

8.1.6.3 Reinforcement in language learning

The use of different languages for the teaching of the two subjects in the programme not only facilitated students' language learning but reinforced this because the students were practising using the language every day. In the exchange programmes reported by Frisch (1990) and by Zorn and colleagues' (1995), the subjects studied by the students when they were in the host country were taught by the home teacher who travelled with the exchange students and taught them in their native language. The exchange students in both these programmes did not learn together with local students and used the host language only when communicating with local people. Therefore, compared with the students in this programme, they had fewer opportunities to practise the language of the host country.

8.1.6.4 Putonghua and Cantonese used in daily communication

The students from both Schools generally used Putonghua when communicating with each other outwith the classroom. They used English for discussion in the Health Counselling class, but changed to Putonghua when the class was over. Sometimes, however, the Hong Kong students liked to use Cantonese and when they did that the

Shanghai students tried to learn Cantonese rather than using English. That may have been because the Shanghai students wanted to take the opportunity to learn another Chinese spoken language even although they also wanted to practise more English.

8.1.7 Enhancement of leadership skills

The students learned and practised leadership skills as a result of participating in the programme. They also felt they had enhanced their management skills in relation to their organisation of both daily life and group activities. It is indicated from the results that the students learned and practised leadership and management skills in the programme. These are addressed below.

The opportunities to develop and practise leadership skills were present for both non-exchange and exchange students although to a different extent. The non-exchange students learned how to become a good ambassador, helping the exchange students to understand and adjust to their new environment and culture, helping them to deal with any problems and organising the group activities including the clinical visits. Although the Hong Kong non-exchange students had previous experience in organising group activities, they still met challenges when they visited the clinical settings with the host students where they played a leadership and an organiser role. For example, when encountering difficulties in transportation, they practised leadership skills in developing and agreeing strategies to overcome the difficulties. The exchange students experienced challenges at the beginning of the programme in relation to managing their daily lives in a different city, with a different environment and culture where the people also spoke a different language. Because most Hong

Kong students lived at home when they were studying in Hong Kong, they needed to learn how to manage themselves when they lived together with other students in a dormitory of the host University. The Shanghai non-exchange and exchange students had to learn how to organise group activities and team working in the programme, as this was something they seldom did and of which therefore they had very little experience. Both exchange and non-exchange students from Hong Kong were more skilful in organising group activities and team work as they had experience of this. To take part in the group activities and in the team work necessary for completion of group assignments, role play and case analysis in subject learning enabled the Shanghai students to learn a lot about leadership and impressed them deeply.

8.1.8 Summary in relation to achievement of the University's Strategic Objective One

By examining the results from the research in relation to the seven aspects of the University's Strategic Objective One, it can be concluded that the students who participated in the programme gained experiences which led to the enhancement of their abilities in relation to all seven aspects and this was so no matter where the students came from, where they attended the programme and whether they were exchange or non-exchange students. The achievements of the students in all these aspects, as a result of their participation in the programme, were indicated directly in relation to learning of language skills, development of cultural appreciation and learning and practice of leadership skills, and indirectly in relation to development of a global outlook, appreciation of the need for life-long learning, enhancement of critical thinking skills and expression of social and national responsibility. It is suggested that the outcomes of the programme in relation to the participating

students' achievements derive from the innovative and unique structure of the programme, not least because of the fact that exchange and non-exchange students studied together in one class in each of the two places.

8.2 VIDEOCONFERENCING AS A TEACHING MEDIUM IN THE PROGRAMME

Videoconferencing was used in a unique way in the programme to link the classrooms in two places, one in Hong Kong and the other in Shanghai. One of the objectives of the programme was to explore the learning experiences of the students with particular relevance to the teaching medium, i.e. videoconferencing and this section discusses its effectiveness in this regard. The data sources include quantitative data from the students' responses to the Videoconference Participant Questionnaire and qualitative data from the interviews with students and teachers and from students' reflective journals. The issues discussed in this section include the students' perceptions of the value and effectiveness of videoconferencing as used in the programme and also of the limitations.

8.2.1 The value and effectiveness of videoconferencing as used in the programme

Videoconferencing has been used for a variety of purposes in general education and nursing education. A number of studies of videoconferencing in nursing education were reviewed in chapter 3 (Havice & Knowles, 1995; MacIntosh, 2001; Tiwari et al. 2003; Waddell et al. 1999; Weber & Lawlor, 1998). In each case, videoconferencing had been adopted in order to overcome large distances between student and teacher

but none of these were in relation to student exchange programmes. As the programme therefore appears to be the first in which videoconferencing has been used in any nursing student exchange programme, in this respect also the programme is innovative and unique. The students, in responding to the open-ended questions in the VPQ, commented on the fact that they could learn together with students who were at a far distance from them and share opinions and views without the need for either students or teachers to travel. All had quite positive attitudes to the use of videoconferencing. The results indicated that the students' experience of being taught and learning through the medium of videoconferencing appeared to broaden their horizons about the use of advanced technology. They felt videoconferencing had unique advantages in their nursing education although they were also aware of some limitations.

The extent to which the students' perceptions were positive in relation to all three aspects of videoconferencing, i.e. presentation, teaching issues and educational value have been presented in chapter 6 and the qualitative data results reported in chapter 7 supported and elaborated on these perceptions.

The Shanghai students had more positive perceptions on all three of the above aspects of videoconferencing than did the Hong Kong students and this was evidenced in their significantly higher scores on these aspects, no matter where they attended the programme. The reason why the Shanghai students had a more positive view than the Hong Kong students about the effectiveness of videoconferencing was not identified, but it may have been because the Shanghai students were in general more accepting

whereas the Hong Kong students were more used to giving their own opinions even if these were critical.

8.2.2 Limitations in the use of videoconferencing in the programme

Students from both places identified some limitations in the use of videoconferencing in the programme. Most of these related to technical aspects, although they also commented on teachers' limited experience of using videoconferencing.

8.2.2.1 The technical failures related to connection between the two classrooms

Although the connection between the two classrooms was tested before commencement of the programme, problems persisted. The main problem was that connection failed altogether, as a consequence of which a few lectures could not begin on time and very occasionally the connection was broken during the course of a lecture. These connection problems resulted in students and teachers feeling frustrated and rather upset. The teachers mentioned that they sometimes had to omit part of their lecture and the students felt that their concentration and learning were interrupted. One solution may be to have more prior testing. However, the main issue relates the timing of the lectures. These were all given in the morning when the ISDN lines were very busy. Because these lines were provided by a commercial company, it is suggested that the University should negotiate with the provider to ensure availability of sufficient lines to ensure continuous connection. The University might also consider varying the times at which lectures were delivered.

8.2.2.2 The lack of availability of sufficient technical support

Technical support is important for successful implementation of videoconferencing (Matthoes et al. 2003). The presence of a qualified technician is essential, especially at the presenting site, where he/she may function as camera operator and vision mixer, and also be available to solve any technical problems which occur during the course of each class. Students and teachers felt that there was insufficient technical support at the Shanghai site. This was because the programme was conducted during the summer holiday period in Shanghai and not only were fewer technicians available but there were frequent changes in the staffing resulting in some technicians not being familiar with the equipment. At the Hong Kong site, there was always one technician available in the classroom during the times when videoconferencing was implemented. The students who attended the programme in Hong Kong were very appreciative of the availability of the technician because he could quickly solve any problem, should one appear.

The problems with technical support affected the teaching and learning processes and therefore the teachers' and students' feelings about the videoconferencing. It is concluded that the availability of technical support for the videoconferencing implementation is very important, in order to ensure effectiveness and efficiency.

8.2.2.3 Teachers' experience of teaching using videoconferencing

The Shanghai teachers had no previous experience of conducting a lecture mediated by videoconferencing and of interacting with students who were in a distant site. They

found it difficult, when giving their lectures, to pay equal attention to students who were in two different locations. Therefore the non-exchange Hong Kong students felt neglected at times and felt that they could not actively take part in the class although the exchange Shanghai students did not mention this. In contrast, the teacher from Hong Kong had experience of conducting lectures using videoconferencing and as a result performed better in his interaction with the students in the distant location. Both the non-exchange and exchange students in Shanghai site mentioned this easier interaction. These results suggest it is important for teachers to practise teaching using videoconferencing before being formally involved in delivering lectures using this medium. Although it may be difficult to set up a 'mock' lecture session, efforts should be made to do this if students are to be satisfied with teaching they receive using this medium.

8.2.2.4 Other factors influencing interaction between the two sites

Similar to findings from Vincent and colleagues' study (2003), the lack of human contact was felt by students in both places. In addition to the issues discussed in the previous section, students mentioned that the formal classroom layout, i.e. in both places the classroom was of lecture theatre style, and the size of the class in the two places may have negatively influenced the interactions between teacher and students in the presenting site and in the remote site. Some of the students in the remote site felt a sense of distance from the teacher. They felt it was not a 'real' classroom without the teacher being present and felt they were just watching TV in the classroom. Factors which may have contributed to this feeling were the lack of eye

contact between teacher and student, the lack of non-verbal cues, and some of the difficulties the students mentioned in asking and answering questions.

It is suggested that ideally videoconferencing is particularly suitable for small group teaching where the students can be physically less distant from teacher and can be seated for example around a large table so facilitating interaction and eye contact. However, one of the advantages of videoconferencing is to utilise teaching resources to their maximum potential, e.g. by delivering lectures to large groups in more than one location and therefore to utilise videoconferencing purely for small group teaching would probably not be economically viable.

