

**School of Business**  
**Curtin Sarawak Campus**

**“More Spices in My Thinking Skills”  
Exploring Confucius Heritage Culture (CHC) Learners’  
Learning Behaviour in Marketing Units (A Case Study)**

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**This thesis is presented as part of the requirement for  
The award of Degree of Doctor of Philosophy  
at Curtin University**

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## **Declaration**

**This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.**

**To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.**

**Signature:** .....

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## **Abstract**

Teaching students to become effective thinkers is increasingly recognised as an immediate goal of education. The impact of globalisation and challenges in business education demand that students be creative, analyse possible options, and evaluate alternatives, discover market opportunities and present recommendations based on the knowledge learnt. If students are to function successfully in a highly technical society, they must be equipped with lifelong thinking skills necessary to acquire and process information in an ever-changing world. To meet the requirements and the demands from the industry in the Australian context, greater emphasis has been placed on higher order thinking skills in the business curriculum of an Australian University, an institution which is the focus of this study. The study was conducted at the offshore Curtin Sarawak campus.

The overall aim of the study was to investigate Confucius Heritage Culture (CHC) learners' thinking and learning behaviour in a multicultural university environment in relation to three marketing units of a business curriculum. Four elements underpinned the conceptual framework of the study. These were the students' conceptions of learning, their approaches to learning, teaching, learning and assessment approaches and their learning outcomes in relation to higher order thinking skills.

The methodology of the study was based on an interpretive model of research and incorporated a mixed method approach using survey and ethnographic techniques. The concept of the mixed method approach, and the process of working with both qualitative and the quantitative data, represents two distinctly different paradigms to understanding the contextual nature embedded in the study. The research design of the study developed over Five Phases and involved collecting data about CHC learners' higher order thinking skills. As part of the survey approach a sample of Curtin Sarawak campus population was used to collect data through the use of a designed study specific questionnaire. Ethnographic techniques also were used which placed a emphasis on classroom observation recorded on video cams, structured focus group interviews which were taped using a tape recorder and students' learning journals through the use of blogs.

This study reported that CHC learners perceived learning as acquiring knowledge. In every lesson students made sure that the learning and assessment activities were about acquiring what they learnt in class. The students were concerned with knowing concepts and theories by heart. They remembered by heart what have been taught in the class so that the knowledge could be retained and then possibly related to the real world. The CHC learners perceived learning as the ability to use information that they acquired to build up new knowledge and blend the new knowledge with what they have already known. It was discovered in this study that the CHC learners, though using the memorising techniques, took the effort to understand in-depth concepts and theories which would help them to understand better theses and be able to apply them to real business situations. The study demonstrated that CHC learners paid attention to understanding the knowledge, however, it was often due to their lack of capability in the English language that they opted to memorise the information. The CHC learners needed to understand the information in order for them to apply the concept and theories that they learnt in class to relate it to the outside world. This was important as most of the assessment tasks in marketing units are related to real business situations. It also was reported that CHC learners enrolled in the three units Marketing 100, Strategic Marketing 310 and Business Policy 320 claimed that the units helped them to improve their level of thinking skills. The topics related to the units, which required CHC learners to relate one business area with the other, had fostered their development of the higher order thinking skills. The assessment tasks which had assessed their level of thinking skills had managed to develop CHC learners' level of thinking. Expectations set in learning outcomes of the units guided students in the way they might need to channel their thinking abilities. The learning process which did not only involve knowing facts but also analysing these had taught CHC learners to be independent. The analysis reported that CHC learners agreed that the assessment activities had taught them not just to understand knowledge but also to analyse and blend facts to build new knowledge. The teaching pedagogy that supported learning was greatly influential in enabling CHC learners to achieve unit learning outcomes. It was indicated in the study that the classroom activities helped in the process of developing CHC learners' higher order thinking skills. The assessment tasks

designed for units of this study had impacted on CHC learners in the ways they perceived learning and the ways they organised their learning strategies. The study provided the foundation for the future overall curriculum design of marketing units in terms of the assessment and instructional approaches that best fit CHC learners' learning environment. A new model of teaching and learning, termed a 'learning-teaching-thinking' model (L2T) to appeal to the intrigue of curriculum designers, was developed. The model has the potential to assist in the process of all curriculum design for marketing units and for CHC learners in particular.

It is envisioned that the information gathered in the study would provide assistance to the stakeholders of the Australian University and those in the industry who will employ business undergraduates and commend them as 'first class human capital'. Such commendation will strengthen the reputation of the University and its relationships with international students and their parents. As an ideal, such graduates in the Malaysian context will become part of the national efforts to build the human capital capacities of the country.

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# CHAPTER ONE

## CONTEXT, PERSEPECTIVE AND OVERVIEW

### 1.0 Introduction

It is a common perception that Asian students rely upon rote learning and prefer passive forms of instruction although this idea appears to be incompatible with ample evidence of their high levels of achievement. The achievements of Asian students, in particular Chinese learners, are well documented. Marton (1993) reported that Asian students are rote learners on the one hand and 'Brainy Asian' on the other. The students actually memorise with understanding rather than mechanically memorise curriculum content. In a study conducted by Stevenson and Lee (1996), they concluded that students from China, Hong Kong, Singapore and Taiwan performed consistently well in quantitative type subjects as compared to language subjects. A summary of research (Khir 2006, cited in Kaur & Singh, 2008) indicated that most Malaysian tertiary undergraduates lacked interpersonal, communication, analytical and problem solving skills besides being timid and lacking in self-confidence.

Kember (2000) highlighted in a study of Asian students in Hong Kong that they rely on rote learning, passive instructional approaches and resist teaching innovations. In his report, it is noted that Asian students in Hong Kong are extrinsically motivated, which is often regarded negatively, have high levels of motivation to achieve, are high academic achievers, excel at project work and their parents are willing to invest in their education. He found that students in Hong Kong anticipated that lecturers would teach them everything that they are expected to know. They have little desire to discover for themselves or avail themselves of other facilities which could support their learning. Even though the students were very much dependent on the teacher, they were recognised as high academic achievers.

These findings may be no different for Confucius Heritage Culture (CHC) learners in Malaysia who are being educated in a system that emphasises an examination system and a learning culture of rote learning through memorisation. It has been highlighted

in the Ninth Malaysian Plan (Jailani et al., 2006) that university undergraduates now are lacking in both technical know-how and generic skills. These concerns resonate with those of government and workforce personnel. Further, a survey by the Central Bank of Malaysia involving 312 companies showed that 77.6% of the respondents were of the view that tertiary undergraduates lacked the required skills to function effectively in the workplace (Geoffrey, 2005). Geoffrey (2005) wrote that while jobs were plentiful, many Malaysian undergraduates could not fit into available positions because they had not acquired the necessary language and communication skills that their prospective employers required of them. To keep up with the pace of world developments, students must be taught explicitly how to think instead of just how to answer examination questions. The issue of thinking skills has been one of the debates among educators in the Malaysia.

Employers today are not just seeking prospective employees with domain skills and knowledge relevant to their field. They are searching for employees who possess generic skills such as problem solving and analytical thinking. These skills are lacking as learning outcomes in the current education system (Aminuddin, 2011). According to Wagner, a Co-director of the Change Leadership Group at the Harvard Graduate School of Education and who wrote a book titled *The Global Achievement Gap*, noted that there was no curriculum with a focus on teaching methods which develop students' capacity to reason, analyse and write well (The Star, 2011, cited in Aminudin, 2011). One of the issues that has been a discussion in Malaysian Education forums is the overwhelming emphasis on examination grades, and in turn, students and teachers feeling compelled to cover a syllabus in a specified time and memorise key points rather than take the time to understand underlying syllabus concepts. The education system which has trained CHC learners to remember facts and study by heart has wedged their perceptions of learning. The examination culture which demands that CHC learners must know what they have been taught also has influenced the way they think about the learning process. Acquiring knowledge through memorisation has been part of the CHC learners' learning process for most of their school life. Thus, the educational culture of memorise and learnt by heart has influenced classroom teaching approaches at school education levels.

The goals of tertiary education and the curriculum in the 1990s were far less attuned to the interests of employers in the workplace (Mason 1992; Sear 1994; Quek 1996, & Billet 2001, cited in Quek, 2005). It was reported by Mason (1992), Quek (1994), Chew et al. (1995) and Lee et al. (2001, cited in Quek, 2005) that, to some degree, the scope of education in universities in the United States of America, the European community and the Asia–Pacific region, including Malaysia, was highly academic. A strong emphasis has been placed on the academic achievement of undergraduates. However, at the Malaysian Education Summits of 2004 and 2005, the debate focused on whether Malaysian undergraduates were well equipped with specific related knowledge and skills in readiness for the demands of the world of work (Chiam, 2005). The demand for a competent workforce now exists in Malaysia but this goal largely has not been realised due to the lack of suitably skilled undergraduates. Participants in the summit claimed that the shortfall appeared to be related to the overall education system and the curriculum design practices followed. Several issues were raised at the conclusion of the Education Summits for the future of Malaysia. The current education system and the current curriculum that prepared students with the necessary knowledge and skills for the future needed to be re-examined.

To meet the requirements and demands from industry in the Australian context, greater emphasis has been placed on higher order thinking skills in the business curriculum of an Australian University, an institution which is the focus of this study. It has been envisioned that the acquisition of these skills will enable students to become critical, creative and constructive thinkers. With the development of their higher order thinking skills, it is expected that students will be able to critically analyse knowledge, information or situations. Students will be able to creatively consider possible next-step options and then finally construct a new product, decision or value. For example, an emphasis on higher order thinking skills in the business curriculum aligns with the development of the generic undergraduate attributes identified by the Australian University that will characterise the qualities of an employable undergraduate. The undergraduate attributes defined by the institution emphasise that an undergraduate should be able to: (1) Apply discipline knowledge, principles and concepts; (2) Think critically, creatively and reflectively; (3) Access, evaluate and synthesize information; (4) Communicate effectively; (5) Use

technologies appropriately; (6) Use lifelong learning skills; (7) Recognise and apply international perspectives; (8) Demonstrate cultural awareness; and (9) Demonstrate professional skills, (Graduate Attributes Policy, Curtin University, 2006).

At one of the Australian University offshore campuses, where the same home campus business curriculum is delivered and where the study was carried out, most of students are CHC learners. The CHC learners attending the offshore campus are exposed to learning strategies and assessment practices that require them to acquire and use higher order thinking skills. The majority of the students at the offshore campus are Chinese, that is, Malaysian Chinese from Peninsular Malaysia, Sabah or Sarawak. As pointed out by Jones (1999), people in Asian societies believed to be influenced by Confucian teachings, are referred to as Confucian Heritage Culture learners. Chinese are part of the Asian population and the students from the offshore campus, referred to as 'Chinese', may come from a variety of nations and backgrounds such as mainland China, Taiwan, Malaysia, Indonesia, Singapore or Hong Kong and speak a range of languages such as Mandarin, Cantonese or Hakka. The Chinese learners studying at the offshore campus are referred to as Confucius Heritage Culture (CHC) learners in this study. Approximately, 10% of the students are from Mainland China, but due to several of these students' cultural differences, this study only focused on the Malaysian Chinese learners.

As a note at this point, I have used the first person as a literary device in parts of this thesis to show my involvement in the fieldwork involved in the study and to emphasise several aspects of the research process. The use of the first person, as well illustrated by Van Maanen (1988), attributes voice either to the participants, others or self. Denzin and Lincoln (2000) referred to the researcher-as-bricoleur, an idea which has enabled to gather information, observe, communicate with people, canvas opinions, interpret meanings, analyse documents and self-reflect.

As a classroom teacher-researcher for this study, I conducted an earlier study in 2002 on the characteristics of the CHC learners at the offshore campus (Abdullah et al., 2002). Through the investigation, it was found that most of the CHC learners were highly motivated to learn in a structured manner with fact based content and textbooks. Their learning strategies involved acquisition of facts, application of logical thinking and memorisation of theories and formula. Based on their learning

strategies, it appeared quite difficult for the CHC learners to apply problem solving skills in any classroom activities associated with the business curriculum. Students were required to think beyond what they knew but they were reluctant to use their knowledge and skills in different ways. To further understand how CHC learners applied problem solving skills in the classroom, I decided to conduct a classroom questionnaire with the students to gain a broader understanding of the ways they learnt best. In Semester 2, 2005 I explored CHC learners' learning behaviour in a specific marketing unit namely Business Policy 320. There were 26 students studying this unit at the time.

To understand CHC learner behaviour in the classroom setting, a questionnaire was developed based on the learning model developed by Marton and Entwistle (1984) and Saljo and Biggs (1985). The questionnaire was categorised into three main sections which were:

- Conceptions of Learning;
- Approaches to Learning; and
- Levels of Learning Outcomes.

The model used as the basis of the questionnaire design emphasised that to understand the students' process of learning, learning had to be viewed from the perspective of the learner and not the teacher. The following Section provides a discussion of the results of the classroom questionnaire that I conducted in 2005.

### **1.0.1 Conceptions of Learning**

In terms of the results for the section on conceptions of learning, it was noted that the respondents agreed they had learnt something if they were able to relate what they had learnt to the outside world. The students believed that learning would be more meaningful to them if they understood the content and were able to relate their learning to outside world application. Apart from relating what they had learnt to the outside world, the students concluded that they needed to repeat what they had learnt so that they could remember and recall facts. However, the respondents believed that learning occurred when they were able to use the information that they learnt to

relate to other knowledge or a related area of business. The findings also showed that most of the respondents who were CHC learners liked to learn things within their own environment and not necessarily in all classroom activities.

### **1.0.2 Approaches to Learning**

The questionnaire results revealed that CHC learners used different ways of learning depending on what they were learning. The CHC learners agreed that they needed to know and understand the concepts but they still used recall or memorisation as a learning strategy for all the units in which they were enrolled. It appeared that this type of learning process could inhibit them from using their skills in terms of analysing, applying and transferring concepts learnt.

Though most of the CHC learners supported the questionnaire statement that they used different strategies in their learning, they would not do anything extra to improve their learning. However, it appeared that a critical thinking approach to learning could be fostered with the students. The CHC learners noted that learning new topics was interesting and that they would spend extra time to look for more information. Based on the questionnaire results, it showed that the topics taught in Business Policy 320 were of interest to the students and somehow had enticed them to look for extra information. Another factor to note in the results was that the structure and the design of the unit outline, the document provided to all students about the expected learning outcomes, content and assessment for the unit, was important in helping them to develop their thinking skills. It seemed that a learning to think approach could be developed with the CHC learners as they progressed with the unit during a Semester study period. It appeared that a critical thinking approach to learning was accepted by the CHC learners who completed the questionnaire.

### **1.0.3 CHC Learners' Levels of Learning Outcomes**

Apart from students' perception of their learning and how they learnt, the findings from the questionnaire showed that the systematic structure of the unit outline helped the CHC learners to understand the theories and concepts taught in the various topics and projects. The learning outcomes for Business Policy 320 required students to

demonstrate **sound understandings** of the role that business policy plays in corporations, a **proficiency in applying** the theories and concepts employed to real life situations, **critical analysis skills** to formulate and implement strategies for the resolution of problems and to maximise opportunities at the corporate level, sound **verbal, written** and **analytical skills** and effective **management of projects** which involved the organisation and co-ordination of group work. For example, the assessment in terms of the Group Audit Project in Business Policy 320 demanded integration of information from other business areas. The nature of Business Policy 320, the highest level unit in the marketing degree program, demanded that students integrated various business areas to understand that this integration would assist them to formulate a business strategy for a company. The Audit Project helped the CHC learners to improve their analytical thinking skills because the students were required not only to understand the unit matter but also use their ability in analysing and applying the concepts learnt.

The emerging challenges from the early investigation undoubtedly motivated me to conduct further study. It seemed that CHC learners taking different marketing units and how learning and teaching approaches influenced CHC learners' development of higher order thinking skills were worthy of continued investigation. Therefore, the interest and motivation for me to pursue this thesis was to investigate CHC learners' thinking and learning behaviour and to ultimately develop a learning model that would assist CHC learners in developing their higher order thinking skills across a business curriculum.

## **1.1 Background**

Relevant to the case in this study has been the changes to the tertiary business curriculum at the Australian University associated with the offshore campus. A greater emphasis has been placed on undergraduate generic competencies such as cognitive skills which include problem solving and critical thinking besides interpersonal skills, communication skills and teamwork skills. Today's education is not about being able to quote the classroom texts but it is about being able to continually learn in the workplace and the outside world. These generic competencies are important for enabling undergraduates, in this case, Malaysian

undergraduates, to transfer learning from the classroom to the workplace and enable them to contribute to their success in their work performance. Quek (2005) indicated that the tertiary curriculum must support graduate transition to successful work placement and that Malaysian undergraduates need to be trained at tertiary level to meet employer requirements to enhance their employability. With the demand for a better qualified workforce, undergraduates need to have the knowledge and generic competencies fit for their chosen profession. Moreover, higher education experts who design curriculum need to place more emphasis on developing skills compatible to industry demand. As already noted, the business curriculum at the Australian University has a greater emphasis placed on higher order thinking skills. Whether CHC learners have gained, and to what extent, from this new curriculum design is uncertain.

Teaching students to become effective thinkers is increasingly recognised as an immediate goal of education. If students are to function successfully in a highly technical society, they must be equipped with lifelong thinking skills necessary to acquire and process information in an ever-changing world. Literature on thinking skills is prolific in the education field. Fraenkel (1980) considered thinking skills to be the development of ideas by organising information in a particular way and integrating it with life experiences. Beyer (1985) described thinking skills as the process of verifying the validity, accuracy and value of a belief or fact and Chipman and Segal (1985) acknowledged that thinking is considered with respect to organise, non-impulsive behaviour, knowledge acquisition and problem solving. Mertes (1991) regarded thinking skills as a cognisant and purposeful method of interpreting information and events. This requires the thinker to employ reflective attitudes that direct beliefs and behaviour. Ennis (1993) described thinking skills as logical introspective thinking that focuses on generating beliefs. These descriptions concur with characteristics that should typify CHC learners as remarked upon by Kember (2000).

What then are higher order thinking skills? The concept of higher order thinking skills has been recognised since the beginning of early Western early philosophical thought. Socrates (circa 470 – 399 BC) explained the value of asking profound questions before an idea could be considered acceptable (cited in Paul & Elder,

1995). This method of inquiry is referred to as the Socratic Method. Plato (circa 428 – 347 BC) believed that thinking was either a dialogue with one's soul or a spiritual activity. Aristotle (circa 384 – 322 BC) argued that there were two basic forms of thinking namely contemplation and deliberation (de Bono, 1972). It is based on Aristotle's belief that the structure of the world is such that it can be understood by logical examination. In the education arena, Passey (2000) suggested that thinking skills could be categorised using a pre-determined structure such as provided by Bloom and Krathwohl (1956). Based on Bloom's taxonomy, a range of thinking skills to be acquired can be explicated so that the students can become aware of the types of thinking they need to practise in order to be equipped with a range of thinking skills. According to Bloom's taxonomy, thinking skills range from lower levels of thinking such as describing, listing and categorising to the higher level of thinking required for the analysis, synthesis and evaluation of information. Higher order thinking skills define thinking that takes place at the higher levels of the hierarchy of cognitive processing. Creative, critical and constructive thinking are closely related to higher order thinking. Thinking processes which become increasingly sophisticated enable a person greater capacity to grapple with the complexity of conceptual ideas and constructing new meanings. Kirkwood (2001) stated in her report that higher order thinking skills tend to be complex, often yield multiple solutions and involve judgment, interpretation and the application of multiple criteria on which to base these judgements. Kirkwood (2001) further stated that higher order thinking skills are about working with uncertainty, require self-regulation of the actual thinking process, involve imposing meaning and require effort from the learner.