8.2.2.5 The sense of distance from the teacher

Some students felt a sense of distance from the teacher in the videoconferencing classroom. They felt it was not a 'real' classroom without the teacher being there and felt they were just watching TV in the classroom. Factors which may have contributed to this feeling were the lack of eye contact between teacher and student, the lack of non-verbal cues, and difficulties in asking and answering questions. This result is consistent with the results of Vincent and colleagues' study (2003). Improvement of specific videoconferencing related teaching skills and enhancement of interaction by training of teachers and providing technical support may reduce this sense of distance from the teacher.

8.3 TEACHING IN THE NURSING SCHOOLS PARTICIPATING IN THE PROGRAMME

The programme offered the participating students two credit-bearing subjects, Health Counselling and Interpretation of Clinical Data, and arrangements were made that teachers from both Schools should teach these subjects, i.e. Health Counselling was taught by a teacher from Hong Kong and Interpretation of Clinical Data was taught by teachers from Shanghai. Videoconferencing was used to link two classes, one in Hong Kong and the other in Shanghai. The students who came from both Schools, no matter whether they exchanged to the other place or stayed in their home School experienced teaching in both Schools. In the interviews and their reflective journals, they mentioned the similarities and differences in various elements of the teaching environment and these are discussed in this section.

8.3.1 The perception of differences in the teaching environment between the two Schools of Nursing

The Course Experience Questionnaire (CEQ) was administered to all students before and after the programme, in order to investigate the students' perceptions of their conventional teaching environment and the teaching environment in the programme. On only one element of the conventional teaching environment, i.e. Clear goals and standards, was there a significant difference between the Hong Kong and the Shanghai students. The students from Hong Kong scored a higher value on that element. This result may not be surprising in light of one of the major differences between the teaching approaches in the two Schools. The Hong Kong teachers provided the students with a subject description which included information on the number of credits, objectives, syllabus, teaching pattern, assessment and references.

This, students felt, made it very clear for them, so that they could prepare for learning about this subject and check the subject information regularly and evaluate whether they had achieved the learning objectives. Compared to the teachers from Hong Kong, the teachers in Shanghai provided information only on the learning objectives for their subjects. They believed that the teaching pattern and assessment format were similar for all subjects and therefore did not need to be addressed for each individual subject. In the teaching environment in the programme, a detailed subject description was provided to students for both subjects. This is likely to have led to the more positive perceptions of the Shanghai students and the lack of any significant difference between the Hong Kong students and themselves on the element: clear goals and standards.

On all five elements of the subscales in the CEQ, i.e. Appropriate assessment, Good teaching, Appropriate workload, Clear goals and standards and Emphasis on student independence, there was a significant difference between students' scores before and after the programme. The environment in the programme was viewed more positively than their conventional environment on all five elements. It is suggested that, in part, this overall positive result could be attributed to the novelty and variety of their experiences. However, the qualitative data indicated that the students were able to identify the strengths and weaknesses in all the elements of the environment which results confirmed the results from the quantitative data and the students' overall positive view of the environment of the programme.

The Shanghai students gave a significantly higher score for the subscale of Good teaching in responding to the CEQ after the programme than the Hong Kong students

did. A key difference in the teaching approach of the two teachers from the School in Shanghai was that they added tutorials to follow on from their lectures. In the conventional teaching environment tutorials had not been used and Shanghai students appreciated this modification.

The Shanghai exchange students scored significantly higher values in the subscale of Emphasis on independence after the programme than the Hong Kong students did. Two inferences can be made from this result. Firstly, to experience such independence was in complete contrast to their experience in their conventional learning environment and they valued their opportunity in the programme to be more independent in their learning. Secondly, because the scores of the Shanghai non-exchange students were lower than those of the Shanghai exchange students on this subscale, it can be inferred that to be directly involved in a real situation, in this case to be in Hong Kong sharing in the teaching with their Hong Kong students classmates, is of key importance to forming a person's perceptions.

The Hong Kong students scored higher values in responding the CEQ after the programme in all but one of the five subscales, the exception being their score for Emphasis on independence. This indicated that, while the Hong Kong students had significantly more positive feelings on most elements of the teaching environment in the programme, they were able to discriminate as they did not change their view about independence in learning. This result could be explained by the information gathered from the qualitative data which demonstrated that the emphasis on students learning independently was already strong in the conventional teaching environment in Hong

Kong. These findings strengthen the validity of the CEQ as used in the present research.

As measured by their scores on the assessments for both subjects in the programme, the students from both Schools had good outcomes. As well as indicating directly that the students had achieved the learning objectives for the two credit-bearing subjects, it could be inferred that, in part, these good outcomes were related to the students' positive feelings about the teaching and learning environment in the programme. There was a significant difference in the scores obtained by the Hong Kong students, exchange and non-exchange, and the Shanghai exchange students compared to those for the Shanghai non-exchange students who gained lower scores in the assessment for the subject of Health Counselling. There was some indication in the qualitative data that this difference might have been related to the tutorials in the two places although it is acknowledged that this link may be rather tenuous. While Health Counselling was a very different type of subject for the Shanghai students, the tutorials in Hong Kong were conducted by the lecturer himself and in a way in which encouraged the students to ask for clarification of anything they did not understand. In Shanghai, the tutorials were conducted by a teacher who, although she received some advice from the subject lecturer from Hong Kong, did not herself have any prior knowledge of the subject, as it was not part of the nursing curriculum in Shanghai, nor did she have experience of conducting tutorials. This may have been a factor in the lower scores achieved by the Shanghai non-exchange students while it did not appear to have influenced the scores for the Hong Kong exchange students who were familiar with this type of applied subject.

8.3.2 Differences in teaching method and content between the two Schools

Students from each of the two Schools also identified differences in teaching, including teaching method and teaching content. The Hong Kong teacher addressed the principles and key points of the concept, in this case, Health Counselling and encouraged debate with the students, while the Shanghai teachers endeavoured to tell the students everything they, the teachers knew about the subject they were teaching, in this case, Interpretation of Clinical Data. The fundamental difference was between teaching in principles and encouraging active thinking and learning on the part of students and teaching factual details and encouraging memorisation, i.e. not debate.

The curriculum content for the nursing programme in the two Schools also differed considerably, not just in relation to the different subjects which were included but in relation to the focus on application to nursing. The latter was the major focus on all subjects in the Hong Kong curriculum, whereas in Shanghai, the focus was on facts. In essence, the difference was between application of knowledge to nursing practice and memorisation of theory. The Hong Kong students thought that the Shanghai students could recall details about a particular disease, what and why certain signs and symptoms would appear and what the nursing care for the patient with this disease should be. The Shanghai students believed that the Hong Kong students focused more on individualised nursing care and applied their knowledge in a patient-centred way, e.g. who was this patient, what were the patient's signs and symptoms and therefore his/her needs and how could they help the patient.

Students believed that the teaching styles of the teachers involved in the programme were different and these were indicated in several ways. The Hong Kong teacher used several different methods in teaching, while the Shanghai teachers used the lecture as their sole teaching method, without giving opportunities for discussion or for question and answer sessions. The Hong Kong students therefore were actively involved and participated in the lecture while the Shanghai students accepted what the teachers said or what the text book described. The Hong Kong students tried to understand what the teachers were saying while the Shanghai students wanted to memorise the points in the lecture content. Therefore, the students thought the learning in Hong Kong was more flexible, independent and 'colourful' while in Shanghai it was seen to be more mechanical and, according to some students 'dull'. The students from both Schools said they felt it was difficult to judge which style was better, but overall they seemed to appreciate the teaching style of the teacher(s) from the host School more than that of the teacher(s) in their home School.

Another difference the students noticed was between reality and simulation in learning about patients. The Hong Kong exchange students appreciated very much that, in Shanghai, they could go to the wards in small groups with their teacher to study a real case and that patient's nursing care. Most of them mentioned this point in the interviews and reflective journals and believed this teaching method would help them to apply knowledge to practice and develop their thinking skills. On the other hand, the Shanghai exchange students who visited the Hong Kong School of Nursing's clinical simulation laboratory thought this provided a better opportunity to learn and practise nursing skills before going to placement in the clinical setting. While both methods have their strengths, the implementation of the Shanghai method

is possible only if access is readily available to a general hospital, affiliated to the University and if there are sufficient numbers of patients with conditions relevant to what the students are studying, because classes of Shanghai students would have to be divided into groups of twenty or less for these visits to the patients. However, a recent and growing limitation to this teaching method is that patients nowadays are increasingly aware of their rights and may not consent to this practice. For ethical reasons and because the simulation technology is becoming ever more advanced it may be that the use of the simulation laboratory for the learning and practice of nursing skills will increase. However, it is suggested that, where resources are available and where informed consent from the patient can be obtained, the opportunity to visit actual patients and learn about their case should continue to be offered to students prior to going on clinical placement.

In the interviews and journals, the Shanghai students mentioned that the tutorials and the team work impressed them very much. They did not have previous experience of this and appreciated it. They believed that the tutorials helped them to understand the concepts addressed by the teachers in the lectures and provided them with the opportunity to practise or discuss the issues that they learned about from the lecture. Moreover, it was the first time Shanghai students had experienced the team work for the assignments. In this team work, they learned how to cooperate with others, how to manage the tasks and the time required, and how to influence others. They not only believed that they learned a lot from the team work but also had positive feelings about this learning activity. The Hong Kong students mentioned that the systematic handouts and presentation of the lecture material from the Shanghai teachers made a deep impression on them. They learned how to organise the material for case analysis

and management at a theoretical level, and how to organise their thinking when analysing a patient case. The Hong Kong students also gained a first time experience of analysing a real case in a clinical setting directly after studying the relevant knowledge and skills in relation to the case. They very much appreciated this teaching method.

8.3.3 Differences in arrangement for clinical placements between the two Schools

In Hong Kong, in each year of the nursing programme, the students had clinical placements in every semester. In Shanghai, the nursing programme included clinical placements for the last two months of their fourth year and all of the final year, which was entirely devoted to nursing practice in clinical settings. Students from both Schools, exchange and non-exchange, evaluated this arrangement and discussed the strengths and weaknesses of each. They believed the arrangement in Hong Kong stimulated the students to apply what they learned in the classroom to their actual practice of nursing, step by step, and that this could help students to consolidate what they had learned as well as to find out what they still needed to learn. A weakness which students from both Schools mentioned was that, especially during the first two years of their programme, the students might feel embarrassed if they did not know how to deal with a situation which they had not previously experienced and for which they did not yet have the necessary specific knowledge and skills. However, in Hong Kong, a clinical instructor who is a member of the School of Nursing staff is responsible for supporting the students in their clinical placements and acting as their mentor.

Because the Shanghai students' placement occurred in the final stages of their programme, they felt they had all the knowledge they would need and had more confidence about their clinical practice abilities. However, for them, the challenge was in adapting to very different environments. The environment in the classroom and in the ward could not have been more different. In addition, for four years of their lives, they had lived on campus but on placements their daily life was in the various clinical settings. Although they knew from the beginning of their programme that their final year would be spent in the clinical settings they still experienced quite a shock when making the transition. They described feelings of being upset, stressed and even helpless.

From the interviews, it was clear that the students wanted to maximise the strengths and minimise the weaknesses of the two systems but were divided in their views as to the best way forward in relation to the arrangements for clinical placements. Some students from both Schools felt it would be better if the Hong Kong students did not have clinical placements in their first year while others valued that early start to clinical experience. There was a more unanimous view in relation to the late start to clinical experience in the Shanghai programme; almost every student felt the clinical placement should begin at an earlier stage but no one specified exactly when. In relation to clinical supervision, they felt that to have a clinical instructor who is a member of staff in the Nursing School would help them minimise the gap between theory and practice because the instructor knew what they had been taught. On the other hand, they felt that clinical staff were likely to teach more up to date knowledge and skills about patient care but, because they were busy with their nursing care responsibilities they often did not have the time to teach the students. The Shanghai

students especially mentioned the importance of the clinical staff mentor role in helping them adjust to the major change from campus life to clinical placement. Therefore, it is important to emphasise the mentor role in helping the Shanghai students adjust to clinical placements.

8.4 THE STUDENTS' LEARNING IN THE TWO SCHOOLS

During the programme exchange and non-exchange students in both Schools studied and worked together. They learned from each other and made many friends as a result of sharing in the various learning activities. Through this process of learning together, they identified similarities and differences in their attitudes towards learning, their study habits and the learning resources of the two Schools. This section discusses these results.

8.4.1 Similarities in learning between the students from both Schools

In the interviews with students and teachers there was a common belief that the students all had positive attitudes and studied hard in relation to nursing knowledge and skills. They listened to the lectures carefully, although the emphasis on this aspect between the students from the two Schools may have been different. They were all of a similar age and believed they had similar attitudes toward their learning but different ways of achieving their learning goals. It is suggested that the social culture and teaching environment may have affected both the way in which the students from the two Schools approached their studying and their thinking processes.

8.4.2 Differences in learning between the students from both Schools

The major differences in learning identified by the students in their interviews included the approach to learning, the ways in which to master the knowledge and skills and the available learning resources in the two Universities and Schools. For example, the manner of asking questions in the class differed. The Hong Kong students asked more questions regarding the different opinions related to specific issues dealt with in the lectures, while the Shanghai students asked questions only to clarify what the teacher had said in the lecture. This was considered to be due to the different teaching styles that they had experienced and these have been discussed in section 8.3.2. There were differences too in the application of their knowledge to the real, i.e. clinical situation. The Shanghai students would recall the knowledge that they had been taught in relation to a particular disease and apply that knowledge irrespective of any possible individual differences between patients with that disease. The Hong Kong students on the other hand would apply their knowledge taking into account the individual patient and their individual needs. There is little doubt that the different teaching styles in the two Schools contributed to these differences in the students' application of knowledge in the real situation but it is considered that the prevailing culture in the two places also would have had an influence.

There were also differences in the form of examinations used to assess the students in the two Schools. In Shanghai, students were encouraged to recall the information that they were given by their teachers and gained from their textbooks. In Hong Kong, a variety of different types of assessment were used and many of these were intended to encourage students to reflect on what they knew about the subject matter, present

different aspects and find references to support their statements. It is noted that these differences are consistent with the different overall approach to teaching and learning in the two Schools, i.e. understanding of principles versus recall of factual detail.

The difference in learning resources between the two Universities and Schools was also a key factor in understanding the different approaches to learning of the students in the two Schools. Compared to the library resources in Hong Kong, those in Shanghai were inadequate. As a result, the Shanghai teachers did not ask or expect their students to go to the library to find the references as they simply would not have been available but rather simply to recall the information they had been taught.

There was no evidence in the literature reviewed of research into a student exchange programme in which students from a host and a home School studied together and teachers from the host and home Schools taught the students from both places. There was also no evidence of students travelling from their own University to a host University to take a subject taught by the teacher in the host University. Very few exchange programmes involved subject learning. If an exchange programme did offer this, the arrangement was that a teacher from the home School travelled with the students and conducted the lectures in the host classroom for her/his own students, without the students from the host School being involved. Therefore, as a result of the unique structure of the programme, new knowledge has been gained about students' perceptions of learning in two different Schools and cultures.

8.5 NURSING PRACTICE IN THE TWO PLACES

During the programme arrangements were made for the students to visit local clinical settings, including general hospitals, specialist hospitals, community health care centres and nursing homes for the elderly. They did this together with the non-exchange students. As a result of taking part in these visits, the students learned about the local health care system, health care service and nursing practice. In comparing these services with the students' home health care services, the exchange students identified some differences between the two places. The findings from the related qualitative data analysis were presented in the previous chapter and this section discusses some issues related to these visiting activities, the differences the students found in the health care services between the two places and the different views of the nursing students in the two places in relation to a career in nursing.

8.5.1 Differences in health care services between the two places

The students believed that there were differences in the health care services between the two places and commented on the health care environment, the emphasis of the service and the pattern of nursing care. The Shanghai students were impressed deeply by the health care environment in Hong Kong. In contrast to that in Shanghai, which was noisy, sometimes overcrowded and, because walls were all painted white, seemed 'cold', they felt the Hong Kong environment was colourful, warm and humanistic. They believed there was a lack of recognition in Shanghai that the health care environment can influence the quality of care provided and patients' psychological well being.

The students identified that health care in Hong Kong emphasised disease prevention, health promotion and self care by the patient, while in Shanghai the emphasis was on treatment of disease. Involvement of patients in their treatment, and promotion of health and rehabilitation were not emphasised in Shanghai. The Shanghai students believed there was insufficient awareness of the importance of enhancing the patient's knowledge of their disease and of disease prevention. However, it is inferred that the culture of society led to the patient adopting a passive role as a service receiver and that the lack of adequate health care resources in Shanghai meant there were only sufficient resources for the single focus, i.e. on disease.

In relation to nursing practice, the students from both Schools noticed a fundamental difference and that was between total patient care as practised in nursing in Hong Kong and task orientation which is normal practice in Shanghai. The Shanghai students thought the total patient care system was better for the patient and would have liked to give care in this way but felt they were too busy to take time to meet patients' psychological needs, i.e. talking and discussing with patients and/or their family members, although all believed that the patient's psychological well being was important in her/his physical recovery. They also recognised that, as students, they could not change the system. However, there is a growing recognition at health policy-making level in China of the benefits of total patient care and of the need to move towards that system of delivering nursing care. Already, recommendations that twenty percent of a hospital's wards should be organised to offer total patient care have resulted in this change beginning to take place.

Bartholomew (1996), Goldberg and Brancato (1998) and Rolls and colleagues (1997) reported on some nursing student exchange programmes which included activities organised with the common goal of comparing the host health care system and service with the students' home health care system and service. Rolls and colleagues (1997) concluded that students who participated in an exchange programme in which they visited hospitals, community health and other settings, developed a concept of the health care system and a level of awareness of health care and health needs in the host country. Goldberg and Brancato found that the programme they evaluated provided the opportunity for the participating nursing students to evaluate the strengths and weaknesses of their own country's health care system in comparison with another country's health care system. These findings parallel the findings of the present research.

8.5.2 The importance of involvement for concept development

When the exchange students in both places commented, in the interviews and journals, on what they had learned regarding the health care service and nursing practice in clinical settings in the host city, as a result of their visits, the students stated that they did not know how the nurses in the host place worked, as they had not worked together with them. In addition, the Shanghai exchange students, with the exception of the year four students who had had one month of clinical placement before the commencement of the programme, had no experience of working in the clinical settings before the programme and so it was difficult for them to compare the host health care services with their own. During the relatively short time of a visit, all the exchange students were able to gain only a general picture of health care practice

and, although they could observe briefly how the nurses provided care for the patient in the ward, they had no opportunity for discussion with the nursing staff there. Therefore, it was environment of the hospital rather than the details of nursing practice which they were able to comment on and which impressed them deeply.

The non-exchange students, in their interviews and journals, seldom mentioned the health care services in the other place because they had not visited these. However, it was clear that they had gained some relevant information from the exchange students in their class.