Therefore, this study was conceptualised around four themes in terms of CHC learners and their thinking. These were:

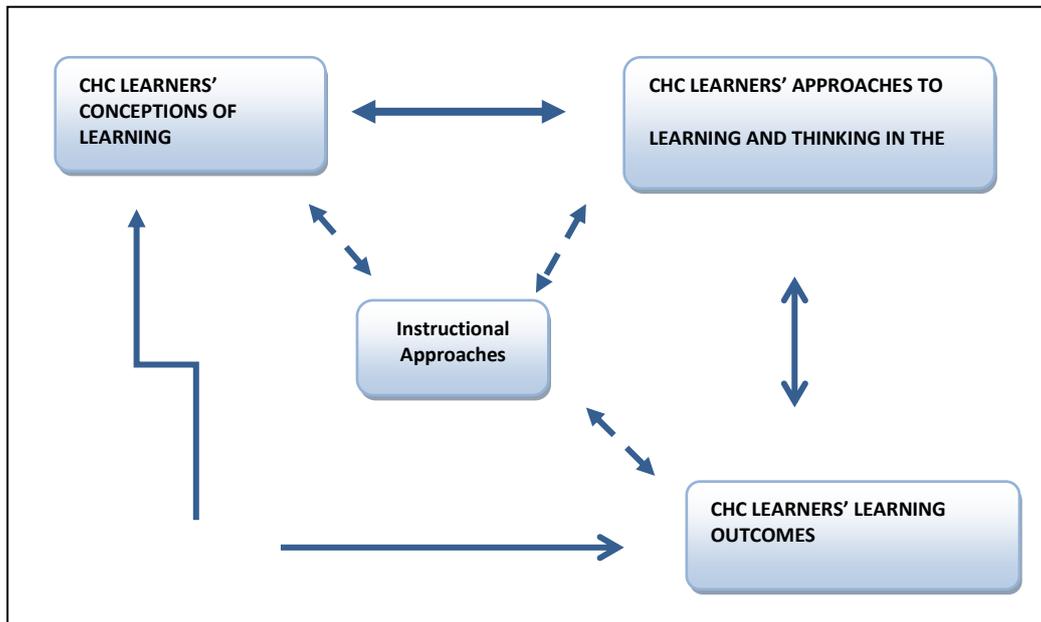
1. the students' conceptions of learning;
2. their approaches to learning;
3. teaching, learning and assessment approaches; and
4. their learning outcomes in relation to higher order thinking skills.

Further, it was considered important that the instructional approaches which had the greatest influence on CHC learners were examined within the classroom learning

environment. As part of the study, it also was considered worthy to investigate the relationship between CHC learners' conception of their learning, their approaches to learning and thinking in the classroom and the instructional approaches which worked best for them. The consequences of these relationships on their learning outcomes, particularly the development of their higher order thinking skills, were relevant to clearly describe. Thus, the purpose of this study was to investigate CHC learners' thinking and learning behaviour, how students responded to the teaching and learning environment, including the instructional approaches used, and the learning outcomes they achieved. The conceptual framework of the study (see Figure 1.1) was framed to allow the examination of:

1. The types of critical thinking skills which CHC learners used and the factors which promoted or inhibited their critical thinking capacities in marketing units;
2. The extent to which current teaching and learning approaches accommodated the development of higher order thinking skills of CHC learners; and
3. A learning and teaching model for CHC learners in marketing units with a focus on higher order thinking skills.

The conceptual framework of the study is elaborated upon in Chapters Two and Three.



*Figure 1.1.* The Conceptual Framework of the Study adapted from Marton and Entwistle (1984) and Marton and Saljo (1984)

## 1.2 Purpose of the Study

The overall aim in the study was to investigate CHC learners' thinking and learning behaviour and to identify how the behaviour influenced learning in a multicultural university campus. The overall outcome of the study was the development and interrogation of an appropriate learning and teaching model specifically for CHC learners which would help to develop their higher order thinking skills. In addition, the intent of the study was to identify suitable teaching and learning approaches which could be implemented in classrooms and the kinds of support required or necessary to assist CHC learners both in onshore and offshore university campus contexts to build their capabilities to use higher order thinking skills.

The central research question in the study was:

Under what circumstances can CHC learners in a multicultural university environment become critical thinkers in the area of marketing units in a business curriculum?

The following research questions provided the specific direction for the study.

1. What are the factors which influence the ways in which CHC learners in marketing units acquire higher order thinking skills?
2. What enhances the opportunities in the classroom in terms of learning activities, teaching strategies and assessment for CHC learners to develop higher order thinking skills in marketing units?
3. To what extent do the learning and teaching approaches used in classrooms influenced the learning outcomes of CHC learners in marketing units?
4. How do instructional approaches for marketing units influence the CHC conceptions of learning, their approaches to learning and thinking in classrooms and their learning outcomes?

### **1.3 Significance of the Study**

There is a scarcity in the literature on higher order thinking skills in particular for CHC learners undertaking a business degree. Thus, this study attempted to identify the issues that teachers of marketing units faced in achieving expected learning outcomes especially for CHC learners in a multicultural university environment. The three themes of study - the CHC learners' learning culture, their preferred learning styles and their learning outcomes - were examined to provide an analysis of CHC learners' learning processes and essentially to document a learning and teaching model which would assist CHC learners develop higher order thinking skills in the tertiary classroom setting.

The study provided the foundation for the future design of marketing units in terms of the assessment and instructional approaches which best fit CHC learners' learning environment. A new model of learning and teaching was developed which will assist in the process of all curriculum design for marketing units and for CHC learners in particular. It was envisioned that the information gathered in the study would provide assistance to the stakeholders of the Australian University and to those in the

industry who might employ business undergraduates and commend them as ‘first class human capital’. Such commendation will strengthen the reputation of the University and its relationships with international students and their parents. As an ideal, such undergraduates in the Malaysian context will become part of the national efforts to build the human capital capacities of the country.

#### **1.4 Definition of Terms**

For the purpose of this study, the following terms were used in discussing the issues related to conceptualisation and development of the research process.

##### **1.4.1 Learning Culture (Conceptions of Learning)**

The model developed by Marton and Entwistle (1984) and Marton and Saljo (1984) for approaches to learning emphasised that learners gain deep understanding of concepts when their learning needs were viewed from the perspective of the learner and not the teacher or the researcher. In the process of developing a model of learning and teaching for CHC learners in this study it was considered imperative to best observe and clearly describe these learners in terms of their culturally embedded perceptions towards learning.

##### **1.4.2 Learning Styles (Approaches to Learning)**

The ways that the students learn provide an insight into the teaching techniques which a teacher can use in the classroom. For this study, it was important to identify the different strategies which CHC learners adopted in order to succeed at learning. In this case, the study was conducted to ascertain the ways CHC learners learnt. In the study the assumption was that CHC learner competence with higher order thinking skills would enable them to understand the topics in marketing units more readily and therefore enable them to integrate their learning in an holistic way. This assumption required testing especially to highlight CHC learner capacities to think at a surface or deep level.

### **1.4.3 Learning Outcomes (Higher Order Thinking Skills)**

To what extent CHC learners' perceptions towards learning and their learning styles influenced the learning outcomes of a unit, particularly those associated with higher order thinking skills, were part of the investigation in the study. Learning outcomes, for the purpose of the study, were confined to those stated for three marketing units. Learning outcomes were defined as demonstrable behaviours of learning, and in the educational setting, assessed in some way through CHC learners' observable behaviour. In the curriculum sense, learning outcomes are statements of expected learning which all students are to achieve in any specific unit domain.

### **1.4.4 Instructional Approaches**

CHC learners learning processes involve the instructor's teaching strategies and techniques. In this study, my own classroom teaching practices were the focus of examination. It was assumed that the importance of classroom pedagogy would have an impact on CHC learners. Thus, it was considered significant that the development and testing of a robust teaching and learning model was vital to assist CHC learners develop their higher order thinking skills.

### **1.4.5 Unit and Course**

The study which this thesis reports was conducted at an offshore campus of an Australian university. At this university specific nomenclature is used to describe how a curriculum is compartmentalised. In this thesis, the term unit is used in relation to a discrete subject of study undertaken by a student as part of an undergraduate course such as the Bachelor of Commerce (Marketing). Usually, a unit of study takes one semester which is approximately 14 weeks with two tuition free weeks. The tuition free weeks occur after Teaching Week Four and after Teaching Week Six. Several units make up the course of study to complete a degree and these are segmented into year levels which are spread over three years for an undergraduate degree. Units have a number and name to indicate the year level and focus of the unit.

## 1.5 Methodology and Thesis Structure

This study investigated how CHC learners think and ascertained the degree to which they used higher-level thinking, and if so, in what form. It was imperative that some of the issues related to the students' and teachers' perception of higher order thinking, and the relation to learning and teaching experiences in the classroom, be explored. An analysis of several cohorts of students' learning approaches, as well as my teaching approaches, was undertaken to provide an embedded case study approach to the research design and an interpretative approach to the analysis of the information gathered during the study. The result of the study forwarded the proposal of a learning and teaching model for CHC learners.

Data collection in the study focused on two educational taxonomies to formulate questionnaires and structured interviews. Bloom's Taxonomy (Anderson & Krathwohl, 2001) and the Structure of Observed Learning Outcomes (SOLO) Taxonomy developed by Biggs (2003) were used to analyse and classify students' learning experiences and outcomes in terms of their higher order thinking skills. These two data collection instruments specifically focused at differentiating students' higher order thinking and cognitive complexity. Besides the two educational taxonomies used in the questionnaire and structured interviews, other ethnographic techniques such as classroom observations were made to gain further insight into the learning behaviour of participants in the study and to strengthen the credibility and interpretations made. There was a need to observe closely how CHC students thought when they were engaged in learning and how to reliably assess their demonstrations of higher order thinking.

Chapter Two of the thesis positions the study in terms of a literature review drawn from the aspects of the importance of higher order thinking skills of CHC learners in the learning process for the marketing units and the approaches which students as learners adopted in their learning. Chapter Three outlines the mixed method methodology used, the survey and ethnographic techniques followed to gather and analyse information and the ethical guidelines that framed the study. As this study involved both quantitative and qualitative approaches, the analysis is detailed into two parts. Chapter Four documents the interpretation of the quantitative data

gathered whilst Chapter Five focuses on the analysis of the qualitative data and information collected. The nub of Chapter Six is the overall product of the study which was the development and interrogation of an appropriate learning and teaching model specifically for CHC learners. The title of the learning teaching model will be elaborated upon in this Chapter. Chapter Seven concludes the thesis with a summary of the research findings, a reiteration of the significance of the study, the implications of the study and the future possibilities that the proposed learning and teaching model can contribute to future research.

## **1.6 Summary of the Chapter**

This Chapter discusses the issues of higher order thinking skills in the business curriculum, in particular, the marketing units taught at an Australian university offshore campus and the importance of CHC learners acquiring such skills to enable them to become one of the ‘first class human capital’ employable undergraduates for the Malaysian working sector. Research on the thinking skills area was put forward and emphasised the importance of such skills in developing undergraduates and preparing them for the work environment.

The emphasis in the business curriculum and students’ development of higher order thinking skills is one of the dominant factors that propelled the momentum in this study. From a preliminary questionnaire conducted in 2005, there seemingly was a gap between CHC learners’ ways of learning and the curriculum requirements of them. The intent of examining the following themes is central to the development of the thesis. These themes were:

- CHC learners’ conceptions of learning;
- CHC learners’ approaches to learning; and
- CHC learners’ performance in business related units.

The discussion that follows in Chapter Two elaborates the literature review related to these three main themes.

# CHAPTER TWO

## LITERATURE REVIEW

### 2.0 Introduction

The integration of critical thinking into the curriculum of higher education has evolved slowly since the 1900s (Gellin, 2003). However, it was not until the 1960s that educational systems began to highlight critical thinking as a major educational goal. Sumner (1906) at Yale and Dewey (1910) at Columbia University claimed that critical thinking should be a central aim of higher education. In 2006, the University of Maryland College tabled a literature review on critical thinking as a core academic skill. The need for this skill to be required by undergraduates was bound up with the College's perception of their futures. As stated in the report, "the increasing importance of critical thinking skills is underscored by the 'information society' that students are expected to operate in and contribute to" (University of Maryland, 2006, p. 6). An increasingly technologically complex and information rich society requires undergraduates who are able to critically analyse the source, content and quality of the information provided as well as use that information effectively. Operating within this context requires undergraduates to have the ability to synthesise, analyse, and organise deductions to address complex problems and situations (American Library Association, 1989; Breivik, 2005).

The Rockefeller Commission Report (Gellin, 2003) on humanities stated that the United States Department of Education should include critical thinking in its definition for higher education. Under the American educational system, issues regarding students at all levels, who were unable to think critically, were of a main concern. Thus, in the early 1980s, critical thinking became one of the major educational goals in higher education. As a result of the Rockefeller Reports, undergraduate programs across the nation incorporated the development of critical thinking into curricula (Ircink-Waite, 1989 cited in Gellin, 2003). It is acknowledged "that critical thinking skills transcend specific disciplines, [but] using those skills requires domain specific knowledge, methods, and techniques" (Facione, 2011).

Bloom's Taxonomy, which was first introduced in 1956 (Bloom & Krathwohl, 1956), encompasses a statement of educational objectives which are arranged in a hierarchical order from less complex to higher order complexity. Learners need to fulfil their understanding of any one concept in an area from the lowest level - knowledge - to the next levels - comprehension, application, analysis, and synthesis before reaching the highest level of thinking – evaluation of an idea acquired. The SOLO Taxonomy, which is based on the study of outcomes from academic teaching, was also used in the study. The SOLO Taxonomy distinguishes five different levels according to cognitive processes (Biggs, 2003). SOLO describes a hierarchy of cognitive processes where each partial construction (level) of thinking becomes a foundation on which further learning is built.

SOLO provides a systematic way of describing how a learner's knowledge moves from one level to the other. The level of knowledge starts from the very basic of understanding a concept (pre-structural level). Knowing concepts is important because the learner needs to have the basics to further construct a statement of other concepts (uni-structural level). With simple understanding, the learner needs to connect this understanding with other related areas, even though there are no meta-connections (multi-structural level). The next level (relational level) of conceptual development is concerned with describing learners who are able to apply and relate concepts and theories. The highest level (abstraction) of thinking is evident when learners not only apply what they have learnt but also are also able to connect beyond the particular to generalise and transfer principles and ideas and reflect on what they have learnt to other situations.

There was an increasing call from various countries for critical thinking skills to be included in undergraduate programs to realise future imperatives of an information society. Universities have at times heeded the call at the undergraduate level. However, in the main, there were no clear outcomes related to higher order thinking skills for undergraduates because the emphasis on these was not a component that was infused into all courses but rather only in as components in isolated subjects (Halpern, 2001).

Australia and Malaysia did not respond strongly to the need to move to the inclusion of critical thinking as a measurable outcome in undergraduate programs. There was no real articulation about preparing undergraduates ready for a future which required decision makers, innovators and risk managers. The content of a university curriculum, to a certain extent, is highly academic which requires students knowing the theories, concepts and the holistic picture of a particular field (Quek, 2005). However, higher-order cognitive skills, such as the ability to think critically, are invaluable to students' future. They prepare individuals to tackle a multitude of challenges which they are likely to face in their personal life, careers and duties as responsible citizens. The importance of imparting thinking skills through the curriculum has resulted in more research on critical thinking (Tsui, 2002). Kumaravadivelu (2003, cited in Clark & Gleave, 2006) reported the lack of students' capacity for critical thinking. Other researchers (Watkins & Biggs, 2001; Hammond & Gao, 2002; Hu, 2002; Shi, 2004) were of the same view that Asian learners, in particular Chinese learners, were lacking in critical thinking skills.

In relation to the development of students' learning and critical thinking skills in higher education, this current study focused on how CHC learners develop their learning process. In this study, factors which influence the ways in which CHC learners learn in a multicultural university environment and how they become critical thinkers in business courses, in particular marketing units, were explored. Further, the instructional approaches which shaped their conceptions of learning, their approaches to learning and thinking in classrooms and how these impacted on their learning outcomes were investigated.

McCorrmick and Ramburuth (2001) reported that due to the limited extent of empirical investigations into the approaches to learning of international Asian students in Australia, and the failure to consider cross-cultural issues in learning, the emergence of stereotypical views about the learning behaviour of Chinese learners has arisen. Thus, Western educators have tended to assume that Chinese learners are rote learners and that they have limited understanding of the subject matter in terms of applying their knowledge to wider contexts beyond the classroom (Chow, 1995, cited in Nield, 2004). The 'examination culture' as described by Wong (1998), has contributed to the lack of higher order thinking skills among students, especially

CHC learners. The examination culture has moved students to their reliance on textbooks and memorising facts. These assumptions and stereotypical views of CHC learners centre the discussion in this Chapter. Thus, the purpose of this Chapter is to discuss:

- The way CHC learners learn (their conceptions of learning and their approaches to learning) and the ways in which they have been taught.
- Thinking skills and the development of these in relation to CHC learners.
- Higher order thinking skills and the business curriculum.
- How current teaching, learning and assessment processes best support CHC learners' thinking styles.

## **2.1 The Ways CHC Learners Learn and are Taught**

This Section describes various theories of learning in the field of education, deep and surface approaches to learning, perceptions about Chinese learners' learning, cultural implications for CHC learners and CHC students learning through the English medium.

### **2.1.1 Theories of Learning**

In the context of learning environments, cognitive psychology provides a framework to understand how higher order processes such as critical thinking skills develop among students. According to theories of cognitive development as highlighted by Piaget (1964), human intellectual development progresses through a four-stage model with "formal operational reasoning" being the final stage of development. Piaget categorised learning into different levels in order to describe human thinking from childhood through to early adulthood. It was suggested by Piaget that cognitive development required a change and movement from a lower level to a higher level of thinking. The formal operational stage identifies the ability of individuals to use abstract reasoning as well as using previous knowledge and experiences to construct

new knowledge (Pascarella & Terenzini, 1991; Piaget, 1964).