The unique structure of the programme therefore enabled the non-exchange students to gain, albeit indirectly, from their discussions with their exchange student classmates during the clinical visits, an impression of the health care service in the other city. This naturally differed in extent from the impression gained by the exchange students as a result of their direct involvement in the visits in the host city.

CONCLUSION

This chapter has presented a discussion of the results from the analysis of the quantitative and qualitative data of the evaluation of the programme which included an evaluation of the effectiveness of videoconferencing as used in the programme. The findings from the quantitative data were supported and further explained by the findings from the qualitative data. A number of findings were consistent with findings from other research in which nursing student exchange programmes were reported and a few were not. The possible reasons for these consistencies or inconsistencies

were discussed. The discussion also explored how and why the participating students gained their various learning experiences and the characteristics of these experiences. The relationship between the unique structure of the programme and the students' experiences in the programme was discussed. The discussion revealed results which had not before been reported in literature about student exchange programmes. The next chapter addresses the implications of some of these findings and makes recommendations for the design and implementation of nursing student exchange programmes, for nursing curriculum development and for further research.

CHAPTER NINE

SUMMARY, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

9.1 SUMMARY

9.1.1 The student exchange programme

The present research evaluated a nursing student exchange programme conducted between a University School of Nursing in Hong Kong and a University School of Nursing in Shanghai. The aim of the programme was to contribute to the accomplishment of Strategic Objective One of the University in Hong Kong which was “to enhance the all-round development of students, particularly in the areas of global outlook, critical and creative thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and trilingualism, entrepreneurship and leadership”. (The Hong Kong Polytechnic University, 2001, p. 10). As entrepreneurship was not considered to be a relevant goal for nursing students, it was not addressed in the programme.

In the programme the students from both places constituted two classes, one of which was held in Hong Kong and the other in Shanghai. Each class therefore comprised a mix of students, i.e. exchange students from Hong Kong together with non-exchange students from Shanghai in one class in Shanghai and exchange students from Shanghai together with non-exchange students from Hong Kong in one class in Hong Kong. The same mix applied in the tutorial sessions for each subject. The learning

activities organised in each of the two locations included theoretical learning, clinical visits and social activities. The participating students studied two credit-bearing subjects, namely Health Counselling and Interpretation of Clinical Data, the former taught by the Hong Kong teacher and latter by two Shanghai teachers. English was used in teaching Health Counselling and Putonghua in teaching Interpretation of Clinical Data. Using videoconferencing, lectures were conducted concurrently for both classes, one in Hong Kong and the other in Shanghai. Although videoconferencing brought these students together, in that they were able, simultaneously, to share the same classroom teaching, their individual learning experiences, and their clinical, cultural and social experiences which were organised as an integral part of the programme, were different.

9.1.2 The programme objectives and the research objectives

Based on the aim of the programme, the following programme objectives were set:

- To improve the development of global outlook in nursing students;
- To enhance critical thinking skills of the nursing students;
- To promote social and national responsibility expressed by nursing students;
- To promote students' cultural appreciation;
- To enhance life-long learning in nursing students;
- To improve the language skills of students from both locations;
- To enhance students' leadership skills; and
- To explore the learning experiences of nursing students from two Universities with particular relevance to the teaching media, i.e. videoconferencing.

The objectives of the research were as follows:

- To determine whether the objectives of the student exchange programme have been met;
- To explore the students' learning experiences gained through participating in activities organised in the programme;
- To identify other benefits for the participating students gained as a result of participating in the programme; and
- To explore the possibility of establishing an innovative teaching model in nursing education.

9.1.3 Research design and method

To address the research objectives, an evaluative research design was chosen, and data collected using triangulation. Both quantitative and qualitative data were collected, using the following research instruments: two questionnaires, the Course Experience Questionnaire (CEQ) and the Videoconference Participant Questionnaire (VPQ); interviews with students and teachers; and students' reflective journals. The students' scores on the assessments for the two subjects in the programme also provided data for the evaluation. The CEQ was administered to all students before and after the programme to investigate their perceptions of the teaching environment they normally experienced in their home School and the teaching environment they experienced in the programme. The VPQ, which was administered to all students on completion of the programme, investigated students' perceptions of the value and effectiveness of videoconferencing, as used in the programme. Interviews with the students and teachers, which were conducted two to three months after completion of

the programme, and students' reflective journals written during the course of the programme were used to explore the students' experiences of teaching, learning and taking part, or 'living' in the programme, in respect of each of the objectives of the programme. Interviews with the teachers focused on their experiences of using videoconferencing as a teaching medium. The students' assessment scores, while they directly measured the students' learning outcomes for each subject, were also likely to have been influenced to a certain extent by their experiences of the teaching and learning environment in the programme, as was indicated in some comments in students' interviews. The quantitative data from the CEQ, VPQ and assessment scores were analysed using descriptive and nonparametric inferential statistics, while the qualitative data from interview transcripts, reflective journals and open-ended questions in the VPQ, were analysed using content analysis.

9.1.4 The sample

A total of 84 students attended the present programme. All students completed each of the questionnaires, their subject assessments and submitted their reflective journals. Of these 84, 26 students were invited to attend for interview, of which 5 were non-exchange Hong Kong students, 8 were exchange Hong Kong students, 5 were non-exchange Shanghai students and 8 were exchange Shanghai students. The main findings are summarised below in relation to the objectives of the programme and of the research.

9.1.5 Summary of results in relation to programme and research objectives

Enhancement of global outlook The students, both exchange and non-exchange, enhanced their global outlook although in different ways and to a different extent. The exchange students gained a vivid sense of the differences in the physical environment between the host and home cities and also became aware of some of the characteristics and life style of the local people. The non-exchange students, through their daily interaction with the exchange students, also became aware of some of the differences between them, for example, in life style and in their approach to new experiences. All of the students explored the different teaching styles of the teachers from the two Schools and, by studying and working together with their classmates from the other School, their different learning styles. By sharing, as non-exchange and exchange students together, in the clinical visits and social activities, all students developed new perspectives and enhanced their understanding of cultural diversity. It is believed that first-hand experience, such as the exchange students had, is very important to the development and enhancement of a global outlook but it was also clear that the non-exchange students in the programme, as a result of getting to know their classmates from the other culture, also developed and enhanced their global outlook. It is not suggested that a single six-week experience of a student exchange programme led to the participating students gaining a major improvement in their global outlook. However, all the participating students, and particularly the exchange students, did take important steps in this regard as a result of attending the innovative and uniquely structured programme.

Enhancement of critical thinking skills By observing, taking part in and evaluating the many activities encountered in the programme, the students believed that these new situations and events stimulated them to think critically. Some of the examples

they gave, which they considered had facilitated this development of their critical thinking, included the teaching and learning environment in the programme, which was different from their conventional environment, the different health care services and environment and the very different social culture.

Promotion of social and national responsibility As a result of all their new experiences, not just related to the teaching and learning environment but even more to their learning about the social and cultural differences, both exchange and non-exchange students expressed their view that they should try their best to learn more and to work hard to master knowledge and skills which would help them to meet society's needs. As a result of working closely together and sharing in clinical visits and social and cultural activities, all the students commented on issues in their own society as well as those they had become aware of in the society in the other place. The results did not indicate directly that the students had enhanced their social and national responsibility, but what they did and how they behaved during the programme indicated indirectly that they had enhanced their awareness of their social and national responsibilities.

Promotion of cultural appreciation The students, no matter which School they came from and where they attended the programme, became much more aware of the differences in the ways of life and the culture in the two cities. As all students were Chinese, before participating in the programme they had not thought about whether or not the culture would be different. Their surprise at finding differences in so many aspects stimulated them to try to understand the reasons for the differences. Through trying to understand, many of the students said that they came to appreciate the other

culture and developed a positive attitude; in other words, they developed cultural appreciation.

Enhancement of life-long learning The dynamic environment of the programme stimulated the students' desire to learn. When encountering something they did not know about before, they wanted to find out about it. They were aware of their need to learn and wanted to achieve as much as possible by attending the programme and so they worked hard. They believed what they learned and how they learned as a result of participating in the programme gave them the motivation to continue to learn, both for their personal growth and professional development. Their expression of this belief indicated they were aware that learning was a life-long process and that they had set out on that journey of learning.

Improvement of language skills The students' experiences regarding language learning included four aspects: difficulties, facilitation, strategies and achievement. The students faced the difficulty of trying to keep up with the speed of talking of both the teachers and their classmates from the other School, difficulty in expressing themselves in a language in which they were not fluent, in reading the teaching and learning materials which were written in the different language, and particularly in understanding the special medical terms. However, the students believed that the learning environment in the programme facilitated their language learning because they were immersed in that language environment, not just in the classroom but in their daily living and studying with their classmates from the other School. The students developed different strategies to help them improve, including practising using the other language as much as possible and seeking help from their classmates,

teachers, local people, text books and other reading material. Most students believed that they improved their language skills as a result of participating in the programme.

Enhancement of leadership skills The students thought that they exhibited and appreciated, learned, practised and enhanced their leadership skills by participating in the programme. The students from both Schools exhibited their leadership skills in organising the activities for the exchange students, regarding clinical visits, social activities and daily life management. The Shanghai students appreciated their classmates' efforts and learned a lot from them. The Hong Kong students also learned and practised their leadership skills when they encountered problems or difficulties in organising these activities and learned how to deal with these. Therefore, exchange and non-exchange students in different ways gained experiences which enabled them to develop their leadership skills.