However, in the field of education, there are many theories which can be applied in the attempt to explain how students learn. To enhance students' learning processes in the classroom, educators can refer to theories such as behaviourism, cognition and humanism to effect change in student thinking. Behavioural learning theories involve alterations and modifications in human behaviour where students' motivation to learn is influenced by their environment (Barrett, 2006). This theory demands much from the teacher to influence change in student behaviour and to even use penalties to bring about behavioural change which will facilitate learning (Slavin, 2003). Cognitive theories of learning are premised on individuals being actively involved in the learning process (Barrett, 2006). The learning process includes linking of information which was formerly learnt with new information being learnt. In this situation, students particularly need to use thinking skills to understand information and then analyse information so that they will link what they know to new information and thus create new knowledge. The role of the teacher is to understand the developmental stages of learning so that learners can progressively build their conceptual understandings. Humanistic approaches to learning (Rogers & Freiberg, 1994) are centred on experiential learning. The theory supports the notion that individuals should become fully functioning as creative, constructive free thinkers who actively participate in their learning process. The teacher is a facilitator of learning experiences to guide learners to self-actualisation. Implications of such theories for the teaching of CHC learners are interesting. If CHC learners prefer ways of learning that are qualified by rote learning and memorisation of knowledge (Marton, 1993; Kember, 2000), then a curriculum which requires them to think in different ways can be confronting for them. In a curriculum predicated on thinking skills, behavioural change in CHC learners' ways of learning requires modifications as does their level of comfort in being part of a classroom where social and human interactions are considered important for active participation in the learning process.

### **2.1.2 Surface and Deep Approaches to Learning**

Issues concerning students' ability to think critically continue to be one of the important issues in teaching and learning in higher education. Approaches to learning are the strategies which learners adopt in order to succeed at learning so students'

view of learning has increasingly become a focus of interest and research for educators in recent years.

Different approaches to learning have been drawn from the work of authors such as Biggs (1978, 1979, 1985, and 1987) who researched the theory of learning as deep and surface approaches. Biggs identified the surface approach as a motive for CHC learners to merely pass examinations. This strategy was achieved through minimum student effort and the learning method could be rote (Beattie et al., 1997, cited in Nield, 2007). Alternatively, the deep approach is targeted at learning with understanding. Thus, the learner will read widely and aim for a breadth and depth of understanding. A surface approach is the ability to learn knowledge which is transmitted in the classroom by an authority or experts without students challenging content. This approach is more about students acquiring knowledge. A deep approach to learning is focused on a process which requires effort, understanding and integration of knowledge which is acquired through one's reasoning rather than delivered by authorities or experts. The focus on in-depth understanding which requires learning effort may lead to students adopting an achieving approach (Chan, 1999). In the achieving approach, students may start with memorising and practicing concepts and theories (which is more of a surface approach) due to assessment requirements but their motivation to excel and perform well in academics will lead them to push to the limits in achieving their goals (achieving approach).

Researchers have found that students' conception of learning is related to their preferred approaches to learning and impacts on the quality of their educational outcomes concerned with higher order thinking (Van Rossum & Schenk, 1984; Prosser & Millar, 1989; Trigwell & Prosser, 1991 cited in Dart et al., 2000; Dart, 1998; Bowden & Marton, 1998). Saljo (1979, cited in Bruce & Gerber, 1995) reported that students' conceptions of learning could be categorised in two different ways. Surface learning is characterised by memorising knowledge to be reproduced. A surface approach to learning engages students in learning tasks through replicating what the teacher does without trying to understand what is being taught (Ramsden 1992, cited in Jackson 1995). In contrast, a deep approach to learning is aimed at students building meaning from the known to the unknown. As an outcome, understanding which can be retained or utilised in practical and purposeful ways

allows learners to abstract meaning and interpret processes aimed at understanding reality. A student engaged in a deep approach to learning will relate their learning to what they already know including other elements of their course or other courses. Watkins (1983, cited in Ramsden 1991, p. 54) reported “that students who used deep approaches retained more of the factual material presented in the text when tested on their knowledge of it several weeks later”. The idea that student learning is more worthwhile when they use deeper approaches to their learning is supported by Entwistle and Ramsden (1983). Thus, students with a deep approach to learning are more likely to use higher order thinking skills in their learning strategies. It is not just about the course content and knowledge that students should acquire, but about students’ approaches to learning and their conception of learning which will either constrain or expand their levels of understanding.

Interviews conducted with Chinese learners in Hong Kong (Davies et al., 1994) suggested that their adoption of a surface approach to learning might have been influenced by variables such as heavy workloads. The students combined both memorisation and understanding concepts to acquire knowledge. In the study, it was claimed that students used a ‘narrow orientation’ to their learning. Students had the intention to understand what they learnt but due to the regime of their studies, they resorted to memorising content in order to pass examinations. It was assumed that they were using a surface approach to learning by acquiring knowledge through reading and memorising but these Hong Kong students had grown with a curriculum which had channelled them into rote learning accompanied by their respect for the teacher and how they were taught. This resulted in most of them using only memorising techniques their preferred way of learning.

However, in other studies conducted with CHC learners to understand their approaches to learning it has been discovered that CHC learners memorised their learning which was the first step to understanding knowledge. Due to their language competency, the only way to start their learning was to memorise concepts and theories. Once the memorisation was achieved, CHC learners then moved to read further and expand the knowledge learnt. This learning approach was better known as ‘deep memorisation’ which was a way to enhance understanding (Kember, 1996; Chalmers & Volet, 1997; Marton et al., 1997; Salder-Smith & Tsang, 1998 cited in

Chan, 1999). This learning approach had improved CHC student performance. The approach, as previously mentioned, was also termed as the ‘the achieving approach’ (Chan, 1999). Students not only learnt to excel in examinations but also to understand concepts and theories and to apply the knowledge to other situations. Salili (1995) reported that despite not questioning the teacher, mere acceptance of teacher knowledge and an emphasis on memorisation, CHC learners will put their efforts to learn for self-improvement. They will use collaborative learning with peers which will promote deep learning among CHC learners.

A study conducted in Hong Kong (Biggs, 1990; Kember & Gow, 1990, cited in Chan, 1999) reported that the Chinese learners in Hong Kong scored higher on the deep and achieving approaches and lower on the surface approach than Australian students. Their strong motivation to achieve and excel academically and with the interest to rely on study skills would assist Chinese learners in their approaches to learning. According to Biggs (1994), successful learning in a Western curriculum typically revolves around the use of deep approaches where students are taught to be “metacognitive” in planning and monitoring their own progress. Chinese classrooms, in contrast, feature teaching approaches and activities which are oriented towards surface approaches to learning. Chan (1999) confirmed that lecturers in Chinese classrooms tended to provide environments characterised by limited discussions because students preferred not to express their opinions in public. If a classroom culture based on active and critical enquiry is discouraged, the classroom climate somehow will tend to dampen the students’ minds towards thinking critically. There has been a trend that researchers view Asian students as rote learners because they rely more on memorisation than understanding, adopt mainly surface approaches to learning and are textbook dependent (Kaputin 1988; Phillips 1990; Samuellowicz 1987a, b; Ballard & Clanchy 1991). However, this view is contestable.

### **2.1.3 Perceptions about CHC Learners’ Learning**

While the notion that different theoretical positions underpin different pedagogical approaches to teaching, learning and assessment will be developed in a later section of this Chapter (Section 5), it is suffice to say here that a teacher’s belief system

about teaching, learning and assessment drives their classroom practices. Based on a study conducted by Bruce and Gerber (1995) on student learning, it was documented that lecturers categorised the conceptions of student learning into six categories. The first two categories characterised learners according to their individual experience of learning to acquire knowledge and store information. Category three described learning as being achieved through individual effort accompanied by their day-to-day social interactions. Category four and five contained descriptions of how learning is achieved through interaction between learners and a wider social group so that their beliefs or behaviour changed as a result of working or engaging in discussion and activities with peers. The final category outlined how learning is achieved through different pedagogic approaches. Watkins and Biggs (1996) categorised Chinese learners into six categories: memorising and understanding, learner effort versus innate ability attributes, intrinsic versus extrinsic motivation, general patterns of student socialisation, achievement motivation, and collective versus individual orientation. Although these researchers' categorisations are somewhat different, they broadly typify Chinese learners as mostly rote learners, teacher dependent and extrinsically motivated to achieve in their examinations due to the high expectations of their parents and others to do so.

These perceptions concurred with the learning framework established by Marton et al. (1993, 1996) who saw learning as:

- increasing knowledge;
- memorising and reproducing;
- applying;
- understanding;
- seeing something in a different way and
- changing as a person.

The conceptions of learning as depicted by Marton et al. (1996) summarised processes which start with the amount of knowledge received and later focus more on the meaning of knowledge.

#### **2.1.4 Cultural Implications for CHC Learners**

It must be noted clearly that when Western researchers study other cultural groups,

stereotypical descriptions about cultural behaviours can arise. In the past, this matter has arisen in many cross-cultural studies in education. It also is important to note that while broad descriptions of learners may be helpful to teachers, there might be often more differences than similarities from one CHC learner to another. However, students mainly perceive learning as based on their learning experiences and the learning environment they have been involved in before they assume their new role in the higher education.

There has been a large volume of cross-cultural studies on learning in general, and on Chinese learners in particular, that has been published in the last two decades (Wen & Wong, 2001). In the study conducted by Watkins and Biggs (2001) cited in Wong (2001), two issues regarding the CHC learners were reported. Firstly, CHC learners were taught in large classes through expository methods (lecture methods with little or no interaction with the learners) and with relentless norm-referenced assessment. Students in these classroom climates still outperformed western students at least in science and mathematics and they were found to have deeper and more meaning-oriented approaches to learning. Secondly, CHC learners used the techniques of memorisation and at the same time paid attention to understanding subject matter. Due to their language competency in English, they were perceived as passive role learners when their memorisation was linked to understanding. Based on some literature (On 1996, cited in Nield, 2004), it was claimed that the learning styles of CHC learners was not just memorising but they also tried to become familiar with the text, understand it, reflect on it and then to question it. Thus, this study was undertaken to further explore the factors other than mentioned in the early study that caused the CHC learners to use memorising techniques in their study. CHC learners spent longer on their learning process to understand what has been taught to them. It requires much effort to achieve success. In relation to the effort made, CHC learners need guidance from teachers who motivate them into using deep strategies in the process of learning especially when the medium of instruction is English. A learning environment which is both teacher led and student centred as advocated by Ausubel (1963) or learning centred is desirable for students to develop their higher order thinking skills. In such a learning environment, the basics of knowledge are transmitted with high efficiency during the class so that students are well equipped with the understanding of concepts and theories being taught.

In a study conducted by Wong (2004), he concluded that in a CHC classroom students were obedient, attentive and listened to the teacher and seldom asked questions. Teachers reciprocated by coming to class with their lessons well prepared and structured, ensured that students followed through by asking questions and gave them guidance after class. Such duties fulfilled their moral responsibility of providing students with individual care including student support not directly related to learning such as guidance in personal growth and transmission of cultural values. Kolb and Fry (1975) pointed out that the key agents of socialisation through family and school are important media for the transmission of cultural values and, hence, directly related to influencing children's learning styles. Researchers such as Wang (1992), Biggs (1995; 1996 a, b), On (1996) and Volet and Renshaw (1996), examined how CHC students generally had a narrow approach to learning. The impact of cultural factors such as the influence of Confucian ethics on learning is central to the learning styles of children. Besides family and religious influences, students' learning approaches are much influenced by the teacher's teaching approaches. Reid (1996) in her observations of CHC learners' learning found that their approach to learning was related closely to their teaching and learning environment.

Some researchers have stressed that CHC student learn by memorising and arranging disconnected pieces of course content. Others have highlighted the process of students linking together and abstracting personal meaning from learnt material. However, the learning environment in an Asian classroom, and in particular in most parts of China, is mostly authoritarian and expository (Ngawainmbi, 2004 cited in Charlesworth, 2008). In many parts of Asia, independent learning and critical thought are practised (Meyer & Kiley, 1998, cited in Charlesworth, 2008) but Kember and Gow (1990) argued that student learning approaches to learning are often more likely to be a function of the teaching and learning environment. Zubir (1988) explored the notion of Malaysian students in higher education being dependent on the teacher. She examined presentation approaches such as lectures and individualised learning strategies and challenged the thinking that these students were reliant on the teacher. She suggested that students could be categorised into those who are lecturer-oriented and those who are self-orientated in their learning, although, many were capable of both. Further, Zubir (1988) claimed that learning

orientation is strongly influenced by the orientation of teaching. Importantly, Zubir (1988) showed that teachers have the means to influence students towards more self-orientated learning. Herein lies the significance of this thesis.

The implication for this study is that not much is known about CHC learners' conceptions and approaches to learning but more about teachers changing their teaching strategies to foster students' higher order thinking skills. Studies associated with CHC learners were reported by Nakarama in Redding (1990, cited in Chan, 1999). These studies portrayed CHC learners as having thinking skills in terms of concrete ideas such as those associated with numbers and lacking of abstract thought with more concern for particulars not universal ideas. The emphasis on the concrete showed why many Chinese learners excelled in "mechanical" subjects such as accounting. For these students, learning which required abstract thinking meant that the students would have difficulties grasping concepts and theories (Redding 1990; Bond 1992, cited in Chan, 1999).

### **2.1.5 CHC Students Learning through the English Medium**

Many Asian students are from families where English is not the first language of communication (Selvarajah, 2006). Thus, the lack of English language proficiency has placed these Asian students at a disadvantage in courses such as business and the social sciences where artistry of the English language is expected. Wong (1980) analysed the difference between Asian (elementary level) and American students. The study showed that Asian students (in particular CHC learners) are categorised as 'model students' by their teachers and the Asian-American often referred to as "The Quiet American" which stereotypes this group of learners. Such studies have examined more the achievement differences between groups of learners based on their racial background but have not pushed far enough to identify the extent of the impact on achievement when students learn through using a second language, English. There is a paucity of studies about the learning outcomes of students when faced with a Western designed curriculum based on developing higher order thinking skills. In Asian countries, many students are uncomfortable speaking a foreign language such as English.

In the case of CHC learners, the lack of critical thinking skills is mostly related to language proficiency. Research conducted on English as a Second language (ESL) by Huang (2006) indicated that Chinese learners experience considerable challenges in their academic learning due to their lack of understanding. Their poor English language proficiency became a major challenge for these students to acquire higher order thinking skills. Studies have shown that with Asian students' dependency on memorising a topic, and their surface approaches to learning, are further constrained in developing higher order thinking skill due to their difficulty in understanding content taught in English. Thus, students often are not able to analyse and synthesise concepts and theories in their academic studies (Sun & Chen, 1999; Yuan, 1982 cited in Huang, 2006). Due to their English language proficiency, most of Chinese learners at universities are prone to rote memorisation (Biggs, 1996, cited in Nield, 2007). However, some research has indicated that it may be a mistake to assume the Chinese learners are merely rote learning with little or no understanding of the subject (Nield, 2007). In the process of learning, due to English language proficiency, memorisation becomes part of the process of learning. The Chinese learners need to be familiar with the text, to understand it, to reflect upon it and then to question it (On, 1996, cited in Nield, 2007). Cooper in his report, noted that the Chinese approach of learning through repetition may lead to deeper understanding and high levels of achievement (Cooper, 2004, cited in Nield, 2007).

## **2.2 Thinking Skills and the Development of these in CHC Learners**

Critical thinking is a form of higher order thinking which involves the ability to reason, solve problem and make decisions. Competency in thinking skills enables students to understand content and knowledge and integrate these with other related factors. To acquire thinking skills, students need to be engaged in deep learning and understand in-depth knowledge. Using thinking skills need to be taken into account while the students go through their learning process.

Robinson (1987) noted that teaching children to become effective thinkers is increasingly recognised as an immediate goal of education. If students are to function successfully in a highly technical society, they must be equipped with lifelong learning and thinking skills necessary to acquire and process information in an ever-changing world. Beyth-Maron et al. (1987) emphasised thinking skills as a

means to making good choices. Thinking skills are necessary tools in a society to cope with the rapid changes in the environment, many alternatives of actions and numerous individual and collective choices and decisions. Callison (2002) suggested that thinking skills are higher order cognitive skills that enable individuals to comprehend experiences and information, apply knowledge, express complex concepts, make decisions, critique and revise unsuitable constructs and solve problems. These skills should be introduced in the early grades of schooling as they are essential for successful academic experiences in higher education.

Beyer (1997) suggested that higher order thinking in the classrooms could be initiated by asking questions in a number of ways particularly those using strategies that trigger puzzlement as well as recall. Learning approaches have to be conducted systematically to allow students to follow the process of learning. The uses of higher order thinking are central to producing meaning, understanding and structuring other forms of knowledge. By structuring classrooms around these features, institutions can establish and maintain precisely the kind of thoughtful learning environment essential for the exercise and potential improvement of students' critical thinking. Such approaches not only provide numerous occasions for students to engage in different kinds of higher order thinking but they also provide repeated occasions to engage in whatever kind of thinking the students need to improve (Abdullah et al., 2002). Thus, the management of classroom environment influences the development of thinking skills among the CHC learners.

### **2.3 Higher Order Thinking Skills and the Business Curriculum**

Critical thinking in the business world is essential as the 'world knowledge economy' demands volumes of information to be reviewed daily for effective decision-making. As such, the task of improving critical thinking in business school undergraduates is vital in preparing students to engage productively in the world. The business curriculum should be designed in such a way that it prepares business executives who are able to handle volumes of information and engage in fast-paced decision making environments of the workplace (Braun, 2004). With a business curriculum which demands higher order thinking skills, the student learning process must move towards opportunities to analyse what has been understood and to reason

things out. Given the opportunity, students will be able to move from learning through memorisation to more meaningful learning.

As part of the business curriculum, there are continuing calls for revisions to teaching marketing subjects as it will help to meet the needs of both undergraduates and their future employers (Chonko 1993; Mason 1995 cited in Duke, 2002). Modification to marketing subject learning outcomes has emerged as a change in an overall marketing curriculum. The change has led to a greater focus on the skills required by marketing undergraduates which will prepare them for the work environment. Thus, CHC students' approaches to learning will have to change to suit the demand from industry for undergraduates who can communicate effectively in English and think creatively. The move from a teaching orientation to a learning orientation approach is vital to prepare marketing undergraduates for the work force environment. As pointed out by researchers (Kelley & Geadeke 1990; McDaniel & White 1993; Tomkovick et al., 1996 cited in Duke, 2002), communication skills and problem solving skills are ranked as the top hiring criteria for marketing undergraduates. As such, marketing undergraduates should be equipped with critical thinking skills at a higher level.

#### **2.4 Planning for Learning, Teaching and Assessment**

Student learning is best achieved when there is constructive alignment between what has to be learnt and how this will be assessed. Pedagogical approaches must be wisely chosen to ensure that desired learning is achieved and assessed accordingly (Biggs, 2003). In a study about CHC learners' learning styles, it was reported that CHC learners were left-brain thinkers and their learning strategies were described as the surface approach type (Abdullah et al., 2002). In this study, it became apparent that one aspect of CHC learners' learning approaches was in need of further investigation. Assessment for learning which was learning oriented, as opposed to assessment of learning which was measurement oriented, required clearer understanding in relation to CHC learners.