Perception of effectiveness of videoconferencing Because the programme gave all the students their first experience of attending a lecture mediated by videoconferencing, their interest in the use of such advanced educational technology was aroused. They were particularly interested in the fact that the use of such technology enabled them to be taught together with and at same time as their fellow students in the programme who were in a classroom more than 1000 kilometres away. The students had positive perceptions of all three aspects of videoconferencing: presentation, teaching and educational value, as evidenced by the higher values they scored in the VPQ. However, they did identify some limitations in the use of videoconferencing in the programme and these related to technical matters, e.g. some failures in connection,

and also to interaction between teachers and students and between students themselves in the two different places which at times they felt was insufficient.

Exploration of teachers' teaching in the other School The students identified similarities and differences in the characteristics of the teachers in the two Schools, in the teaching content and the teaching methods. It is important to note that their comments in the interviews and journals were based on their experiences of only three teachers, one in Hong Kong and two in Shanghai. They did not offer any comments on tutors. Their impressions were positive about teachers in both Schools. They felt the Hong Kong teacher was more 'amiable' and like a students' 'mentor' and that the Shanghai teachers were more 'serious' and 'dignified'. In the frequent discussions between exchange and non-exchange students in each class they noticed the difference in the content of their respective nursing programmes, i.e. that Hong Kong gave more time to applied knowledge and nursing skills whereas in Shanghai there was more focus on the theory. The lecture content was also different as the Hong Kong teacher taught about principles while the Shanghai teachers taught about detail. The teacher in Hong Kong also expected and received more interaction with the students, while the Shanghai teachers expected the students to listen quietly and only to ask questions if they needed clarification on some point.

Exploration of students' learning in the other School The students were aware of similarities and differences between themselves and the students in the other School in the ways in which they learned. They believed that they all had a positive attitude to learning but the Shanghai students noticed that the Hong Kong students liked to debate and sometimes critique what the teachers taught, which was an approach

which they, the Shanghai students, found very different. The students from both Schools recognised that the learning resources of the two Universities and Schools were different and considered that the University and the School of Nursing in Hong Kong had abundant and advanced learning resources compared to those in Shanghai.

Exploration of health care services in the other city By visiting different kinds of clinical settings, the exchange students observed quite a number of differences in the health care services and in nursing practice between the two places; particularly they noticed the different physical environment and facilities of the various settings. Both from their observations and in discussions following the visits, they contrasted the individualised patient care philosophy in Hong Kong, with its emphasis on involvement of the patient in her/his treatment and care, with the task orientation organisation of nursing care in Shanghai in which the patient was a passive recipient of care.

9.2 CONCLUSION

There were four research objectives. These will now be addressed and a conclusion reached as to their achievement or otherwise.

9.2.1 The first objective of the research was ‘to determine whether the objectives of the student exchange programme have been met’.

The findings indicated that the objectives of the programme were achieved. The use of triangulation ensured multiple data sources, both quantitative and qualitative, the

results from which indicated students' all-round development in relation to the seven elements of Strategic Objective One of the University in Hong Kong which were enhancement in students' global outlook, critical thinking, social and national responsibility, cultural appreciation, life-long learning, biliteracy and leadership. The students' personal and professional development in these elements was indicated both directly and indirectly by all the students, exchange and non-exchange, and from Hong Kong and Shanghai. The remaining programme objective related to the students' experiences of the effectiveness of videoconferencing which was used as a teaching medium in the programme. That objective was also achieved as will be seen in the next section which focuses on students' learning experiences.

It is concluded therefore that the programme, with its unique design and structure, was effective in enhancing the all-round development of the participating nursing students. Such development is an important purpose of nursing education, as indeed it is of education in general.

9.2.2 The second objective of the research was 'to explore the students' learning experiences gained through participating in activities organised in the programme'

The students' learning experiences were gained from an innovative variety of activities. In addition to their learning of the content of the two subjects in the programme, they also learned from the clinical visits they undertook, and from the social and cultural activities.

By taking two subjects in the programme, one of which was taught in English by the teacher in Hong Kong and the other in Putonghua by the teachers in Shanghai, the students not only shared but compared the different teaching styles and methods of the teachers in two places and also improved their language skills. In learning about these very different teaching approaches and styles they became aware of the strengths of each of the Schools of Nursing in relation to teaching. The mix of exchange and non-exchange students in each class, a structure which has not been reported in the literature about other student exchange programmes, meant that the exchange students interacted frequently and daily with the students from the host School in each city. Both exchange and non-exchange students mentioned how much they learned from each other.

The clinical visits to different health care settings were also carried out in groups of exchange and non-exchange students together and involved observation followed by discussion. In these ways too therefore the students not only learned to compare what, it transpired, were very different health care environments but different ways of providing nursing care and different patient roles. Not only did the exchange students learn from direct observation of the clinical areas in the host settings but, again because their close interaction with the exchange students, the non-exchange students too learned about the health care environment in the other city. It is concluded that the unique structure of the programme enabled the students who had not had the opportunity to travel to the other place to learn about health care there although clearly not to the extent of those students who had travelled there. Thus, while direct involvement is clearly very important to learning, indirect involvement, in the way in which it was organised in the programme, was also effective.

This balance between direct and indirect involvement was also illustrated in the students learning experiences related to cultural appreciation. Immersion and involvement, albeit for a short period of six weeks, in a different cultural context and environment led to the exchange students expressing more and detailed learning about the different cultural context and environment than the non-exchange students did, although they too gained some appreciation of the other culture, principally because of their discussions with the exchange students in their class. The unique structure of the programme was important to the achievement of this learning experience.

One of the programme objectives related to improvement of students' language skills and this was considered particularly important if nurses work in clinical settings in which there are more and more patients who do not speak the local language. The unique structure of the programme meant that the Hong Kong students, who were familiar with the use of English, and the Shanghai students, whose first language is Putonghua, were in daily contact with each other and all the students practised their language skills through this daily involvement. The two subjects in the programme were each taught in the different language and in this way too they learned and improved their language skills.

The use of videoconferencing as a teaching medium was a new experience for all the students. They appreciated the fact that this technology enabled them to interact with teachers and students who were so far away. Even although their experience of videoconferencing was of only six weeks, they learned that there were positive aspects to this technology but also that there were some limitations. Their relatively

short experience of this medium however enabled them to form an initial and balanced view about its effectiveness.

9.2.3 The third objective of the research was ‘to identify other benefits for the participating students gained as a result of participating in the programme’.

Another unique aspect of the programme was the inclusion of various social and cultural activities, for example exchange and non-exchange students together visited museums, went shopping together and went to karaoke parties. Because the host students were responsible for arranging these visits, as they were with clinical visits, they benefited by developing their leadership skills. In addition, they benefited by further developing their cultural understandings and by making friendships with their new classmates from the other city. Many still keep in contact with these new friends. It is concluded that the unique structure of the programme not only ensured that the students studied and learned together, but that they relaxed together, again something which, although it may have happened, has not been reported in the literature about student exchange programmes. Another potential benefit of working and playing together is that the students may have further enhanced their cultural appreciation and global outlook.

9.2.4 The fourth objective of the research was ‘to explore the possibility of establishing an innovative teaching model in nursing education’.

For the purpose of this thesis, the term ‘teaching model’ refers to the nursing student exchange programme which has been evaluated in this research. It is concluded that

this objective has been achieved by the design, structure and implementation of the programme which successfully established an innovative model for teaching and learning in a nursing student exchange programme. The key features of this innovative programme are:

- The locations – in two different cultures but the same country;
- Two Schools of Nursing – both functioning as home and host Schools;
- Exchange and non-exchange students – from each School a group of exchange students transferred to the host School and a group of non-exchange students remained in their home School;
- Mix of exchange and non-exchange students – in each class in the two Schools;
- Number of participating students – 84 students in all;
- Length of the programme - six weeks;
- Theory content – two subjects taught by lectures, supported by tutorials;
- Teachers - a teacher from one School taught one of the subjects and two teachers from the other School taught the other subject; tutors also came from both Schools;
- Two languages – one subject taught in English, the other in Putonghua;
- Videoconferencing – lectures conducted concurrently between the two classes in the two Schools;
- Clinical visits – to a variety of health care settings including hospital and community:
 - Agreement to access arranged by the teachers
 - Organisation of visits done by students
- Social and cultural activities – visits to different historical sites and to shops and entertainment facilities:

- Organisation of visits and leisure activities done by students.

The programme took place over a six week period in a summer semester for the Hong Kong students and the summer vacation for the Shanghai students.

9.3 LIMITATIONS

Sample size Although the number of participating students was the largest in the reported literature regarding nursing student exchange programmes, it was too small to justify generalisation of the findings to other nursing student exchange programmes.

Selection of participants The students who were involved in the research had elected to participate, having read the poster information about it. In effect they were volunteer participants, rather than participants who had been selected by randomisation into control and experimental groups. However, to have used randomisation would have been inappropriate as it would have been unethical to coerce students to become an exchange student and travel to another country.

The students were selected according their GPA score and only those who had a GPA of average or above participated in the programme. The results therefore will not be representative of the achievements of students across the range of intellectual ability.

The research design While the use of triangulation was a strength in the programme evaluation, the sample selection procedures noted above mean that any attribution of

the outcomes to the intervention, i.e. the programme alone, as opposed to any undetected intervening factors, should be done with caution.

Financial and staffing resourcing While the financial support for the exchange students was described, no mention is made in this research of the possible cost of the programme in terms of other financial aspects, including the staffing resource and cost of the videoconferencing. It was not the intention to include these details and neither School maintained a record of costs. This could be considered a limitation of the research. However, both Schools delivered the programme within their existing budget and staffing complement.