To achieve such outcomes in the business curriculum, the way in which CHC learners are taught and assessed becomes a critical aspect of a learning and teaching

model which best fits students' learning styles. Assessment design is a dominant influence on how students approach their learning (Baumgart & Halse, 1999). If the teacher encourages students to use a deep approach to help improve their thinking skills, but the assessment requirements tap limited conceptual understanding, then students will opt for surface learning strategies so they feel confident about providing satisfactory answers to questions posed. Both Baumgart and Hasle (1999) agreed that the learning environment in many classrooms has been structured to encourage deep learning approaches over surface approach with an emphasis on metacognition, meaningful learning and learning outcomes which seek higher levels of cognitive functioning and higher order thinking skills. Biggs (1996) also pointed out that the learning context in shaping students' approaches to learning and how the type of assessment has a high influenced on students' approaches to learning is important. However, such teaching approaches will achieve little in terms of students acquiring higher order thinking skill if the assessment tasks they face are not aligned to compatible learning outcomes.

Researchers in the higher education warrant that if educators desire to understand how the undergraduates learn then acknowledging students' view of the world is important (Kunhn & Rundle-Thiele, 2009). To understand better the effects of teaching on student learning, educators need to consider that undergraduate learning experiences must move to implementing approaches that harmonise with students learning approaches. Kearns (2005) has written that when students' perspectives were considered in planning activities for learning and teaching, it allowed educators to develop a richer understanding of the contributions of various learning activities to the achievement of specific learning outcomes. Students would be able to demonstrate their own learning achievement for course learning goals and provide insightful information to inform further course development (Rundle-Thiele, 2006).

## **2.5 Summary of the Chapter**

Based on the literature review, it is evident that higher order thinking skills are imperative for business studies undergraduates to acquire. It is the responsibility of any group involved in the teaching, learning and assessment processes to find ways which can help students to develop these skills. It was crucial in this study to look at

what were CHC learner's perception of learning, how they approached learning and what were their levels of learning outcome.

As noted by Watkins and Biggs (1996), CHC learners learn through memorisation. However, this notion is debatable. It would appear that such a surface approach to learning might not be an inherent characteristic of CHC learners but be more about the ways they are taught. The memorisation learning technique has distorted their ability to develop their thinking skills. English language limitation is one of the factors which may constrain the development of CHC learners' thinking skills. In order for them to understand, synthesise and analyse information, learner's needs to have a good English language capability for them to be comfortable in thinking-environment processes.

The learning styles of CHC learners and the way in which they are taught is another constraint on CHC learners' developing higher order thinking skills. Apart from memorisation and rote learning, students have been expected to respect their elders. Questioning an authority figure is considered disrespectful. Teachers have been obliged to accommodate such a cultural expectation. Often learning environments are more of a teacher centred approach rather than learner centred in Asian classrooms (Leung 2004, cited in Wong 2004). More in- depth study is crucial in terms of students' approaches to learning and their conceptions of learning. How the skills of memorisation and problem solving have impacted the learning process of CHC learners needs to be understood. There are no grounds to believe that CHC learners excel only in rote learning and do not aim for genuine understanding (Wong, 2004).

The next Chapter discusses the methodology used in the study. The Chapter explains the Five Phases involved in the development of the research design used for the study including the data collection and interpretation strategies used to address the research questions.

# CHAPTER THREE

## METHODOLOGY

### 3.0 Introduction

The impact of globalisation and challenges in business education demand that students be creative, analyse possible options, evaluate alternatives, discover market opportunities and present recommendations (Smith, 1989, cited in Waller, 1993). The learning outcomes for business subjects, in particular marketing subjects, demand that students acquire higher order thinking skills. Students are expected to have the skills and ability to apply concepts and theories learnt in class and to analyse, synthesise and evaluate information.

In this study an investigation was conducted on how tertiary CHC learners think when using the English language. The extent to which these students used higher level thinking skills and how any such thinking manifested itself in a context of a higher education setting was examined. It was imperative in the study to explore issues related to the students' perception about learning, the relationship of these perceptions to their learning approaches and the connections to their learning outcomes, particularly in relation to their higher order thinking skills, in marketing units. An analysis of several cohorts of students' learning approaches, as well as my teaching approaches, was embedded as a case study approach in the research design. The participants were studied over a period of 15 months using survey and ethnographic methods to collect and analyse information.

The four elements underpinning the conceptual framework of the study were (1) the students' conceptions of learning, (2) their approaches to learning (3) teaching, learning and assessment approaches and 4) their learning outcomes in relation to higher order thinking skills (see Figure 1.1) which in turn provided a framework for the proposal of a learning and teaching model applicable to CHC learners.

The analysis and summary of the results in association with the research questions (as mentioned in the Introduction) contributed to the proposal of the teaching and learning model for CHC learners in this thesis. The participants in the study were students (CHC learners) enrolled in a Business degree at Curtin Sarawak campus. In this Chapter, a description is provided of the methodology underpinning the study, the methods used to collect and analyse data and the research standards applied in the research process. Specifically, this Chapter provides a discussion centred on the use of survey and ethnographic approaches in a mixed methods methodology, the research standards, including ethical issues, applied in the study, the data sources and gathering processes used in the study, the design, development and use of the survey instruments and a description of the variety of qualitative data collected in the field over the period of conducting the study.

### **3.1 Mixed Methods Methodology**

The methodology of the study was based on an interpretive model of research and incorporated a mixed method approach using the survey method and ethnographic techniques drawn from the methods based on using qualitative data. The concept of the mixed method approach, and the process of working with both qualitative and the quantitative data, represents two distinctly different paradigms to understanding the contextual nature embedded in the study. According to Fraser and Tobin (1991), it is acceptable to combine both quantitative and qualitative methods of research. Fisher et al. (1997) confirmed the idea of using qualitative research methods to help refine questionnaires identified by the analysis of quantitative data. Denzin and Lincoln (1994; 2000) put forward the need for researchers to triangulate their research designs and endorsed researchers being involved in fieldwork.

In most educational research, both quantitative, sometimes known as descriptive research, and qualitative approaches to research are used simultaneously. The qualitative approach helps to support the quantitative approach as the latter cannot provide an holistic interpretation of human behaviour in a particular context (Vockell & Asher, 1995). As highlighted by Creswell (1994), Denzin and Lincoln (1994) and Anderson (1998), triangulation is based on the assumption that biased judgments are reduced when more than one data source, investigator, or method is used.

According to Lincoln and Guba (1985), combining two or more research methods with different strengths and weaknesses helps minimise misinterpretation in the analysis of data collected. Also, as this study involved identifying students' behaviour ranging from their perceptions of learning, approaches in learning and their use of their higher order thinking skills, the triangulation procedure was adopted. Triangulation is often used to indicate that more than two methods are used in a study with a view to cross examine the results and increase the credibility and validity of the results. This notion is described by Campbell et al. (1966) and Jick (1979). As stated by Cohen and Manion (2000), the use of triangulation assists the researcher to map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint. Based on these insights, the triangulation strategy was adopted in the study to provide guidance in addressing the research questions and providing more accuracy of interpretations made by me. Quantitative data collection and analysis in this study was through the avenue of a questionnaire. Besides the quantitative data collection, structured focus group interviews were used. The focus group interviews were conducted following the survey. To increase the trustworthiness of the study, classroom observations and student learning journals were undertaken during the study. In the study, the goal was to map out and explain fully the complexity of human behaviour of the CHC participants involved in the study by analysing their learning from more than one standpoint through survey and the use of several ethnographic techniques.

### **3.1.1 Survey Method**

The survey approach is often used as part of the process to study human behaviour. Johnson (1990) and LeCompte and Preissle (1993) suggested that an exploratory survey is valuable when a large number of participants cannot be interviewed individually. Also, Miles and Huberman (1984) noted that in qualitative research there are "three good reasons to resort to numbers: to see rapidly what you have in a large slice of data; to verify a hunch or hypothesis; and to keep yourself analytically honest, protecting against bias" (p. 215).

This study involved collecting data about CHC learners' higher order thinking skills. As part of the survey approach, I used a sample of the offshore campus Curtin

Sarawak population of CHC students to collect data through the use of a questionnaire, as exemplified by Earl (1973). The survey approach was part of my intensive involvement in the social setting being studied. A questionnaire was designed based on the conceptual framework of the study (see Figure 1.1). The questionnaire was distributed to a sample of the student cohort over a period of one year, an approach similarly outlined by Zikmund (2000). The cohort sampling allowed me to compare the patterns of perceptions of learning, approaches to learning and whether CHC learners from different study periods had achieved the desired learning outcomes based on the learning and teaching activities they had experienced.

### **3.1.2 Ethnographic Techniques**

Knapp (1979) defined ethnography as an intensive involvement of the researcher in the social setting being studied. Gans (1968) reported that the researcher is completely involved emotionally in the social functions of a research setting and after the social engagement is over, the researcher becomes a researcher again. In ethnography, researchers are engaged systematically with those they are studying by participating in their lives and asking questions about the information they are acquiring (John, 1990). Ethnography has three corner stones – observation, inquiry, and examination of artefacts (Denzin & Lincoln, 1994) as a way of experiencing situations and understanding the views of others (Wolcott, 1999). As reported by Glaser and Strauss (1967), both participant observation and ethnographic techniques have long been used in sociology and cultural anthropology in which ethnography is considered to place a heavier emphasis on observation and interviewing to obtain information. In this study, data were collected through classroom participant observations recorded on video cams, structured focus group interviews which were taped using a tape recorder and student learning journals using blogging. These strategies required me to take part in the daily activities of the CHC learners being observed. Conducting observations and interviews while in a setting provides a researcher with multiple impressions that may not be reproduced by reading field notes or watching a tape of activities in a classroom. There was a need for me to observe closely how CHC conceptions of learning and their learning styles

influenced the way in which they adopted and applied higher order thinking skills when they were engaged in learning in the classroom and their assessment tasks.

In dealing with the biasness of the data; I have employed both the quantitative and qualitative approaches in this study. There is a need to blend the two methods as it would assist me in handling the issues of biasness. The data administration is explained in the following sections in attempt to reduce the biasness. Involvement of my critical colleagues and other parties (such as the faculty members) is important. Their feedbacks assisted me in exploring further the evidence, interpretations, and explanations, and consider alternatives, locate blind spots and omissions, assess sampling procedures to highlight selection biases and examined judgements.

Atweh and Malone (1998) supported the use of ethnographic interviews to complement the data collected through observation. Such data can be used to increase the understanding of the phenomenon under investigation, to incorporate different perspectives and to make effective use of time. Most often interviews are used to supplement the information taken from observations. The two major forms of interviews available are the unstructured informal interview and the structured interview. These techniques provide a useful mechanism through which it is possible to ascertain participant views about issues arising out of the research and to address validity (McDonald, 2005). According to Wiersma (1986), interviewing might be conducted casually or in a structured way. Focus group interviews are used to get in-depth information from a group of selected participants. In this study, the interviews were undertaken using the structured method where a set of questions was prepared based on the analysis from the quantitative data and focus groups were identified from the set of the participants for the purpose of inquiry.

Apart from the focus group interviews, classroom observations were used as a means to collect data. As the teacher-researcher for this study, I conducted the classroom observations in tutorial sessions. The small group discussion activity during the tutorials was used as the focal point for the classroom observations. Observation protocols were communicated to the participants to be observed, together with the purpose of the observation. The classroom observations were videoed using the

video cam and the videos were later transferred on to a CD for me to use during the analysis of the classroom observation data.

The participants were given a choice to reflect on their learning through their learning journals. I created my own blog (littledonosaur@blogspot.com) where the participants reflected on their learning process by writing in my blog. The participants had a chance to view and provide comments to others who participated in the learning journals. The learning journal write-ups were transcribed into a word document for further analysis. Besides the students' reflections, photographs and original and annotated documents such the Unit Outlines for the three units, which were provided to students at the beginning of each semester, student assessments tasks and performance results in assessments were collected during the study.

### **3.1.3 Research Design of the Study**

A case study research design was used in this study and was bounded by two main referents. Firstly, the case was bounded by the participation of CHC learners and secondly, the case study was bounded by the three marketing units used for analysis of students' thinking skills. The strength of the case study research design in this study was the interactive nature of working with the data collected and its analysis. As pointed out by Merriam (1988), a case study focuses on discovery, insight and understanding from the perspectives of those being studied and offers the greatest promise of making significant contributions to the knowledge base and practice of education. A case study design is frequently used to illustrate a more general principle which provides a unique example of real people in real situations (Yin, 1994). This enables researchers to understand ideas more clearly than simply presenting the analysis with abstract theories or principles. A case study establishes relationships and patterns of human behaviour, thus enabling the researcher to report the complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance.

An embedded case study enabled me to address the research questions posed in this study. Hitchcock and Hughes (1995) suggested that the case study approach was particularly valuable when the researcher has little control over events, as was the

situation in this study. This case study developed over Five Phases. Figure 3.1 illustrates the Five Phases in the study and the flow process in the data collection and analysis. At each Phase of the research design, the analysis of the data collected allowed for a working hypothesis to be tested and to describe an emerging picture of CHC learners. As explained by Denzin and Lincoln (2000), setting working hypotheses to guide the collection and analysis of data in a staged way adds to achieving credibility of the findings made.

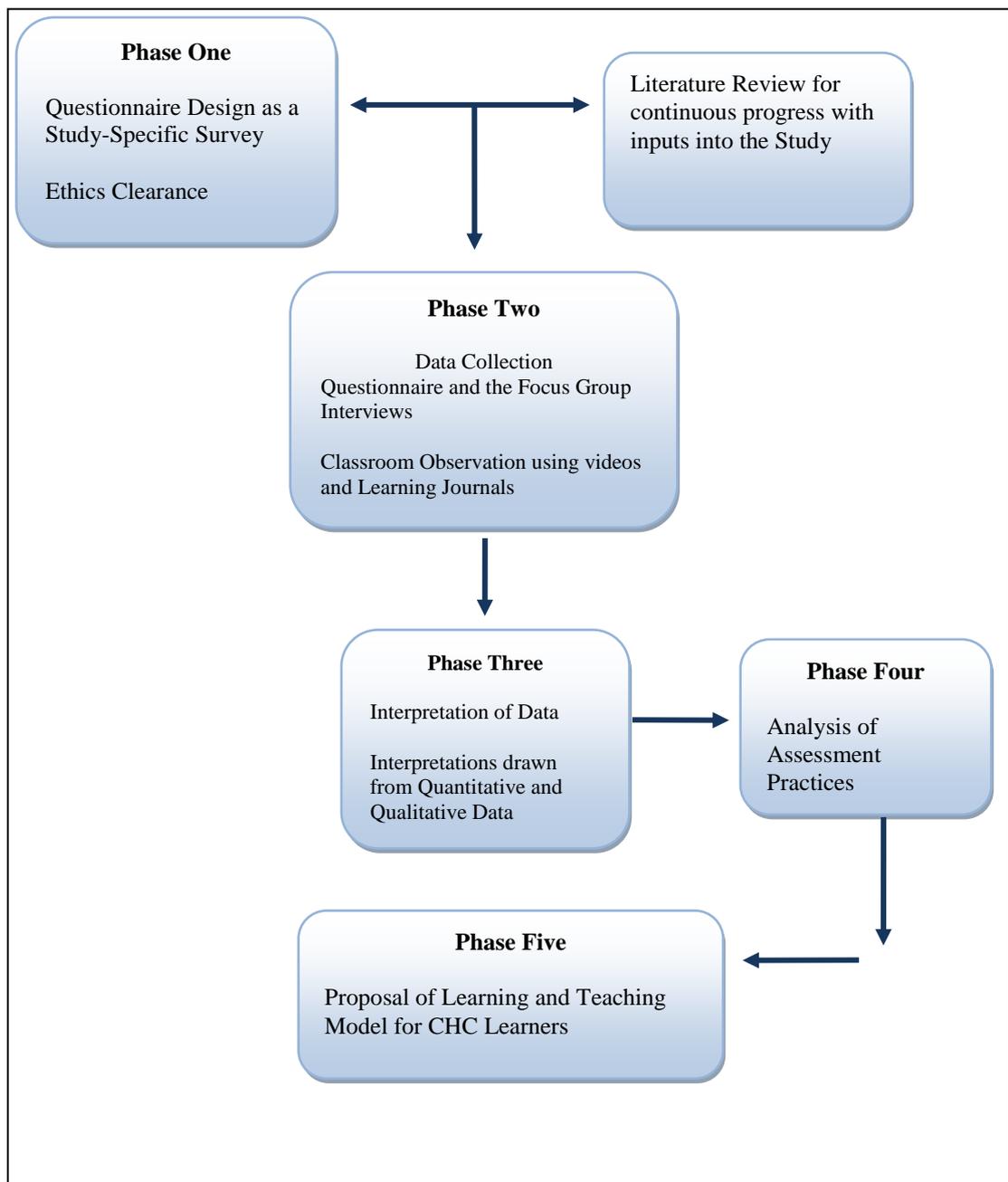


Figure 3.1. Five Phases in the Data Collection and Analysis Framework

As previously mentioned, the case was bounded by the participation of CHC learners at Curtin Sarawak in the study which enabled me as the researcher the unique capacity to deal with evidence such as documents, artefacts, interviews and observations. The student participants are further discussed in the section on sampling (see Section 3.2.2).

The three marketing units used for analysis of students' thinking skills also bound the case study. The three units were chosen over the other marketing units because of the nature of the unit learning outcomes that demanded application of thinking skills and their relation to students' conception and approaches to learning (see Tables 3.1, 3.2 and 3.3). All three units were core units for students majoring in marketing. The learning outcomes for these three units were closely examined in terms of Boom's and the SOLO Taxonomies.

Marketing 100 is an introductory unit in the business curriculum and a common core unit offered at the Curtin Sarawak campus for all Year 1 students (Semester 1 and 2). Thus, all first year students were required to take the unit. This unit requires students' application of critical thinking skills. The students should be able to identify the role of marketing in both business and society. Besides that, the students are to apply and explain the concepts. They should be able to demonstrate their proficiency of application through verbal and written communication. In Marketing 100, the marketing discipline is introduced through topics such as consumer behaviour, marketing research, product planning, promotion planning, distribution planning, product and service pricing, and the topical issue of ethical and societal marketing.

Table 3.1 indicates the relationship in the Marketing 100 unit between the learning activities, assessment tasks and the taxonomies. The level of thinking skills required for the unit was derived from the unit learning outcomes.

Table 3.1. *Thinking Skills Embedded in Marketing 100*

Unit	Learning Activity	Assessment Task	Bloom's Taxonomy	SOLO Taxonomy
Marketing 100	Group discussion on pre-reading topics	Weekly group presentation based on topic given	Knowledge	Pre-structural
	Tutorial discussion	Tutorial participation	Knowledge and Comprehension	Pre-structural and Uni-structural
	Academic writing skills (group written project)	Written submission (Marketing Plan)	Application and Analysis	Multi-structural and Relational
		Final examination	Knowledge and Comprehension	Pre-structural and Uni-structural

The overall aim of the unit was for students to understand the role that external environments have upon firms and their marketing decision, such as new product development. The learning outcomes for the unit were:

- **Identify** the role that marketing plays in both business and society.
- **Apply** the key marketing concepts employed.
- **Explain** the relevance of these concepts and what they mean.
- **Demonstrate** proficiency in 'applying' these marketing concepts to 'real world' situations.
- **Demonstrate** sound verbal and written communication skills.

Strategic Marketing 310 requires Year Two (Semester 4) students not only to understand concepts, but also to gain the ability to apply concepts and able to make decisions concerning the formulation of a marketing strategy. This advance course in marketing is primarily aimed at developing strategic direction making skills with particular reference to marketing. This unit presented the concept of integration of marketing planning in process. The learning outcomes for the unit were:

- **Understand and apply** analytical techniques useful for analysing companies, customers, competitors, environmental trends, market characteristics, company capabilities, and cost dynamics.
- **Understand and be able to use** a range of strategic planning methods including portfolio analysis, market attractiveness, SWOT analysis, business position assessment, experience curves and the Profit Impact of Market Strategy.
- **Understand** the strategic planning process of moving from where the business is now, to where it wants to be, based on an evaluation of the current situation, and coming up with strategies to generate this change.
- **Understand key strategies** relating to various aspects of strategic marketing, and to be able to gauge their potential worth to a firm, based on a rigorous analysis of this firm.

Table 3.2 indicates the relationship in the Strategic Management 310 unit between the learning activities, assessment tasks and the taxonomies.

Table 3.2. *Thinking Skills Embedded in Strategic Marketing 310*

<b>Unit</b>	<b>Learning Activity</b>	<b>Assessment Task</b>	<b>Bloom's Taxonomy</b>	<b>SOLO Taxonomy</b>
Strategic Marketing 310	Tutorial activities (submit summary of topic discussed)	Tutorial participation	Knowledge, Comprehension and Application	Pre-structural, Uni structural and Multi structural
	Academic writing skills (group written project)	Major Projects	Knowledge, Comprehension and Application	Pre-structural, Uni-structural and Multi-structural
		Final examination	Knowledge and Comprehension	Pre structural and Uni structural

Business Policy 320, a third year unit studied in Semester 5 and 6, demanded higher order thinking skills from the students. As mentioned in Chapter 1, some preliminary work was conducted with students studying this unit in 2005. A broad picture was gained about the behaviour of CHC learners based on the analysis of a questionnaire. Students should be able to demonstrate their proficiency in applying theories and concepts to real life situations and to formulate and implement strategies for the resolutions of problems.

Table 3.3 indicates the relationship in the Business Policy 320 unit between the learning activities, assessment tasks and the taxonomies.

Table 3.3. *Thinking Skills Embedded in Business Policy 320*

Unit	Learning Activity	Assessment Task	Bloom's Taxonomy	SOLO Taxonomy
Business Policy 320	Tutorial Activity/Discussion (case study given)	Tutorial participation and mid-term examination	Knowledge and Comprehension	Pre structural and Uni structural
	Oral case study group presentation	Case presentation and industry insight	Application and Analysis	Multi structural and Relational
	Company analysis (Audit Report)	Group Strategic Audit Report	Analysis and Synthesis	Relational and Extended Abstract
		Final examination	Knowledge and Comprehension	Pre structural and Uni structural

Concepts associated with Business Policy are introduced through topics such as the roles of corporate governance and leadership in strategic management, interpreting an organisation's macro, competitive and internal environments, understanding corporate, business and functional strategies, as well as developing an understanding of how to plan, implement, evaluate and control a workable strategic plan. Students are encouraged to develop higher order thinking skills by integrating concepts, theories and skills developed in this and other units covered in the business degree. The learning outcomes for this unit were:

- **Sound understandings** of the role that business policy plays in corporations.
- **A demonstrated proficiency in applying** the theories and concepts employed to "real life" situations.
- **Developed critical analysis skills** to formulate and implement strategies for the resolution of problems and to maximise opportunities at the corporate level.
- **Demonstrated** sound verbal, written and analytical skills.
- **Managed projects effectively**, which involves the organisation and co-ordination of group work.

## **3.2 Research Standards**

This Section outlines the standards applied in the research design. In the quantitative approach, the reliability and validity of the questionnaire were examined and the sampling of respondents attended to. In the qualitative approach, the trustworthiness of the data collection and analysis were considered closely. Appropriate ethical standards were also applied in the study.

### **3.2.1 Reliability and Validity of the Questionnaire**

A survey instrument usually is tested to examine its reliability and validity (Collis & Hussey, 1995). Reliability reflects the stability and consistency of an instrument in measuring a specific concept (Page & Meyer, 2000; Sekaran, 2003). Cronbach's alpha (1951) was used for this study to assess the reliability of each item in the questionnaire. The literature and empirical investigations highlight that the higher the Cronbach's coefficient alpha, the higher is the reliability of measurement in an instrument (Page & Meyer, 2000; Sekaran, 2003). As suggested by Nunnally and Berstein (1994), 0.70 is an acceptable reliability coefficient level in an instrument. This view is supported by Sekaran (2000). As long as the Cronbach's alpha measure is above 0.70, it can be said that the instrument has internal consistency reliability. However, the values of Cronbach's alpha between 0.60 and 0.70 have been considered acceptable. According to Nunnally (1978), these reliability values are comfortably above the lower limits of acceptability, generally considered to be around 0.50 to 0.60. As suggested by Nunnally and Berstein (1994), 0.70 is an acceptable reliability coefficient level. The reliability test results showed that each section in the questionnaire had an overall Cronbach Alpha from 0.727 to 0.856 which are listed in Table 3.4 below.

Table 3.4 *Reliability Statistics*

<b>Cronbach's Alpha</b>	<b>Cronbach's Alpha Based on Standardised Items</b>	<b>N of Items</b>
0.739	Conceptions of Learning 0.741	10
0.727	Approaches to Learning 0.727	10
0.856	Levels of Learning Outcomes 0.858	10

### 3.2.2 Sampling

With the population of 756 (student enrolment in 2006/7) students in the School of Business, 70% of the students were CHC learners (529 of the total population). The questionnaire was distributed to the respondents. This study involved collecting data about CHC learners' higher order thinking skills. A questionnaire was designed based on the conceptual framework of the study (see Figure 1.1). The questionnaire was distributed to a sample of a student cohort over a period of one year, an approach similarly outlined by Zikmund (2000). A sampling of 163 CHC learners (approximately 30% of the CHC learners population) was taken through cross sectional approach for the quantitative data collection and focus interviews, videos, journal documents in a cross sectional method to be sufficient to transfer interpretations to the remaining population. The cross sectional approach was used as this study involved a different student cohort group over 2006 but involved students who had a similar experience in terms of the units taken. In this study, data were collected from different group of respondents studying in a different semester but were involved in the same learning environment and undertaking the same units, learning activities and assessments. The expected anticipation of students represented the total population and thus it assisted me in proposing a learning and teaching model for these CHC learners, in particular the Malaysian Chinese, who remain the largest population of students at Curtin Sarawak.

### **3.2.3 Trustworthiness of the Study**

The quality of interpretive research is the “credibility, transferability, dependability, and conformability” of the data generated and how they are analysed (Lincoln & Guba, 1985, p.43). As they have suggested, there are no objective measures of validity in qualitative approaches to research, the only way validity can be considered is through the truthfulness or adequacy of the research design of a project. In terms of the credibility of this study, a range of data sources were used for cross-checking of interpretations. Apart from the quantitative data, I used data collected from the focus group interviews, videos and journals documents to provide me with ways to make interpretations about CHC learners’ thinking skills and the ways in which they used these.

As the researcher for this study, I was totally involved in all Five Phases of the study. I collected and analysed data from multiple data sources to enhance the reliability of the study. In this study, I was integrally involved in the social setting in the developmental aspect of the study. I invested sufficient time being the teacher of the participants and knowing the CHC learners even before the study was carried out allowed me to establish a relationship of trust with the participants. My prolonged engagement with the participants came not only with teaching each cohort over the period of a year but also in the time taken for the focus group interviews sessions. The interviews assisted me in understanding the problems faced by the participants as CHC learners. The focus group interview sessions often went beyond the planned one-hour time slot, taking around two hours to finish the session. I used member check techniques to establish the conformability of interpretations of the data collected. I summarised the information with the groups and checked with them that the information that I gathered was correct. I also invited a colleague to read the transcribed data to provide me with feedback to gain another point of view about the analysis of the data.

### **3.2.4 Ethical Issues**

The ethical obligations ensuring privacy of the participants was maintained and confidentiality of the data was protected in order to protect the participants from any potentially negative consequences that may have occurred as a result of their participation in the study. The procedure of the research and the participants' role in the data collection during week three of each semester was explained. The participants were given a week to sign and return the consent form to me (see Appendix A). The identity of any participants in this thesis and subsequent publication has been protected. Participation in this study was voluntary. The students chose to participate in all (questionnaire, interviews, classroom observation and blog) or only some of the data collection methods. There was no effect or negative implication on the students' engagement in learning activities. All students enrolled in the marketing units experienced the learning and teaching activities as part of the usual classroom practices planned by me.

The classes ran as normal lectures or tutorial sessions during the period of study. I informed the students about the study to be carried out and that there were no implications for the students' assessment as a result of the study. I gave due and proper consideration to all students in classes, the participants in the study and their learning environments. The data gathering aspect of the study was dependent on students volunteering to participate in the research. Thus, the methodology had to fit with the content of the learning situation without interfering with or intruding on any students' learning in the marketing units included in this study.

Prior to the interview sessions, procedures were explained to the focus group. The interview sessions were recorded using a cassette tape and consent was obtained from the students prior to the interview to record their words. Their consent was formally given through signing a consent form. The questionnaires collected from students and the interview transcripts and the tapes are to be kept for three years from the publication date of this thesis on a password-protected computer and notebook and back up disks with hard copies being kept in a locked file drawer for this period after which, all the materials will be destroyed.

### **3.3 Phase One – Development of the Study Specific Questionnaire**

The working hypothesis for this Phase of the study was that learning and teaching approaches influence CHC learners' development of higher order thinking skills. How CHC learners perceived learning will contribute to the way they learn. A questionnaire (see Appendix B) was developed based on the approved thesis proposal and submitted for ethics approval. The questionnaire was developed based on two educational taxonomies (Bloom's Taxonomy and Biggs' Solo Taxonomy). First, Bloom's Taxonomy (Anderson & Krathwohl, 2001) was used to examine the students' learning activity and assessment in terms of the level of knowledge or cognitive level required for its understanding or application used (see Tables 3.1, 3.2 and 3.3). Second, the SOLO Taxonomy originally developed by Biggs in 1999 was selected because of its consideration of CHC learners. The taxonomy was used for classifying students' responses in terms of their learning. These two taxonomies specifically focused on differentiating thinking levels and cognitive complexity levels in students' thinking capability. Samples of students were identified from those who studies the different marketing units namely Marketing 100, a first year unit, Strategic Marketing 310, a second or third year unit (and a pre-requisite unit for Business Policy 320) and Business Policy 320, a third year unit, to complete the questionnaire.

The questionnaire was divided into three parts to assist in gathering the information for the research questions. Part A of the questionnaire outlined the elements or factors that influenced the way CHC learners learnt (Conceptions of Learning). These factors in terms of how they perceived learning influenced their way of learning to achieve the higher order thinking skills. Part B of the questionnaire outlined the elements or factors that influenced how CHC learners learnt, the strategies or their approaches to learning. Part C of the questionnaire outlined the expected learning outcomes that CHC learners acquired at the end of their learning process. It was assumed that the design of the classroom assessment and activities influenced the way they were being taught, their approaches to learning and how they perceived learning.

### **3.4 Phase Two – Collection of Quantitative and Qualitative Data**

In this Section the administration, data sources and data collection related to the questionnaire are described. Also, data collected through structure focus interviews, classroom observations and student learning journals are outlined.

#### **3.4.1 Administration of the Questionnaire**

The working hypothesis for this Phase of the study is that CHC learners' learning perception will have an impact on their learning strategies and the teacher's classroom pedagogy. Once the questionnaire was developed, it was administered. The questionnaire (Section A) was distributed early in each semester throughout the entire data collection stage. The purpose was to find out what were the CHC learners' conception of learning and the approaches which they used in their learning strategies. Section B was distributed at the conclusion of each semester, as its purpose was to identify the achievement of the CHC learners' learning. The questionnaire was distributed to the participants taking the three different marketing units.

#### **3.4.2 Questionnaire Data Sources and Collection**

The quantitative data were collected in two stages (Semester 1 and Semester 2 2006). The questionnaire was distributed to CHC learners who were the participants of the study. As mentioned, the focus units from which data were collected from student respondents were Marketing Principles 100, Strategic Marketing 310 and Business Policy 320. The sample of respondents for Semester 1 2006 for the study is summarised in Table 3.5.

Table 3.5 *Number of Questionnaire Respondents (Semester 1, 2006)*

<b>Unit</b>	<b>Group from Each Unit</b>	<b>N of Students</b>
Marketing 100	Group 1 Group2	14 8
Strategic Marketing 310	Group1 Group2	15 8
Business Policy 320	Group 1	20
<b>Total</b>		<b>65</b>

The participants completed sections A and B at the start of the semester and Section C at the end of the semester. In Semester 2, 2006, I distributed the same questionnaire to another group of CHC learners taking the same units. The administration of the questionnaires followed the same procedure as in Semester 1, 2006. The data were then tabulated by using cross-tabulation statistical technique. Descriptive statistical analysis was used on the questionnaire responses and factor analysis was used to analyse the relationship of the three categories in the questionnaire (Conception of learning; Approaches to learning; Levels of learning outcomes). The descriptive analysis also examined the relationship between the three categories in the questionnaire and the units studied by participants in each semester of study.

### **3.4.3 Structured Focus Group Interviews**

Further to the quantitative data collected, structured focus group interviews were conducted to find out if other situational factors influenced CHC learners' learning perceptions and their learning strategies. Focus group interviews were conducted, besides inviting the students to share their thoughts through the 'blog-learning journal'. The schedule of interviews is indicated in Table 3.6.

Table 3.6 *Schedule of Structured Focus Group Interviews (Semester 1, 2006)*

<b>Unit</b>	<b>Number of Students</b>	<b>Date/Time of the Interview</b>	<b>Venue</b>
Marketing 100	5 (Group 1)	24 <sup>th</sup> May 2006 1 hour duration	School of Business meeting room GP3204
Strategic Marketing 310	5 Group 1)	23 <sup>rd</sup> May 2006 1 hour duration	School of Business meeting room GP3204
	5 (Group 2)	23 <sup>rd</sup> May 2006 1 hour duration	
Business Policy 320	5 (Group 1)	25 <sup>th</sup> May 2006	School of Business meeting room GP3204
<b>Total</b>	<b>20</b>		

The purpose of the focus group interviews was to identify demonstrations of students' thinking. The interviews also provided an opportunity for the focus groups to confirm or disconfirm any analysis of the questionnaire data. The focus group interview participants (five participants from each group) were assigned randomly for the structured interview sessions. The interview sessions were carried out separately based on the units taken.

The focus group interview participants (five participants from each group) were assigned randomly for the structured interview sessions. The interview sessions were carried out separately based on the units taken. The structured interview questions (see Table 3.7) were designed based on the feedback on the survey that was conducted in 2005.

Table 3.7 *Structured Focus Group Interview Questions*

Approaches to Learning	Questions for the Focus Group Interview
Conceptions of Learning	<ol style="list-style-type: none"> <li>1. When do you use what you have learnt to relate to the outside world?</li> <li>2. How do you relate what you have learnt to the outside world?</li> <li>3. What kind of knowledge has to be known and recall?</li> <li>4. In what situation/context is this knowledge recalled and used?</li> <li>5. Do you agree that it's better to learn by yourself?</li> </ol>
Approaches to Learning	<ol style="list-style-type: none"> <li>1. Tell me the difference between learning a reading unit and calculation.</li> <li>2. How do you relate what you have learnt in one unit to that of the other?</li> <li>3. What is your opinion of questioning/debating issues in the class?</li> <li>4. Tell me how do you link the real situations to that of the classroom information?</li> </ol>
Levels of Learning Outcomes (Higher Order Thinking Skills)	<ol style="list-style-type: none"> <li>1. Tell me about some of the new approaches which you have learnt?</li> <li>2. Tell me about how this unit has helped you in integrating the different areas in business?</li> <li>3. How do you integrate the different aspects of business area in your project assignment?</li> <li>4. Tell me your experience during which you or the group solves certain issues during the discussion?</li> </ol>

The structured interview questions were designed based on the feedback on the survey that was conducted in 2005. Interviews were conducted in a comfortable, quiet and private room at the School of Business at the Curtin Sarawak campus. The questions were prepared to facilitate a structured interview and to further gain an insight into the participants' approaches to learning. The interview sessions assisted me to obtain more information, to probe more deeply the area which was not covered based on the analysis of the quantitative data. Students were also encouraged at various times during the learning activities and assessment to reflect on their thinking and enter this in a diary. Based on my observation, I kept a teaching diary of events that happened in the class.

#### **3.4.4 Round Two of Data Collection – Questionnaire and Interviews**

The second round of data collection using the questionnaire continued in Semester 2 2006. This was to make sure that the number of participants was sufficient to represent the population of CHC learners taking the three units Marketing 100,

Strategic Marketing 310 and Business Policy 320. The same procedure was applied to the data gathering process as in Semester 1, 2006.

The participants for Semester 2, 2006 also were randomly assigned to participate in the structured focus group interviews. Table 3.8 indicates the number of students from each unit who participated in the interviews.

Table 3.8 *Questionnaire Respondents for Units (Semester 2, 2006)*

<b>Unit</b>	<b>Class/group from each Unit</b>	<b>N of Students</b>
Marketing 100	Group 2	9
	Group 3	15
	Group 4	7
	Group 5	7
Strategic Marketing 310	Group 1	11
	Group 2	10
Business Policy 320	Group 1	12
<b>Total</b>		<b>71</b>

Table 3.9 shows the schedule of when the focus group interviews were conducted.

Table 3.9 *Schedule of the Structured Focus Group Interviews (Semester 2 2006)*

<b>Unit</b>	<b>Number of Students</b>	<b>Date/time of the Interview</b>	<b>Venue</b>
Marketing 100	5 (Group 1)	12 <sup>th</sup> Oct 2006 (330 – 500pm)	School of Business meeting room
	5 (Group 2)	13 <sup>th</sup> Oct 2006 (900 – 1030am)	
Strategic Marketing 310	5 (Group 1)	17 <sup>th</sup> Oct 2006 (1230 – 200pm)	School of Business meeting room
	5 (Group 2)	19 <sup>th</sup> Oct 2006 (1000- 1130am)	
Business Policy 320	8 (Group 1)	19 <sup>th</sup> Oct 2006 (130pm till 230pm)	School of Business meeting room

### 3.4.5 Videos, Classroom Observations and Students' Learning Journals

Besides the data collection using the questionnaire and focus group interviews, students in Semester 2 were advised to post their learning reflections in a blog.

Videos on classroom observation and the learning journal and teaching journal were also analysed to provide an extensive analysis of the study. The classroom observations were videotaped during the tutorial group discussion (see Table 3.10).

I used different teaching techniques as part of my classroom pedagogy. The classroom settings were rearranged (see Appendix C) to suit the learning activities underpinning different assessment tasks. Feedback from students in terms of situational factors such as cultural and social interactions was noted during the classroom observation and also during the focus group interview sessions. I used the opportunity during the classroom observation to watch the students' learning behaviour and listen to their conversations during discussion activities. I kept a teaching diary of what happened during the learning and teaching process. Records were kept in a set of notes and cross-analysed with the video tapes. I used this evidence to crosscheck and confirm or disconfirm interpretations I made about students' thinking skills.