Risk of researcher bias The researcher is a member of staff of one of the participating Schools of nursing and was a tutor for one of the subjects in the programme. She also conducted the interviews. She is a registered PhD student in the other participating School of nursing. For all these reasons she could be said to have a vested interest in the success of the programme. However, procedures for establishing methodological rigour were followed, for example, the interviewees were selected by randomisation, there was independent checking of the coding and categorisation of the data and triangulation, with the resulting multiple data sources, was used.

9.4 RECOMMENDATIONS

Recommendations are made in relation to nursing education, specifically in relation to the establishment of an innovative teaching model, i.e. the programme, nursing curriculum development and to further research.

9.4.1 Implementation of nursing student exchange programmes which follow the design and structure of the programme

The programme was the first of its kind and to confirm its effectiveness as a model for a nursing student exchange programme, more programmes of similar design and structure should be implemented. It is recommended that these should be between the existing partners but also it would be important to extend the implementation of the programme to other countries of the world. Such programmes should be subject to research evaluation.

There is an argument for recommending that exchange students should participate directly in clinical practice in the host site rather than simply observing, and some students in the programme made this comment. However, this argument is not accepted because of the legal and particularly the ethical implications.

9.4.2 Nursing curriculum development

Given the evidence of the effectiveness of the programme, it is recommended that opportunities for students to participate in similar exchange programmes should be a part of all baccalaureate nursing curricula.

9.4.3 Recommendations for future research

In relation to any nursing student exchange programme, it is recommended that a longitudinal study be carried out approximately one year after students complete the programme in order to attempt to examine the long term effects of the students' participation in the programme. It is acknowledged that many and diverse factors will have influenced participating students' personal and professional development in the period intervening between the programme and the time at which the proposed longitudinal study would commence, but none-the-less, and based on the comments from students in the programme about the long term effects they thought their experiences would have, it is considered a longitudinal study would be worthwhile.

9.5 A FINAL COMMENT

The design and structure of the programme conducted between the School of Nursing in Hong Kong and the School of Nursing in Shanghai is unique. Many of the findings and outcomes of the programme, which have been described and discussed in this thesis, are also unique. As such, they provide an important contribution to knowledge which it is hoped will inform nursing education now and in the future.

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Appendix 1 Poster

1.1 Poster of the School of Nursing in Hong Kong



The Hong Kong Polytechnic University
School of Nursing



**FACING THE HEALTHCARE FUTURE WITH CUTTING EDGE TECHNOLOGY,
PRECISE ART AND A HEALING TOUCH**
高術精藝 白衣紅心

Student Summer Exchange Programme

Collaborating Institutions

School of Nursing, The Hong Kong Polytechnic University (PolyU), Hong Kong
School of Nursing, Fudan University, Shanghai

Programme Objectives

1. To enhance the development of all-round students.
2. To promote student cultural appreciation and communication skills.
3. To enhance the bilingual skills of students.
4. To capitalize on the strengths of the two departments from two universities.
5. To further strengthen the established partnership between the two universities.

Duration of the Programme

5 July to 21 August 2004

Characteristics of the Programme

1. Conventional and innovative teaching methodologies will be employed, e.g. videoconferencing technologies.
2. Two elective credit - transferred subjects will be offered : i.e. "Health Counselling" and "Interpretation of Clinical Data". The first subject will be offered in English and the second in Putonghua.
3. The two classes will run concurrently at the PolyU and Fudan University during the aforementioned period. Each of the two classes will consist of half PolyU students and half Fudan students.
4. Classroom teaching will be offered on the campuses of the two universities.
5. Clinical visits will be provided in Hong Kong and Shanghai.

Eligibility for Application & Quota

1. Second and third year nursing students from BSc programmes.
2. Students should be fluent in both English and Putonghua.
3. A preferred GPA score of 3.0 or above (subject to change).
4. Willing to face challenges and develop leadership skills.
5. Sixty students will be selected to attend the programme.

Sponsorship

Expenses on travel and accommodation will be sponsored by The Hong Kong Polytechnic University. Students are responsible for other expenses.

Interview


Selection interviews will be held in January 2004. Results will be announced in mid- February 2004.

Award

An award of achievement will be granted to those students who have successfully completed the programme and attained satisfactory learning outcomes.

Application Procedure and Contact Person

Please download the attached application form at (www.polyu.edu.hk/~nhs). Upon completion, send the application to Miss Karina Leung, General Office, GH506, School of Nursing, PolyU or fax to 2364 9663 – Attention: Miss Karina Leung. Contact Telephone: 2766 4041. For further enquiry, please contact Dr. May Fok at 2766 6542.



Closing date for application : 30 November 2003

1.2 Poster of the School of Nursing in Shanghai

海报

我院拟与香港理工大学护理学院联合举办“2004 年暑期复旦大学和香港理工大学护理专业本科生交流学习项目”。

目的：充分利用办学资源，促进护理教学的交流，丰富教学内容，拓宽学生的知识面，加强社会实践，提高外语水平，进一步增进两院师生间的友谊。

时间：2004 年 7 月 5 日——8 月 13 日，共 6 周。

内容：1、开设两门课程：

《健康咨询》由香港理工大学护理学院教师用英语授课，计 3 学分。

《症状护理学》由我院教师用普通话授课，计 3 学分。

2、社会实践：通过参观、访问，了解医疗卫生保健体系的现状

形式：1、双方各自选派 40 名护理本科学生，其中 20 名学生进行交换，双方组成混合班。

2、采用远程影视网络教育方式连接上海和香港两个课堂。

3、双方同学结成对，在学习、生活、社会实践中互帮互助，共同完成学习任务。

费用：食宿费、差旅费学生自理。交流学生可直接向香港理工大学学术交流与合作办公室申请留学资助约 3000-3500 港元。

学生报名条件：1、热爱护理专业，有志为人类健康事业服务；

2、学习勤奋、踏实，成绩良好，具有较好的英语基础；

3、具有良好的团结协作精神和沟通交往能力;

4、具有较强的自理能力和自律意识。

申报办法：1、报名范围：00、01、02 级护理本科生;

2、日程安排：

动员—12 月 10 日下午 1:30 枫林路 305 号第一会议室（本科）

报名—12 月 11 日-12 月 15 日书面申请交班主任

面试—12 月 18 日下午 1：30 枫林路 305 号第一会议室

3、联系人：丁言雯 徐玲

复旦大学护理学院 2003-12-3



translation

Poster

A joint summer nursing degree student exchange programme will be conducted in 2004 between the School of Nursing, Fudan University and the School of Nursing, the Hong Kong Polytechnic University.

Purposes: utilising the resources of the two schools, improving exchange of nursing education, enriching teaching content, broadening horizons, enhancing social practice, improving English skills and improving the friendship between the two schools.

Duration of time: 5th July — 13rd August 2004, 6 weeks

Content:

- 1、 To offer two subjects:
 《Health Counselling》 taught by the teachers of Hong Kong Polytechnic University in English and has 3 credits;
 《Interpretation of Clinical Data》 taught by the teachers of the Fudan University in Putonghua and has 3 credits.
- 2、 To attend social activities and visits: understanding health care system and practice by visiting different health care settings.

Pattern:

- 1、 40 nursing students will be selected to attend the programme, of which 20 will exchange to the other school and the other 20 will

stay in their home school and study together with students from the other school.

- 2、 videoconferencing will be used to link two classes, one in Shanghai and the other in Hong Kong.
- 3、 the students from both sites will study and work together. They will learn from and help each other in learning, living and working to complete the learning tasks together.

Cost : Accommodation and travel at student's own expense. The exchange students can apply for financial support from the Hong Kong Polytechnic University to a maximum of 3000-3500 HK. Dollars.

The criteria for application:

- 1、 commitment to nursing, willing to serve the professional health care service;
- 2、 evidence of studying hard, an acceptable GPA and proficiency in English;
- 3、 demonstration of collaborating and communicating with others;
- 4、 the ability to self care and conscientiously observes discipline.

The way of application :

- 1、 eligible students: 00、 01、 02 (year 2, 3, 4) nursing degree students.
- 2、 schedule for application:
 - 2.1 Introduction meeting—1:30 pm 10th December, 2003. No 1 meeting room 305 Fenglin Road.
 - 2.2 Application—11th December – 15th December submit written application form to supervisor.
 - 2.3 Interview—1:30 pm 18th December 2003 No 1 meeting room 305 Fenglin Road
- 3、 Contact Person: Yanwen Ding, Ling Xu (Administrator staff)

The School of Nursing Fudan University

03-12-2003



Appendix 2 Course Experience Questionnaire

Section A Personal Information

Please tick the appropriate box:

- | | | | | | | | | | | |
|----|---|-----|--------------------------|-----|--------------------------|-----|--------------------------|-----|--------------------------|--------------------------|
| 1. | Sex | M | <input type="checkbox"/> | F | <input type="checkbox"/> | | For coding only
[] | | | |
| 2. | Year of study | 1st | <input type="checkbox"/> | 2nd | <input type="checkbox"/> | 3rd | <input type="checkbox"/> | 4th | <input type="checkbox"/> | [] |
| 3. | Which university do you belong to | | | | | | | | | [] |
| | The HongKong Polytechnic University | | | | | | | | | <input type="checkbox"/> |
| | The FuDan University | | | | | | | | | <input type="checkbox"/> |
| 4. | Place of attendance in the exchange programme | | | | | | | | | [] |
| | Hong Kong | | | | | | | | | <input type="checkbox"/> |
| | Shanghai | | | | | | | | | <input type="checkbox"/> |

Section B Course Experience Questionnaire

Instructions: Please circle the number beside each statement that most accurately reflects your view by giving your immediate response. Answer all the questions and only one answer is required for each question.

- Legend:
- 5 Agree
 - 4 Agree somewhat
 - 3 Unsure
 - 2 Disagree somewhat
 - 1 Disagree

						For coding only	
1.	It's always easy here to know the standard of work expected of you.	5	4	3	2	1	[]
2.	There are few opportunities to choose the particular areas you want to study.	5	4	3	2	1	[]
3.	The lecturers / tutors of this course motivate students to do their best work.	5	4	3	2	1	[]
4.	The workload is too heavy.	5	4	3	2	1	[]
5.	Lecturers / Tutors here frequently give the impression that they haven't anything to learn from students.	5	4	3	2	1	[]
6.	You usually have a clear idea of where you're going and what's expected of you in this course.	5	4	3	2	1	[]
7.	Lecturers / Tutors here put a lot of time into commenting on students' work.	5	4	3	2	1	[]
8.	To do well on this course all you really need is a good memory.	5	4	3	2	1	[]
9.	The course seems to encourage us to develop our own academic interests as far as possible.	5	4	3	2	1	[]
10.	It seems to me that the syllabus tries to cover too many topics.	5	4	3	2	1	[]
11.	Students have a great deal of choice over how they are going to learn in this course.	5	4	3	2	1	[]
12.	Lecturers / Tutors here seem more interested in testing what we have memorised than what we have understood.	5	4	3	2	1	[]
13.	It's often hard to discover what's expected of you in this course.	5	4	3	2	1	[]
14.	We are generally given enough time to understand the things we have to learn.	5	4	3	2	1	[]
15.	Lecturers / Tutors make a real effort to understand difficulties students may be having with their work.	5	4	3	2	1	[]
16.	Students here are given a lot of choices in the work they have to do.	5	4	3	2	1	[]
17.	Lecturers / Tutors here normally give helpful feedback on how you are doing.	5	4	3	2	1	[]
18.	Our lecturers / Tutors are extremely good at explaining things to us.	5	4	3	2	1	[]
19.	The aims and objectives of this course are not made very clear.	5	4	3	2	1	[]
20.	Lecturers / Tutors here work hard to make their subjects interesting to students.	5	4	3	2	1	[]
21.	Too many lecturers/ tutors ask us questions just about facts.	5	4	3	2	1	[]

22.	There's a lot of pressure on you as a student here.	5	4	3	2	1	[]
23.	Feedback on student work is usually provided ONLY in the form of marks and grades.	5	4	3	2	1	[]
24.	We often discuss with our lecturers or tutors how we are going to learn in this course.	5	4	3	2	1	[]
25.	Lecturers / Tutors here show no real interest in what students have to say.	5	4	3	2	1	[]
26.	It would be possible to get through this course just by working hard around exam times.	5	4	3	2	1	[]
27.	This course really tries to get the best out of all its students.	5	4	3	2	1	[]
28.	There's very little choice in this course in the ways you are assessed.	5	4	3	2	1	[]
29.	Lecturers / Tutors here make it clear right from the start what they expect from students.	5	4	3	2	1	[]
30.	The sheer volume of work to be got through in this course means you can't comprehend it all thoroughly.	5	4	3	2	1	[]

From Ramsden, P. (1992). Learning to Teach in Higher Education. London and New York: Routledge.

End of questionnaire

Thank You!

Appendix 3 Letter Asking Permission for Use of the Provident Participant Questionnaire and E-mail Giving Permission for Use

3.1 The Letter sent by the researcher to the author of the questionnaire

Dear Dr. Odell,

I am a PhD student of Department of Nursing and Health Science, the Hong Kong Polytechnic University. Regarding my study, I am going to evaluate student exchange programme using videoconference media.

I have conducted a search of the literature and would like to use questionnaire which was designed by you and your colleagues in 2001 (published in European Journal of Dental Education, 5(3), 113-119). Here, I would like to get your permission to use the Questionnaire. On the other hand, I also interested in your another paper that put the results of audience evaluation. But I can not find it in my searching. I should be most grateful if it would be possible for you to provide that article or the journal name in which it is published and grant permission for me to use that questionnaire.

The success of my study depends very much for your generous support and therefore I would be most grateful if you could help me.

I look forward to hearing from you.

Yours sincerely,

Haiou Xia

3.2 The Letter sent by the author of the questionnaire to the researcher

From: Dr Edward Odell <edward.odell@ >
To: "xia haiou" <xhaiou@ >
Subject: Re: Seek Permission
Date: Wed, 10 Apr 2002 10:40:10
Attachment: QUESTIONNAIRE99.doc (51k)

Dear Xia,

I have found an electronic copy of the questionnaire. You are welcome to use it and amend it as you wish but if you publish your results please quote the paper noted above to acknowledge the source. good luck with your study, I hope it goes well. please reply so I know you have received the attachment OK

Dr EW Odell, KCL Division of Oral Medicine and Pathology, GKT Dental Institute, King's College London.

Postal address: Dept. Oral Medicine and Pathology, Floor 28 Tower, Guy's Hospital, London SE1 9RT, United Kingdom. Phone 44 (0)20 , FAX 4(0)20 7955 4455.

Appendix 4 Videoconference Participant Questionnaire

Videoconference Participant Questionnaire

Modified from the Provident Participant Questionnaire. Source: Eaton, K. A., Francis, C. A., Odell, E. W., Reynolds, P. A., and Mason, R. D. (2001). Participating dentists' assessment of the pilot regional online videoconferencing in dentistry (PROVIDENT) project. *British Dental Journal*, 191: 6, 330-335.

Code _____

PRESENTATION

1. Did you consider the teaching material of the subject appropriate for delivery by videoconference?
- | Yes ++ | Yes + | Neutral | No - | No -- |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
2. Did you think the text that showed on the screen was clear enough for reading?
- | Yes ++ | Yes + | Neutral | No - | No -- |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
3. Did you think the colour contrast of the slides on the screen appropriate?
- | Yes ++ | Yes + | Neutral | No - | No -- |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. Did you think the slides, graphs, and diagrams on the screen were busy?

No --	No -	Neutral	Yes +	Yes ++	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. Did you think the lecturer was good as a presenter in this medium?

Yes ++	Yes +	Neutral	No -	No --	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TECHNICAL ISSUES

6. Were you able to see the visual aids adequately?

Yes ++	Yes +	Neutral	No -	No --	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. Were you able to hear all of the presentation?

Yes ++	Yes +	Neutral	No -	No --	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. Were you able to see the distant presenter in the videoconference?

Yes ++	Yes +	Neutral	No -	No --	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

9. Did you feel any inter-communication delay between the two sides?

No --	No -	Neutral	Yes +	Yes ++	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10. Did you feel that the presenter made appropriate use of the technology?
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Yes ++ | Yes + | Neutral | No - | No -- | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

EDUCATIONAL VALUE

11. Were the objectives of the subjects met?
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Yes ++ | Yes + | Neutral | No - | No -- | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

12. Did you feel that the interaction between the two sides' audience was accomplished?
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Yes ++ | Yes + | Neutral | No - | No -- | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

13. Did the videoconferencing inhibit you from asking questions?
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Yes ++ | Yes + | Neutral | No - | No -- | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

14. Would this videoconference alter your learning strategy?
- | | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| No -- | No - | Neutral | Yes + | Yes ++ | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

15. Did you think the amount of information you received was positively influenced by the use of videoconference?

Yes ++	Yes +	Neutral	No -	No - -
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Did you think that your capacity to memorise the information was positively influenced by the use of videoconference?

Yes ++	Yes +	Neutral	No -	No - -
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. In your view, what was the most useful aspect of the videoconference?

18. What, if any, do you think is the difference between face to face lecture and lecture which is conducted by videoconference?

19. What would you suggest to improve effectiveness of videoconference?

∴ End of questionnaire ∴

Thank You!

Appendix 5 Interview Schedule for Student

The interview begins with a brief exchange in which the researcher thanks each interviewee for taking time to come to the interview. She stresses that there are no right or wrong answers to the questions she is going to ask and she simply is interested in hearing their views, thoughts and perceptions about the programme.

1. How did you feel about learning together with students from another school of nursing?
与香港（上海）同学一起学习的过程中，你的感受是什么？
2. How did you feel about the learning experiences regarding videoconference?
对于应用视频会议于我们的教学中，你的感受是什么？
3. How did you feel about the merits and limitations of using videoconference in the teaching?
使用视频会议的优点和缺点是什么？
4. How did you feel about the use of English and Putonghua in the teaching?
对使用两种语言上课你的感受是什么？
5. Describe briefly the different clinical settings to which you have paid visits.
请谈谈你所参观过的医院及其他机构的情况
6. What sorts of interesting experiences have you gained in interacting with people from another place?
与其他地方的人们互动中，你有什么有趣的经验？
7. Are there any cultural events or cultural phenomena that made a lasting impression on you?
在交换项目中有什么事件或现象给你留下了很深刻的印象？
8. How did you feel when acting as a student ambassador in assisting the students from the other school in relation to the social activities (for local students only)?
作为一个学生大使，在帮助交换生参与本地社会活动中你有什么体会？
9. What is your overall impression of the programme?
项目给你的整体印象是什么？
10. In what areas do you think there is room for improvement for the programme?
项目还有什么地方可以改进？

An opportunity was given to the students for asking question, if any.

Appendix 6 Interview Schedule for Teacher

The interview begins with a brief exchange in which the researcher thanks each teacher for taking time to come to the interview. She stresses that there are no right or wrong answers to the questions she is going to ask and she simply is interested in hearing their views, thoughts and perceptions about the videoconferencing and the programme.