Table 3.10. *Schedule for Participant Observations*

<b>Date</b>	<b>Activity</b>	<b>Frequency</b>	<b>Activity Conducted</b>
May 2006 Sept– Oct2006	Classroom observations	Four times-twice per month	During the tutorial session. Sessions were videotaped
May 2006 Oct 2006	Focus group interviews	Once for each focus group based on the units	Participants were interviewed in the School meeting room.  The interviews are being recorded
April – Sept 2006  Throughout Semester 1 and Semester 2 2006  Semester 1and Semester 2 2007/Semester 1 2008	Learning journals  Classroom observation through the researcher's reflective practice	Participants were encouraged to post their learning experience in the researcher's blog throughout the semester	Participants were free to visit the researcher's blog and post their learning experience  Teaching journals conducted based on the classroom observation and researcher's own reflections

### **3.5 Phase Three – Analysis and Interpretation of the Data**

Phase Three continued by investigating my classroom pedagogy and other situational factors which might have an impact on the CHC learning perceptions. To guide the analysis, the working hypothesis was that a teacher's classroom pedagogy and other situational factors do have an impact on the CHC learning perceptions. Data were collected from the questionnaire and the interviews. Interpretation was derived by looking at the teacher's classroom pedagogy and other situational factors.

Data were analysed questionnaire using SPSS. Descriptive statistics were applied to analyse the quantitative data. Means and standard deviations were used to further analyse the data. A Cronbach Alpha was also used to analyse the reliability of the items used. Factor analysis was used to find out if there was any relationship between the students' conceptions of learning; their approaches to learning; and their levels of learning outcomes in the units taken and the semester of study. The interview data were transcribed using the Microsoft office. The data were transcribed using codes and transferred using a table format and later documented in a word format. The information from both the classroom observation and the learning journals were also transcribed using codes and transferred to words documents. These data were transcribed separately and the analysis was then conducted based on the activities which were the classroom observation and learning journals.

### **3.6 Phase Four – Analysis of Assessment Practices**

The working hypothesis for this Phase of the study was that CHC learners would acquire higher order thinking skills more effectively when curriculum design supports and encourages them to use higher order thinking skills. Further analysis was conducted at this stage to look at the link between what is being "taught" and what is being "learnt". Students learning activities and the assessment needed to have elements of thinking skills (in this case the learning outcomes should have higher order thinking skills elements).

The participants' learning outcomes were evaluated through the unit assessment. Participants were assessed based on the different assessment tasks. I evaluated the

learning activities and assessment in the units chosen for the study (see Table 3.1, 3.2 and 3.3). The classroom activities were mapped onto the Bloom's and SOLO elements to ensure the alignment between the instructional objectives and those of the assessment with the thinking skills required for the CHC learners. The analysis of the learning design and assessment were evaluated based on the participants' performance in the given assessment for the unit, and these data were used to analyse the student's performance and the assessment practice used. These data helped me in analysing the assessment activities, the unit learning outcomes and how these impacted on the CHC learners' thinking skills. A knowledge and skills matrix in terms of the higher order knowledge was identified and a proposed teaching and learning plan was formulated to provide information for the proposed learning and teaching model for CHC learners.

### **3.7 Phase Five- Proposal of a Learning and Teaching Model**

The significant culmination of the research process was embedded in the working hypothesis for this Phase of the study: CHC learners acquire higher order thinking skills when their learning conceptions and the teacher's teaching, learning and assessment design are in harmony. Based on the interpretation and findings of the quantitative and qualitative data, issues which impacted on CHC learners' thinking skills were further examined. Gaps were identified and further analysed to form a broader perspective of a comprehensive program for teaching CHC learners to acquire higher order thinking skills. Table 3.11 outlines the developmental nature of the study, which proceeded in a Five Phase process with each Phase directed by a working hypothesis to examine the conceptual framework of the study and to propose the learning and teaching model which was fundamental to the whole study.

### **3.8 Summary of the Chapter**

This Chapter outlined the methodology and the planning process undertaken to develop the survey instruments used in this research. Discussion in this Chapter involved the explanation of Phases of the data collection, the data sources, and the participants' details and the processes followed to collect the data. Data analysis focused on the objectives of the study where two types of analysis were conducted:

statistical analysis using SPSS package and an analysis of qualitative data collected from the open-ended questions provided to the students during the focus group interview and also through the classroom observation and the students' learning journal.

Chapter Four will present the data interpretation from the quantitative analysis and Chapter Five will detail the interpretation of the qualitative analysis. Chapter Six provides a further discussion to Chapter Four and Five. These analyses are drawn together in Chapter Six from which the findings are used to address the research questions outlined in Chapter One. The discussion in Chapter Six leads to the confirmation of the learning and teaching model. In Chapter Seven the limitations and the conclusions of the study are documented.

Table 3.11. *The Developmental Design of the Study*

<b>Research Design Aspect</b>	<b>Phase One Questionnaire Design</b>	<b>Phase Two Collection and Quantitative and Qualitative Data</b>	<b>Phase Three Analysis of Quantitative and Qualitative Data</b>	<b>Phase Four Analysis of Assessment Practices</b>	<b>Phase Five Proposal of Learning and Teaching Model</b>
Time	October 2005 – December 2005	2006	2007 - 2008	2009	2010
Working Hypothesis	Learning and teaching approaches influence CHC learners' development of higher order thinking skills	CHC learners' learning perception will have an impact on their learning strategies and the teacher's classroom pedagogy	A teacher's pedagogy and other situational factors do have an impact on CHC learners' learning perceptions	CHC learners will acquire higher order thinking skills more effectively when the design of the curriculum supports and encourages them to use higher order thinking skills	CHC learners acquire higher order thinking skills when their learning conceptions and the teacher's learning, teaching and assessment design are in harmony
Method	Development of an instrument as a study specific survey using elements from the Bloom's and SOLO Taxonomies  Commencement and continuation of literature review	Distribution and administration of the questionnaire  Structured Focus Group Interviews  Video of Classroom Observations  Learning Journals using Blog	Analysis of the: <ul style="list-style-type: none"> <li>• Questionnaire</li> <li>• Interviews</li> <li>• Classroom Observations</li> <li>• Learning Journals</li> </ul>	Examining and evaluating learning activities and assessment in three marketing units	Proposal of a learning and teaching model for CHC learners
Sample	Identification of three marketing units (Marketing 100, Strategic Marketing 310, Business Policy 320) for the study and potential CHC learners enrolled in 2006	136 students from Years 1, 2, and 3 in the three units  Identification of 43 interviewees form the questionnaire respondents	N = 136	Learning activities and assessments in the three units mapped to the Bloom's and SOLO Taxonomies.  N=136	N=136

(Table 3.11 continues on page 61)

(Table 3.11 continued)

<b>Research Design Aspect</b>	<b>Phase One Questionnaire Design</b>	<b>Phase Two Collection and Quantitative and Qualitative Data</b>	<b>Phase Three Analysis of Quantitative and Qualitative Data</b>	<b>Phase Four Analysis of Assessment Practices</b>	<b>Phase Five Proposal of Learning and Teaching Model</b>
Procedure	Design of instrument over three months and submitted for ethics approval	Administration of questionnaire – distributed and collected over a Semester study period  Conduct the focus group interviews (48 respondents)  Undertake classroom observations.	Questionnaire data transcribed using SPPSS and analysis completed - Frequencies, Means, Cross Tabulations and Factor Analysis  Using a decision tree, qualitative data transcribed from interviews, classroom observations and learning blog using Nvivo and documented in word format	Analysis of the curriculum design of the three units focused on learning outcomes and assessment tasks	
Data Sources	Questionnaire approved by Ethics Committee	136 questionnaire respondents  48 interviews  Video footage of classroom observations  Posts on Learning Journal blog	N=136	Three marketing unit Outlines  Students’ performance in assessment tasks  Students’ performance moderated with that of the home campus	Gaps and differences of the study to form a broader perspective of a comprehensive program for teaching CHC learners the required thinking skills
Data Representation			<i>Quantitative Data</i> Tables, charts and reports  <i>Qualitative Data</i> Word format with substantiating student quotes	Assessment tasks in the three units mapped to level of thinking skills	Pictorial representation of the of the proposed learning and teaching assessment model

# **CHAPTER FOUR**

## **QUESTIONNAIRE DESIGN, DISTRIBUTION AND ANALYSIS**

### **4.0 Introduction**

The purpose of this Chapter is twofold. First, the development of the questionnaire is described. Second, and importantly, an analysis is provided of the data collected using the questionnaire to identify CHC students' conceptions about learning, their approaches to learning and their levels of higher order thinking skills as perceived by them. Each of the Phases was guided by a working hypothesis. The working hypothesis for Phase One was that learning and teaching approaches influence CHC learners' development of higher order thinking skills. Phase Two was guided by the working hypothesis that CHC learners' learning perception will have an impact on their learning strategies and the teacher's classroom pedagogy.

### **4.1 Phase One: Learning and Teaching approaches influence CHC learners' development of higher order thinking skills**

The questionnaire design, as mentioned in Chapter Three, was based on the 'Approaches to Learning' developed by Marton and Entwistle (1984) and Saljo and Biggs (1985). The questionnaire incorporated three sections each consisting of 10 items as shown in Appendix B.

Section A: Students' Conceptions of Learning;

Section B: Approaches to Learning; and

Section C: Levels of Learning Outcomes

Section A of the questionnaire was to identify the elements or factors which influenced the way CHC learners learnt. Section B of the questionnaire outlined the elements or factors which influenced how CHC learners learnt in terms of the strategies or approaches they used in their learning. Section C was concerned with what was the expected learning outcome which CHC learners acquired at the end of their learning process. The purpose of the questionnaire was to identify CHC

learners' conception of learning, describe their learning approaches and identify what they believed that they had learnt as part of the process to acquire their critical thinking skills in marketing units. The instrument was well tested by other researchers such as Trigwell and Prosser (1991), Watkins and Reghi (1991) and Richardson (2006).

Detail about the design of the questionnaire was provided in Section 3.3 of Chapter 3. The design of the questionnaire was guided by the working hypothesis that learning and teaching approaches influence CHC learners' development of higher order thinking skills. The working hypothesis for the Phase was considered held because the instrument was well founded on other researchers' work and accepted for ethics approval. This working hypothesis was further tested in Phase Two of the research design.

#### **4.2 Phase Two: CHC learners' learning perception will have an impact on their learning strategies and the teacher's classroom pedagogy**

Both Section A and B of the questionnaire was distributed early in each Semester. The study was conducted both in Semester 1 and 2, 2006. Section C of the questionnaire was again distributed at the end of the Semester (both in Semester 1 and 2 2006). I administered the questionnaire distribution explaining to the students the objectives of the study and that ethics clearance was sought before carrying out the study. The students were given adequate time to answer and return the questionnaire upon completion. At the end of each Semester, the students were then given Section C of the questionnaire where the same procedure of administering the questionnaire was used. One hundred and thirty six students (136) completed the questionnaire and the respondents were able to indicate their responses according to four options: item is **never or rarely true** of me; item is **sometimes true** of me; item is **frequently true** of me; or item is **always or almost true** of me. The students completed Section A and B of the questionnaire which consisted of items related to students' conceptions to learning and approaches to learning. At the end of the Semester, the students completed Section C which incorporated their perceived levels of higher order thinking skills. The data analysis was conducted after all the questionnaires were collected.

The quantitative data are presented in this Chapter in the form of statistical analysis charts and tables to provide a statistical description of the students' responses to items in questionnaire. The detailed statistical data are reported in Appendix D.

Further, factor analysis was used to ascertain the data reduction between the sections in terms of the units taken by the students and also the Semester that the students were enrolled. Using factor analysis allowed for the examination of the relationship between the questions and the units taken by the students and the Semesters in which they were enrolled. In the next section of the Chapter, the statistical findings and the factor analysis are discussed.

### **4.3 Analysis of Frequencies and Means**

Detail of the frequencies and means derived from the items in the three parts of the questionnaire is provided in Appendix D and E respectively. This Section reports the analysis of frequencies and means and illustrates the results in graph form.

#### **4.3.1 Conceptions of Learning**

The students were asked about their learning through the statement “*When I can relate what I have been taught to the outside world*”. A total of 49.3% agreed that the item was frequently true of them and another 30.9% reported that the item was always true of them. It appeared that learning occurred when CHC learners were able to use what they had been taught in class and relate the concepts and theories to the outside world. It appeared that the students placed emphasis on their learning in which understanding concepts and theories was very important to them. Such learning would assist them to relate what they learnt in the classroom environment to the business world. The statement that “*Learning is when I can repeat something I have learnt*” had a response rate of 53.7% (frequently true) and 14.0% reported that the statement was always true of them. This response suggested that students' understanding of knowledge would provide them a better position to recall what they had learnt. Knowledge could be used to assist them in understanding concepts and theories and relate these to the outside world. While 41.2 % of the respondents said

that the statement “*Learning to me means making sure I remember things well, so I can recall*” was frequently true of them and another 19.1% reported that the statement was always true of them that they needed to remember well what they had learnt so that they were able to recall information.

The statement on the application of knowledge “*Building up knowledge by blending new facts and information*” gained a 48.5% and 33.1% response respectively indicating respondents agreed that the statement was frequently true or always true of them. They believed that they had learnt something if they were able to build new information by bringing in and synthesising new facts and information with what they understood that they had learnt if they were able to build new knowledge from what they had learnt. The response rate suggested that once students built new information from what they had learnt, it would then assist them to use the information to build new facts and information. The response rate to the statement “*Applying of knowledge to unfamiliar situation*” was 45.6% frequently true of me and 33.1% almost always true of me. The combined 97.7% response rate strongly suggested that the CHC learners had learnt to their satisfaction if they were able to see things in a different way. The respondents also believed that “*Learning to me means seeing things in a different and more meaningful way*”. The statement had a response rate of 51.1% (always true) and 32.4% agreed that the statement was frequently true of them. This showed that the respondents would go to the extent to learn beyond the classroom context such as using the unit textbook as this would help them to see things in a different and more meaningful way. Approximately, fifty four percent (53.7%) chose the statement “*Have made sense of the information*”. This statement was frequently true for them and 29.4% agreed that the statement was always true of them. The results showed that the respondents would make sure that they had made sense of all information they had learnt.

The **Means** for the items in the conceptions of learning category are summarised in Figure 4.1 and ranked. The higher Mean represent always or almost true agreement in response to the statements while the lower **Mean** represent never or rarely true or disagreement (4.00 is the highest Mean possible and 1.00 the lowest). “*Learning to me means being able to use the information I have acquired*” was ranked as the highest conception of CHC students’ learning. They believed that they had learnt

something if they were able to use the information they had acquired (Mean 3.37). From the **Means** analysis, the CHC learners noted the importance of understanding what is learnt. In-depth understanding of the theories and concepts will assist their learning process. Though they still memorised what they learnt, at the same time they will put in more effort to understand what they learnt and through this meaningful learning will assist the CHC learners to develop their higher order thinking skills. As mentioned in Chapter 2, the surface approach, deep approach and strategic approach to learning categorised different learning approaches. Most likely, here the CHC learners used the strategic approach as they were also concerned about their academic performance. The analysis again supported that the conceptions of learning is one of the factors which influenced the development of CHC learners' higher order thinking skills.

The respondents also agreed that “*Learning to me means seeing things in a different and more meaningful way*”. When they were able to use the information, they indicated that they would be able to see things in a different and more meaningful way (Mean 3.33) and be able to build knowledge by acquiring facts and information (Mean 3.20). The respondents perceived learning as “*Being able to build knowledge by acquiring facts, blending new facts, understanding new ideas and information and having made sense of information*” (Mean 3.11). They were able to “*Relate what have been taught to an unfamiliar context or situation*” (Mean 3.09) and “*Relate what has been taught to the outside world*” (Mean 3.10). However, participants ranked the items “*Having to repeat something I have learnt*” and the item on “*Making sure I remember things well, so I can recall*” (Mean 2.77 and 2.75 respectively) relatively lower than the other items. This suggested that CHC learners' perceptions towards learning were that learning was more than just memorising and remembering. The standard deviations for all the item of conceptions of learning were consistent with a range from 0.70 to 0.86 and indicated the responses to the items seemed to suggest that the same perception of what learning meant to students was held by most of them.

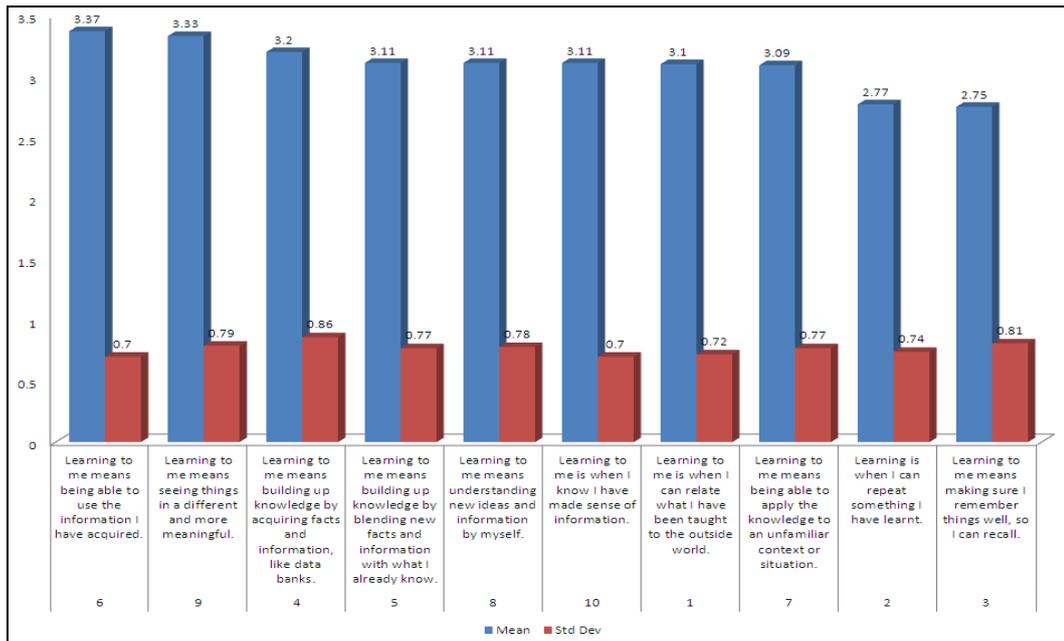


Figure 4.1. Analysis of Means - Conceptions of Learning (N=136)

In summary, CHC learners perceived learning as the ability to use information that they have learnt in building up new knowledge and blending the new knowledge with what they already knew. This new knowledge would help them to relate the information to the outside world through application of and analysing new information. Based on the analysis, it showed that CHC learners' perception of learning was one of the factors which influenced their learning process. Their perception of learning such as the ability to use information that they learnt, seeing things differently and building and blending new knowledge with what they have had would demand their higher order thinking skills. Thus the higher order thinking skills could be acquired through their approaches in their learning. The findings in this section have provided insight about the first research question. What CHC learners perceived of their learning will influence the way they learnt and the first element, that is, the conceptions of learning is one of the factors which influenced CHC learners in business curriculum in acquiring higher order thinking skills.