Videoconference

1. How much time did it take you to prepare these lectures? How does that compare with your normal preparation times for face-to-face classroom lectures?
与传统的课堂教学比较，你觉得备课中花费的时间是多了还是少了？
2. Did you have any problems with the videoconferencing, e.g. sound and/or visual?
在应用视听会议过程中有没有遇到问题，如声音和图像方面？
3. How did you feel about your ability to communicate with the students?
用这个教学媒体，你觉得与学生地沟通方面怎么样？
4. How did you feel about the students' response?
学生的反应怎么样？
5. How did you feel about the technical assistance you had before and during the lecture?
课前和课中，技术员的支持怎么样？
6. Overall, how would you compare your experience of teaching in the programme with conventional methods? 总体来说，它与传统的面对面上课有何区别？
7. Overall, what do you consider are the merits and limitations of using videoconferencing in teaching? 运用视频会议在教学中，它的优点和缺点是什么？

General

1. What did you find were the differences, if any, between the teacher-student interaction in the local context and in the context at the remote site?
你觉得主场与客场的师生互动怎么样？
2. How did you feel about teaching the exchange students?
在对于教交换生的感受是什么？
3. Are there any other comments you would like to make about the student exchange programme?
对交换项目你有什么想法和建议？

An opportunity was given to the teachers for asking question, if any.

Appendix 7 Learning Guideline

The Schools of Nursing in Hong Kong and in Shanghai

Student Exchange Programme

5 July – 14 August 2004

Learning Guideline

Theoretical teaching/learning

1. Actively participate in the classroom teaching sessions and tutorial sessions.
2. Communicate with the teacher(s) either directly or via videoconferencing when questions and learning issues arise.
3. Use English as the only language medium when the lecture is conducted in English and vice versa for the lecture that is conducted in Putonghua.
4. Local students should actively communicate with the exchange students and the exchange students should actively communicate with the local students regarding their learning experience.
5. When group learning is assigned, the groups should comprise students from both schools to ensure a mix of Hong Kong and Shanghai students.
6. Consider and assess the ways in which the lectures are delivered via videoconferencing.
7. Evaluate the ways in which the teachers communicated with the students from the local context and with the students from the other school.
8. Consider and assess the technical issues related to the videoconferencing, such as the image quality and sound quality.
9. Consider and assess the interaction between teachers and students when using videoconferencing.
10. Fulfil the requirements of the two subjects.

Clinical visits

1. Obtain relevant information regarding the nature of the settings prior to the visits. Information can be accessed from the local teachers and the local students in your class.
2. Observe and record the nature or characteristics of the clinical settings.
3. Compare similar settings between Hong Kong and Shanghai with respect to organisation, structure and other aspects of care delivery systems.
4. Reflect your own experiences in paying visits to the different clinical settings.
5. If possible, communicate with the appropriate personnel in the clinical settings to gain a better understanding of these settings.

Social/cultural experiences

1. Appreciate that social/cultural experiences are important to exchange students.
2. Local students are encouraged to assist students from the other school in gaining local lived experience.
3. Be responsible for working in groups which have a good mix of local students and students from the other school. Local students should plan ahead for some social activities and discuss these with the students from the other school. When consensus is reached between the students, local students are encouraged to take the leading role regarding the social and cultural activities.
4. It might be helpful to prepare a diary with the times and dates of your activities.
5. Discuss and share your experiences with each other.
6. Individual students are encouraged to evaluate his/her experience and to write these up as a journal.
7. Local students should record and reflect on their roles as student ambassadors.

Requirements of students who consented to take part in the programme

Students are required to:

1. complete questionnaires before and after attendance in the programme;
2. selected students must attend interviews in which their experiences of the programme will be shared;
3. all students must attend and fulfil the academic requirements of the two credit-bearing subjects offered in the programme;
4. all students must complete a reflective journal, to be submitted to the researcher on completion of the programme.

Contact Person if any queries

Xia Hai Ou: hsxia@ 27664520(office)

Dr. May Fok: 27666542(office)

Appendix 8 Clinical Visits Schedule

8.1 Visit Schedule of the School of Nursing, the Polytechnic University

**School of Nursing
The Hong Kong Polytechnic University**

**Student Exchange Programme
Visit Schedule**

Institution	Date & Time	Address	Contact person
PolyU	9 July 2004 (Friday) 2:30-4:30pm	Nursing Laboratories C071 PolyU	Ms. So Kit Ying
Princess Margaret Hospital	15 July 2004 (Thursday) 2:00-5:00pm	CHRC 2-10 Princess Margaret Hospital Road Lai Chi Kok Kowloon	To be announced
Alice Ho Miu Ling Nethersole Elderly Care Home	28 July 2004 (Wednesday) 10:00am-12:00noon (group1-group 5) 3:00-5:00pm (group6-group 10)	4/F., Ancillary Facilities Block Sau Mau Ping Estate Kwun Tong Kowloon	Ms. Au Wai Fong Superintendent
Hospital Authority Hong Kong	4 August 2004 (Wednesday) 10:00-11:30am	Info World Hospital Authority Head Office Hospital Authority Building 147B Argyle Street Kowloon	To be announced
Caritas Medical Centre	4 August 2004 2:00- 5:00pm (group 6-group 10) 6 August 2004 2:00- 5:00pm (group1-group 5)	Caritas Medical Centre 111 Wing Hong Street Shamshuipo Kowloon	Ms. Phoda Chan
Alice Ho Miu Ling Nethersole Hospital	29 July 2004 (Thursday) 2:00-5:00pm	Alice Ho Miu Ling Nethersole Hospital 11 Chuen On Road Tai Po, NT	Mr. Andrew Luk

8.2 Visit Schedule of the School of Nursing, Fudan University

复旦大学护理学院 2004 年暑期学生交换项目临床参观安排表

日期和时间	参观机构	集合时间和地点	召集人
2004 年 7 月 8 日 下午	复旦大学邯郸校区	12: 45 枫林校区校车站	林岑
2004 年 7 月 16 日 下午 1 点半	中山医院	下午 1: 15 中山医院枫林路大门	陈瑜
2004 年 7 月 22 日 上午 9 点	上海第一社会福利院	8: 30 留学生楼前	陈瑜
2004 年 7 月 23 日 下午 1 点半	浦东儿童医学中心	12: 30 留学生楼前	林岑
2004 年 7 月 29 日 下午 2 点	华山医院	下午 1: 45 华山医院住院部门口	陈瑜
2004 年 8 月 5 日 下午 1 点半	浦东潍坊社区 卫生服务中心	12: 15 留学生楼前	陈瑜
2004 年 8 月 6 日 下午 2 点	上海临汾老年护理院	12: 30 留学生楼前	林岑

Appendix 9 Timetable for Activities

**School of Nursing, The Hong Kong Polytechnic University, Hong Kong
School of Nursing, Fudan University, Shanghai**

COURSE: Student Summer Exchange Programme

**Period: 5 July – 13 Aug. 2004
Week: 1-6**

	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20
	8:30 - 9:30	9:30 - 10:30	10:30 - 11:30	11:30 - 12:30	12:30 - 1:30	1:30 - 2:30	2:30 - 3:30	3:30 - 4:30	4:30 - 5:30	5:30 - 6:30
MONDAY		Health Counselling →					Health Counselling →			
TUESDAY		Interpretation of Clinical Data →					Interpretation of Clinical Data →			
WEDNESDAY					Self Study					→
THURSDAY		Clinical Visit →					Clinical Visit →			
FRIDAY		Social Activity →					Social Activity →			

Appendix 10 Information Sheet



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



Department of Nursing
and Health Sciences

護理及醫療科學系

INFORMATION SHEET

Establishing a Model of Student Group Exchange in Nursing Education with the Use of Videoconference

You are invited to participate in a study conducted by Ms. Xia Hai Ou, who is a post-graduate student of the School of Nursing in The Hong Kong Polytechnic University.

The aim of this study is to evaluate the first Nursing Student Exchange Programme between two universities, one in Hong Kong and one in Shanghai. The study will involve completing a questionnaire, which will take you about twenty minutes. You may also be invited to participate in the interview to reflect your opinions about the programme. That will take about you about forty-five minutes.

The procedure should not result in any undue discomfort. All information related to you will remain confidential, and will be identifiable by codes only known to the researcher. You have every right to withdraw from the study before or during the measurement without penalty of any kind.

If you have any complaints about the conduct of this research study, please do not hesitate to contact Mr. Eric Chan, Secretary of the Human Subjects Ethics Sub-Committee of The Hong Kong Polytechnic University in person or in writing (c/o Human Resources Office in Room M1303 of the University).

If you would like more information about this study, please contact Ms. Xia Hai Ou at tel. no. 2766 4520 or Dr. May Fok at tel. no. 2766 6542.

Thank you for your interest in participating in this study.

Xia Hai Ou / Dr. May Fok

Principal Investigator/Chief Supervisor

Appendix 11 Consent to Participate in Research



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



Department of Nursing
and Health Sciences

護理及醫療科學系

CONSENT TO PARTICIPATE IN RESEARCH

Establishing a Model of Student Group Exchange in Nursing Education with the Use of
Videoconference

I _____ hereby consent to participate in the captioned research conducted
by Ms. Xia Hai Ou.

I understand that information obtained from this research may be used in future research and
published. However, my right to privacy will be retained, i.e. my personal details will not be
revealed.

The procedure as set out in the attached information sheet has been fully explained. I understand
the benefit and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any
time without penalty of any kind.

Name of participant _____

Signature of participant _____

Ms. Xia Hai Ou

Name of researcher _____

Signature of researcher _____

Date _____