An analysis was also conducted to examine the correlation (factor analysis) between the three units used in this study and students' conceptions of learning. There was a strong positive relationship in terms of "***Building up knowledge by blending new facts and information with what I already know***" with students enrolled in the unit Business Policy 320 (0.644). The analysis showed that the third year students

perceived learning as their ability to build new knowledge through formulating new facts and information in addition to what they knew. The relationship was stronger for the respondents enrolled in the third year unit that they had learnt something if they were able to use the information that they had acquired. However, there seemed to be a weak relationship for the second year unit Strategic Marketing 310 (0.213) as compared to the first year unit Marketing 100 (0.454). This showed that the respondents enrolled in the second year unit perceived that they did not have much information upon which to build new knowledge and blend it with what they already knew.

Another strong positive relationship in the factors analysis was seen in Marketing 100 (0.602) in which the CHC learners perceived that “**Learning is seeing things in a different and more meaningful way**”. The first year CHC learners perceived that in business areas, it is important to see ideas from different perspectives. The analysis showed a weak relationship for respondents enrolled in Business Policy 320 and Strategic Marketing 310. The strong relationship in the first year unit could have been due to the design of the first year unit in which the students are expected to complete a marketing project. The assessment required students to use a real business situation as an example to complete a marketing plan. A good point to note here is that the content of the curriculum, especially the nature of an assessment piece, seemed to play a role in developing students’ critical thinking skills. The CHC learners enrolled in Business Policy 320, however, noted the fact that learning is the “**Ability to use the information**” (0.450) and “**Apply the knowledge**” (0.453) and is assessed with “**Which they can make sense of the information**” (0.422). The analysis showed that there was a relationship in the third year unit although the relationship was not that strong. It was noted from the second year unit, Strategic Marketing 310, that there was a weak relationship for the conceptions of learning. The lowest of the positive relationships was identified in Strategic Marketing 310 unit.. The analysis showed that the items for the conceptions of learning for the second year unit were from 0.023 to 0.377. The relationship between Strategic Marketing 310, where the respondents were from the second year, was very weak.

From the analysis, it can be concluded that there was no strong relationship between the conceptions of learning and the units that CHC students enrolled in except in the

third year unit. The relationship was stronger as compared to the other units. This perhaps explained how CHC students perceived that learning was not so much about what unit they were studying but more about prior factors before they embarked on their tertiary learning process. Factors such as their previous learning environments and the system of education they experienced before they entered the higher education learning process may have prevailed. Figure 4.2 summarises the factor analysis between the conceptions of learning and the units of study.

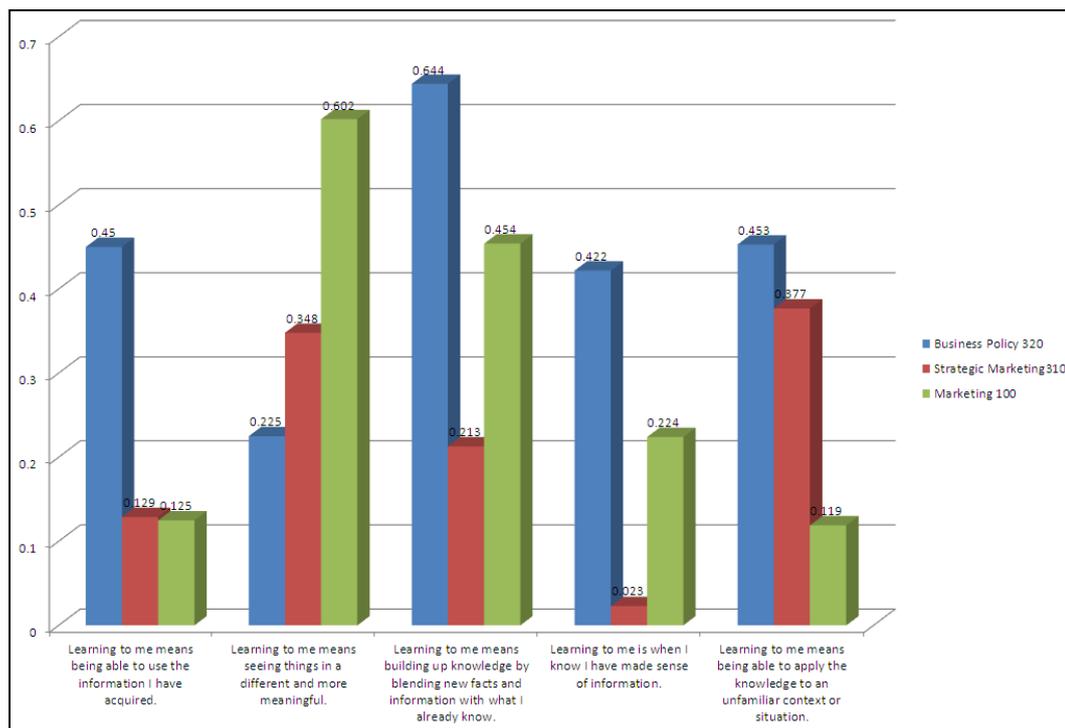


Figure 4.2. Factor Analysis - Conceptions of Learning

The relationship between the conceptions of learning and the Semester when the students were enrolled was not strong. This result highlighted that there was no relationship between the CHC learners' perception towards learning and any semester in which the students were enrolled.

#### 4.3.2 Approaches to Learning

The **Approaches to Learning** section of the questionnaire was used to find the students way of learning such as their surface versus deep approaches or strategies in their learning. The analysis assisted me in analysing their learning approaches and

this assisted me in developing the students' thinking skills. The students were asked about how they learnt - "***I learn by rote, going over and over the information until I know by heart***" - and 50% said that the statement was sometimes true of them. However, 39.7% said that the statement was frequently true of them. Only 13.2% of the respondents supported the statement that it was always true of them. The students also indicated that it was important to relate one unit to another. Approximately forty eight per cent (47.8%) frequently agreed that it was important to relate one unit to that of another whilst 38.2% frequently agreed that they "***Generally restrict their studies to what is specifically set***". The students also agreed (40.4%) that "***New topics are interesting and that often spend extra time***" trying to obtain more information. Only a few agreed (12.5%) that they would spend extra time to obtain more information. Nevertheless, 32.4% of the respondents (given other incentives) "***Would like to see the information that they gather from their learning applied in the future***". In the process of their learning, the students were asked about "***What they do with the information and what they do after the classroom process***" and 50% of them reported that they would recall the information they had learnt.

Figure 4.3 summarises the **Means** for the **Approaches to Learning**. Statements pertaining to how they learnt were embedded into the items. The majority of respondents ranked that they would often "***Think about a real life situation to help them to better understand what they had learnt***" (Mean 3.18). The participants also agreed that they "***Would always think on how the new information can be applied in the future***" (Mean 3.04) and to use different learning strategies to help them to better understand what they had learnt. The participants ranked low whether they "***Accepted what the lecturers said and no questions asked***" (Mean 2.70). They "***Seemed not to be enthusiastic about new topics***" (Mean 2.61), being "***A rote learner***" (Mean 2.55) and "***Were not constant in their study***" (Mean 2.39). The participants also ranked lowest "***Restricting their study and not doing extra***" (Mean 2.29). The standard deviations for all the items of approaches to learning were consistent with a range from 0.75 to 0.86. The analysis (approaches to learning) showed that there was a strong link between what the CHC learners' perceived learning to be and their approaches to learning.

Based on the above analysis, it can be concluded that any new knowledge acquired would help the CHC learners to relate information to the outside world through application and analysis. They used real life examples to help them in understanding what they had learnt. They would try to understand in-depth knowledge by connecting it with what happened in the real business situation. They applied more of the deep approach to learning instead of the surface approach. Different learning strategies were used to help them better understand what they had learnt. The approaches to learning results showed that the CHC learners, to some extent, applied critical thinking skills in their approaches to learning. They were not in favour of accepting what the lecturers said and would seek clarification. They did not resort to memorisation and were constant in their study. However, they were not enthusiastic about exploring new topics.

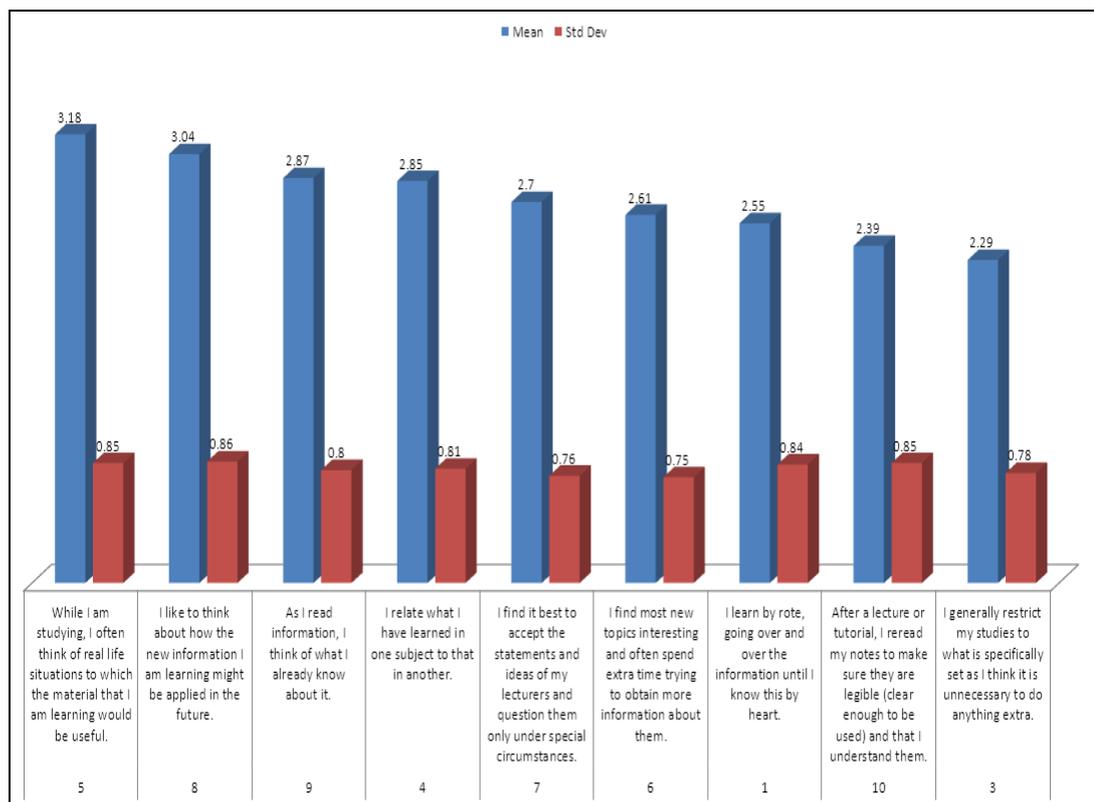


Figure 4.3. Analysis of Means - Approaches to Learning (N=136)

The findings in this section also have addressed the first research question. Besides, the conceptions of learning, approaches to learning is another element that played an important role in developing CHC learners' higher order thinking skills. It is worth mentioning that slowly CHC learners were moving away from just memorising or

rote learning the information. They were beginning to realise that it was important to understand and memorising was just not enough in their learning process. However, instructional approaches played an important role in the process. In this case, the role of a teacher in the classroom had an influence in the development of the CHC higher order thinking skills. Due to their language capability, effort from the teacher was important to assist the CHC learners. They were more open to seek clarification from me as their teacher within a supportive environment.

Further analysis was undertaken to look at the relationship (factor analysis) between the approaches to learning and the units students studied. There was a relationship between the third year unit Business Policy 320 and the approaches to learning. The CHC learners enrolled in this unit agreed that most new topics were interesting and they would spend extra time to obtain more information (0.416). The relationship was, however, weak for the other two units (Marketing 100 - 0.202 and Strategic Marketing 310 - 0.162). On one hand, the CHC learners enrolled in Strategic Marketing 310 had a substantial background and knowledge of the basic concept and theories embedded in the unit. Figure 4.4 summarises the factor analysis between the approaches to learning and the units students studied.

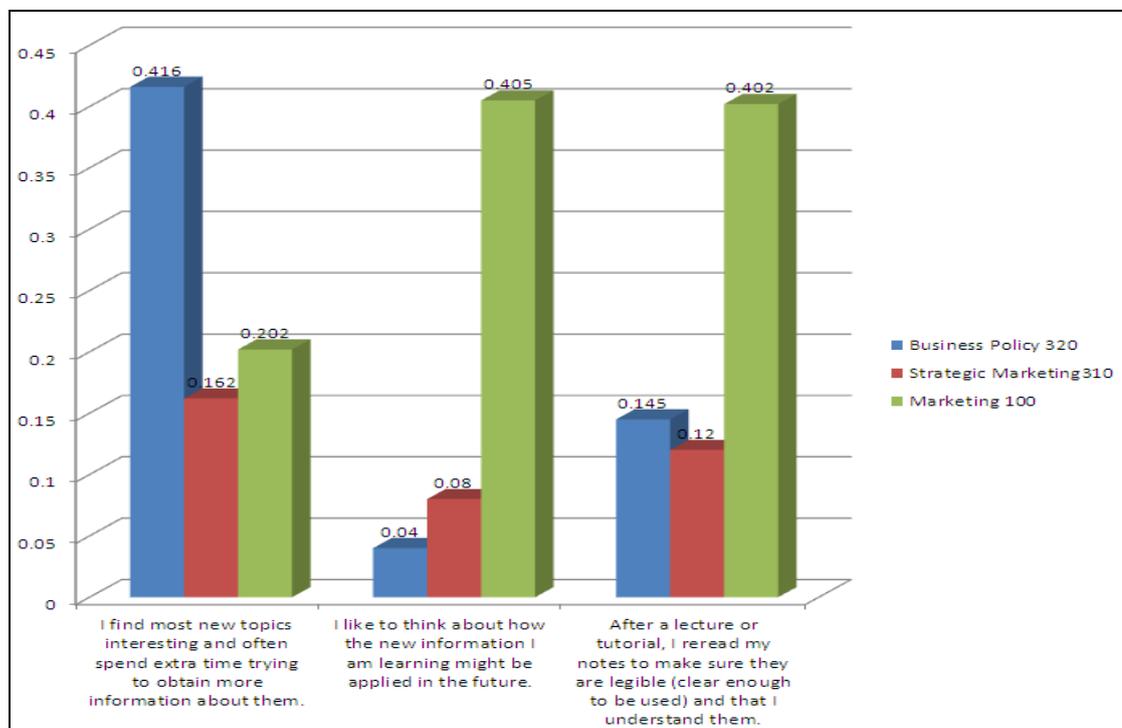


Figure 4.4. Factor Analysis - Approaches to Learning

The assessment for the unit may have been one of the factors that influenced the way they learnt. On the other hand, the Marketing 100 CHC learners learnt in a way which would enable them to use and apply the knowledge when they went into the workforce: “*How the new information might be applied in the future*” (0.405). They would do their revision “*To make sure that the knowledge is clear enough to be used*” (0.402).

As mentioned earlier, the learning process to develop higher order thinking skills for CHC learners seemed to take much longer. The CHC learners took a longer time often because English was their second language to understand a concept before they could apply all the theories and concepts with real business situations. The respondents agreed that the unit outcomes helped them to understand the unit matter. The nature of a unit which integrates all other business related areas (management, finance, accounting, and economics) actually helped to improve the CHC learners’ analytical thinking skills.

#### **4.3.3 Levels of Learning Outcomes (Higher Order Thinking Skills)**

The students were asked about their levels of higher order thinking skills. This section of the questionnaire identified how the intended learning outcomes of the units influenced students’ learning. Out of the total respondents 49.3% showed that the statement was frequently true of them - the “*Unit has helped them to acquire knowledge from the strategy and international business discipline*”. A total of 60.3% respondents said that “*The unit has helped them to obtain an understanding of the selected models*” (concepts and theories) was frequently true of them. The unit also had “*Helped them to integrate different business perspectives*” because 47.8% agreed that the statement was frequently true of them. Further, 43.4% said that the statement, “*Helped them to think critically and apply the theories*” was frequently true and more than 40% said that the statement was always true of them. The students agreed that the “*Unit has helped to improve either written or oral communication skills*”. More than 50% (frequently true) said that the unit helped them to evaluate when to use problem-solving processes and apply these

appropriately. In terms of perceptions of higher order thinking skills, the participants ranked highly (Means 3.15 to 3.36) on the following:

- Think more critically;
- Help to acquire knowledge;
- Help to manage projects effectively;
- Help to think and apply theories and concepts;
- Learn how to learn.

Based on the intended learning outcomes of the units, the participants agreed that their work had somehow helped them to think critically, acquire knowledge, and manage projects effectively. They were able to think about and apply the theories and concepts learnt and also could learn how to learn. The assessment were designed in such a way that the participants were able to achieve some or the entire set of learning outcomes. The participants agreed that the units had helped them to evaluate when to use problem solving, arguments, critical and creative thinking and were able to integrate different business areas. However, the units were not able to help them to improve their written and communication skills (Mean 2.98) which they ranked the lowest.

Research question three was: How do CHC learners' approaches to learning impact on their learning outcomes in marketing units? As noted in the levels of learning outcomes analysis, the units helped them in their critical thinking skills, acquire knowledge and they were able to apply the knowledge. The two elements, conceptions of learning and approaches to learning, had helped them in their process of learning. The theory of 'constructive alignment' highlighted that in achieving the alignment, it was worth examining how the curriculum matched the student capability and the environment in which they were involved. Thus, in this case, the assessment task played an important role in developing students' skills, both soft skills and hard skills. The assessment tasks designed in the three units had somehow influenced CHC learners' approaches to learning in their development of higher order thinking skills. The above findings work towards addressing the research question that the approaches to learning have an impact on their unit learning

outcomes. Figure 4.5 summarises the means and standard deviations for the levels of higher order thinking skills section of the questionnaire.

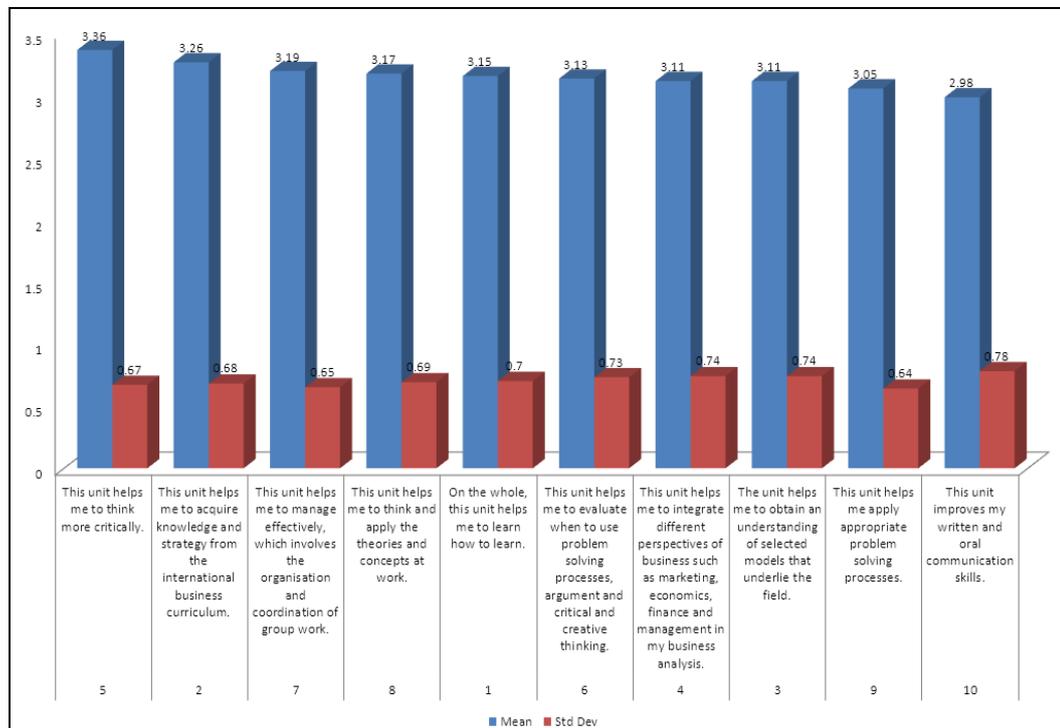


Figure 4.5. Analysis of Means – Higher Order Thinking Skills (N=136)

An analysis was conducted to examine the relationship (factor analysis) between the levels of learning outcomes (in terms of the higher order thinking skills) and the units students studied. There was a strong relationship between the second year Strategic Marketing 310 unit and the levels of learning outcomes. The CHC learners agreed the unit has helped them to obtain an understanding of the selected models that underlie the field (0.522). With increased in-depth understanding it had further helped them to apply and analyse concepts learnt. The CHC learners enrolled in Strategic Marketing 310 and Marketing 100 agreed that the units helped them to acquire knowledge from the strategy and international business discipline. They needed an in-depth knowledge about these ideas and not just learning by rote to be able to do well in the units. With in-depth knowledge, the CHC learners managed to integrate different perspectives of the business area. Students also identified their ability to evaluate and use the problem solving processes, arguments and to criticise and think creatively. The CHC learners enrolled in Marketing 100 valued the team effort which in turn helped them to improve their ability to think and apply the concepts. The concept of cooperative learning enabled the first year CHC learners to

improve their critical thinking skills. Thus, assessment which involved a group project helped the CHC learners in their learning process. Figure 4.6 summarises the factor analysis between the levels of learning outcomes and the three marketing units.

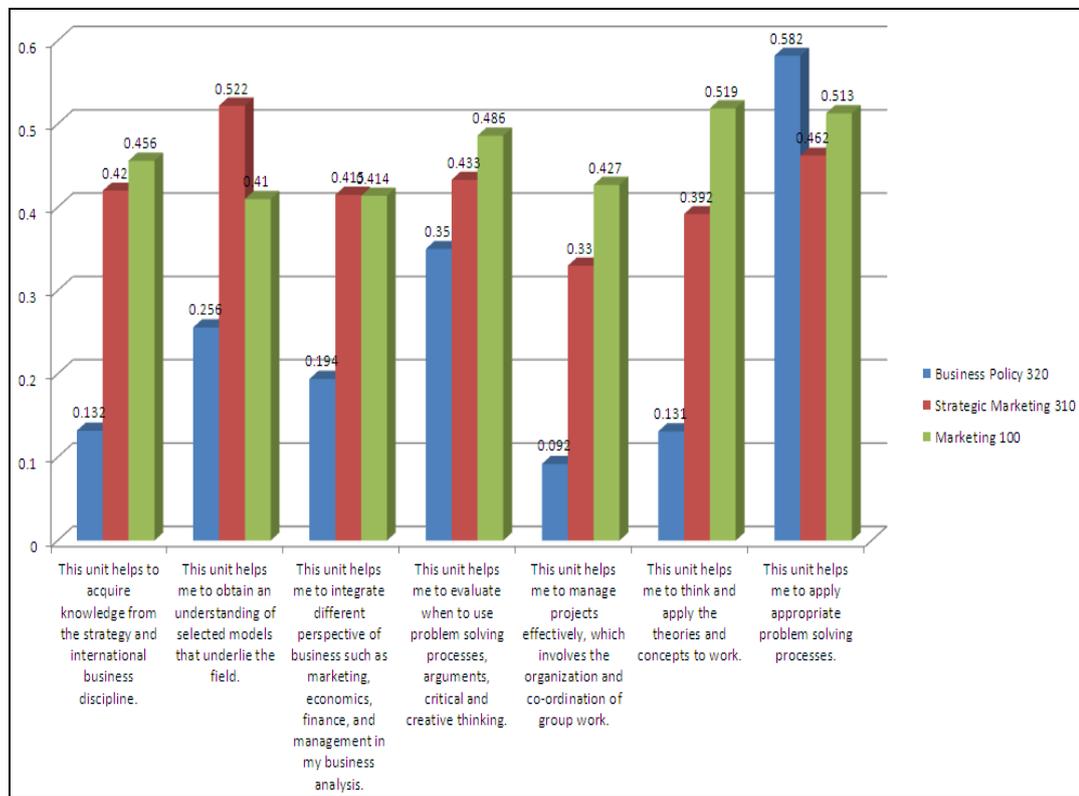


Figure 4.6. Factor Analysis – Higher Order Thinking Skills

#### 4.4 Cross Tabulation between Semesters

Detailed of the analysis of the cross tabulation by Semesters is provided in Appendix G. This Section indicates the cross tabulations between Semesters and conceptions of learning, approaches to learning and students acquisitions of higher order thinking skills.

##### 4.4.1 Conceptions of Learning

The cross tabulation between Semester 1 and 2 (Year 1, 2 and 3) results does not show large differences in most of the items for the conception of learning in both the Semester 1 and 2 (58.5% for Semester 1 and 40.8% for Semester 2). The CHC

learners believed that they had learnt something if they were able to relate what had been taught with the outside world. The other 27.7% (Semester 1) and 33.8% (Semester 2) responded that the statement was always true of them. The Semester 2 students agreed (the statement was frequently true of them) that “***They could repeat something that they had learnt***” (57.7%). The percentage for Semester 1 was 49.2%. The other 13.8% (Semester 1) and 14.1% (Semester 2) respondents responded that the statement was always true of them.

The students from both Semesters (frequently true of them) did have the same perception of their learning “***Making sure they remember things well***” (35.4% and 46.5% respectively). The response was quite low (14.1%) for Semester 2 students who agreed that the statement was always true of them. The students perceived that “***Learning is when they were able to build knowledge by acquiring facts and information***”. The frequency (always true of them) was similar (46.2% and 47.9% respectively). The students also agreed that learning was not just acquiring facts (frequently true of them) but was also when they were able to blend their knowledge with new facts and information (46.2% and 50.7% respectively). The frequency for the frequently true response was much lower for this item (26.2% and 31% respectively).

The students agreed (always true of them) that learning was when they were able to use the information they had acquired (46.2% for Semester 1 and 53.5% for Semester 2). The students agreed (40% and 50.7% respectively-frequently true of them) that learning was when they were able “***To apply the knowledge to an unfamiliar situation***”. However, the frequency was low (38.5% and 31%-always true of them) in terms of “***Understanding new ideas and information by me***”. The CHC learners for both Semesters supported the statement (always true of them) that “***Learning is seeing things in a different and more meaningful way***” (50.8% in Semester 1 and 52.5% in Semester 2) and when they were able to make sense of information (49.2% in Semester 1 and 57.7% in Semester 2-frequently true of them). From the data, it seemed that the CHC learners viewed learning as a process to use knowledge (concepts and theories) that they had acquired.

#### 4.4.2 Approaches to Learning

A cross-tabulation analysis was also conducted on the students' approaches to learning and the Semesters in which they were enrolled. The students' responded (36.9% in Semester 1 and 42.3% in Semester 2) that the statement was frequently true of them regarding rote learning. Students from both Semesters responded (the statement is always true of them) 16.9% and 9.9% respectively to the statement that they "*Always rote learn by going over and over the information until I know this by heart*".

The students from Semester 1 and 2 responded (frequently true of them) at 41.5% and 50.7% levels when asked about the different learning approaches which they used depending on what they learnt. The Semester 1 students agreed (33.8%) that the statement was always true of them that they used different learning approaches. The students agreed that they did not generally restrict their studies to what was specifically set. Only 6.2% and 1.4% agreed (always true of them) that they restricted their studies to what was specifically set as they agreed it was unnecessary to do anything extra.

The students usually related what they had learnt in one unit to that in another. In the two Semester responses, 46.2% and 49.3% agreed (frequently true of them) that they would relate what they had learnt in one unit with that of another. While they were studying, they often thought of real life situations in relations to what they learnt. The other 26.2% and 16.9% responded always true to the statement.

Students enrolled in Semester 2 (52.1% -always true of them) always linked what they learnt in class (theories and concepts) with real life situations as compared to Semester 1 students (30.8%). The other 44.6% and 35.2% responded that it was frequently true of them. Students from both Semesters (13.8% and 11.3% -always true of them) responded when asked about studying new topics and spending their extra time to obtain more information. They did not spend extra time to obtain more information. However, 35.4% (Semester 1) and 45.1% (Semester 2) agreed (always true of them) that they spent extra time to search for new information.

The students from Semester 1 and 2 agreed (frequently true of them -50.8% and 52.1%) that it was best to accept the statement and ideas of their lecturers but would ask questions when necessary. Only a few of the students (Semester 1- 3.1% and Semester 2- 8.5%) did not accept the statement and ideas of their lecturers and would question them when necessary. The other 13.8% and 11.3% of the respondents agreed that the statement “*To accept the statement from the lecturer and not questioning them*” was always true of them.

The Semester 1 students (44.6%) and Semester 2 (54.9%) agreed that the statement was frequently true of them that as they read the information they would always thought of what they already know about. While 26.2% (Semester 1) and 16.9% (Semester 2) agreed that the statement is always true of them.

#### **4.4.3 Levels of Learning Outcomes (Higher Order Thinking Skills)**

In terms of the students’ **Level of Learning Outcomes**, the students agreed (statement is frequently true of them). The units had helped them to learn how to learn (56.9% in Semester 1 and 43.7% in Semester 2). The other response was 35.4% from Semester 1 and 31% from Semester 2 students who agreed that the statement was always true of them: the units helped them learn how to learn. The response was 53.8% for Semester 1 and 45.1% for Semester 2 agreed (statement is frequently true of them) that the units had helped them to acquire knowledge. Apart from that, the respondents (41.5% and 36.6%) agreed that the statement was always true of them. Besides acquiring knowledge, the units also helped them in understanding information (64.6% in Semester 1 and 56.3% in Semester 2 agreed that the statement was frequently true of them). Out of the total respondents, only 30.8% and 21.1% agreed (statement was always true of them) that the units had provided them with an understanding of the selected business models.

The students agreed (always true of them) that the three units had helped them to think critically (53.8% in Semester 1 and 40.8% in Semester 2). Following that, the students would be able to use their critical thinking skills to solve problems (50.8% and 52.1%-frequently true of them). About 35% (Semester 1 35.4%) and 30% (Semester 2 29.6%) agreed that the statement was always true of them. Not only did

the units help students to solve problems, but also they assisted the students to manage projects effectively and coordinate their work efficiently (56.9% in Semester 1 and 50.7% in Semester 2 -frequently true of them).

The three units helped the students to apply problem solving processes (63.1% in Semester 1 and 54.9% in Semester 2 - frequently true of them) and 26.2% (Semester 1) and 21.1% (Semester 2) of the respondents agreed that the statement was always true of them. The three units also improved the students' written and oral communication skills. The respondents in Semester 2 agreed (29.6%) that the statement was always true of them while 47.7% of students in Semester 1 agreed that the statement was frequently true of them.

Overall, between the two Semesters, there was not a remarkable difference in the CHC learners' responses to questionnaire items in terms of the conceptions of learning, approaches to learning and learning outcomes. The CHC learners from both Semesters perceived that learning was when they were able to use the information and apply the concepts and theories to current real life situations. By understanding what have they been taught, it provided them better knowledge of the unit matter although they still needed to memorise the facts. The information had to be retained for them to use and apply it in current situations.

The approach which they used in their learning was to relate what they learnt in one unit with that of the other. The CHC learners used different approaches depending on the type of assessment that was given to them. However, 50% of the CHC learners still thought that they rote learnt. This was because they needed to learn by heart the information before applying the concepts and theories. These findings were in line with Saljo's study on conceptions of learning (1976). The study found that while students increased their knowledge, it was through memorising and acquisition of facts. However, from the results of this study, students indicated that they used their time to find extra information but because they were dependence on their rote learning style it lowered their involvement in classroom discussion. The assessment designed for the units had improved their learning outcomes (although is still critical in certain areas). Fifty percent of the CHC learners from both Semesters managed to

learn something from what had been taught to them and acquire knowledge. Few said that the three units helped them to think critically.

Although the findings appeared to be positive, there were still certain areas of CHC learning which required deeper examination. How CHC learners' thinking skills could be developed further to a higher level without being dependent too much on their rote learning strategies was an important aspect to further research in this study. The qualitative approach in the study was focused to analyse further the three elements in the questionnaire.

#### **4.5 Cross Tabulation between the Three Units**

Detailed of the analysis of the cross tabulation by units is provided in Appendix F. This Section indicates the cross tabulations between the three units and conceptions of learning, approaches to learning and students acquisitions of higher order thinking skills.

##### **4.5.1 Conceptions of Learning**

Data were analysed by **cross tabulation between three units taken** by the respondents. The students represented different Semesters in their study plan. Business Policy 320 was comprised of Year 3 students (graduating students); Strategic Marketing 310 was comprised of Year 2 students. This unit is a pre-requisite to Business Policy 320 unit. Marketing 100 comprised of Year 1 students (enrolled in Semester 1 and 2). Students enrolled in Business Policy 320 agreed (25% - was always true of them) that learning to them was when they were able to relate what have been taught with the outside world. The Year 2 students also agreed (36.4%) it was frequently true of them as did the Marketing 100 students (48.3%). The students in all the three units agreed (almost true of them) that learning was when they were able to repeat what they had learnt (response rate between 20% - 40%). However, few responded (11% - 15.6%) to the item as 'always true' in terms of repeating what they have learnt.

The response rate again was similar among the three units concerning 'repeating' what they had learnt. In terms of 'remembering' what they have learnt a response rate was seen in both the statement of frequently true and sometime true (between 30% - 40%). The students responded fairly on the item about knowledge and its relation to acquiring and building new knowledge by blending newly acquired information. The students always perceived that they had learnt if they were able to acquire the knowledge (40.6%, 42.7% and 52.3%). Approximately 31% (31.3%) of the Business Policy 320 students sometimes thought that they had learnt if they were able to acquire new knowledge.

The Marketing 100 students (Year One) agreed it was frequently true of them (56.7%) that they had learnt if they were able to build up knowledge by blending new facts and information. The students enrolled in Strategic Marketing 310 (always true of them) agreed with the statement. The Third Year students agreement (always true of them - 61.4%) supported the fact that they learnt something if they were able to apply what they had learnt. Fifty per cent of the students in Marketing 100 agreed that (frequently true of them) learning was being able to apply knowledge to an unfamiliar situation. However, 23.3% of the Marketing 100 students agreed (sometimes true of them) with the statement. In Business Policy 320, 43.8% agreed (always true of them) that learning to them is to be able to understand new ideas and information by themselves. Year 1 students frequently agreed (48.3%) with the statement. Year 3 and Year 2 students agreed (the statement is always true of them) that learning was when they were able to see things in a different and more meaningful way. The students also perceived that learning was the ability to make sense of information.

#### **4.5.2 Approaches to Learning**

In terms of approaches to learning, Year 1 students (41.7%) responded to the statement on 'rote learning'. The students enrolled in the unit agreed (frequently true of them) with the statement. Some of the students in the Year 2 and 3 (30% and above) still believed that they rote learnt. A small percentage was noted supporting the statement (10% - 16%) across the units. The majority of the students enrolled in the three units agreed it was frequently true of them (between 40% - 48%) that they

used different ways to learn depending on what they had to learn. A number of the respondents from Year 2 and 3 agreed (always true of them) that they used different techniques in their learning (31.3% and 31.8%). Approximately twenty percent across the three units sometimes used different techniques in their learning.

Apart from using different techniques in their learning, quite a number of the respondents (46.9%, 38.3% and 31.8 %) restrict their studies to what was specifically set and would not do extra in their learning. However, 31.3 % in Business Policy 320, 48.3% in Marketing 100 and 40.9% in Strategic Marketing 310 of the respondents thought that it was not necessary to restrict their learning. The students across the three units related what they had learnt in one unit with the other. Fifty percent of the Year 3 students used the strategy in their learning and so did the Year 2 students (56.8%). Forty percent of the Year 1 students also used the strategy in their learning. The students not only related one unit with the other but also related the theories and concepts learnt with the real life situations. It was identified that across the three units, 31.4%, 48.3% and 40.9% of the students used the learning strategy to relate information with outside world situations although Year 1 Marketing 100 students did not use the strategy as often as their older peers.

The students taking the three units, Marketing 100 (43.3%), Strategic Marketing 310 (43.2%) and Business Policy 320 (43.8%) found that the new topics were interesting. They would spend extra time to obtain new information. The majority of the students across the three units accepted the word of lecturers and would only ask them under special circumstances for clarification of information. The majority of the students frequently thought about how new information could be applied in the future. Students enrolled in the three units frequently agreed that they would reflect on what they already knew during the process of their learning. However, the majority of the students often would do their revision by rote to understand the content (Marketing 100-46.7%, Strategic Marketing 310- 36.4% and Business Policy 320-43.8%).

#### **4.5.3 Levels of Learning Outcomes (Higher Order Thinking Skills)**

In terms of the students' levels of learning outcomes, students enrolled in Business Policy 320 agreed that the unit helped them to acquire knowledge from the strategy

and international business discipline. The students enrolled in both Marketing 100 and Strategic Marketing 310 agreed (frequently true of them) with the statement (48.3% and 59.1%). However, only 21.7% of the Marketing 100 students agreed (sometimes true of them) with the statement. The students enrolled in the three units agreed (frequently true of them) that the units had helped them to obtain an understanding of the selected models that underlie the field (63.3% - Marketing 100; 50% - Strategic Marketing 310 and 68.8% - Business Policy 320). Year 2 students enrolled in Strategic Marketing 310 agreed (always true of them) that the unit had helped them to obtain an understanding of the selected models (40.9%).

Besides obtaining an understanding of concepts and theories, the CHC learners across the three units agreed (frequently true) that they were able to integrate different business perspectives (46.7% - Marketing 100; 47.7% - Strategic Marketing 310 and 50%, Business Policy 320). About 30% across the three units agreed (always true of them) that they were able to integrate different business perspectives. Both the CHC learners enrolled in Business Policy 320 and Strategic Marketing 310 agreed that they were able to think more critically. Students enrolled in Marketing 100 agreed (frequently true of them) with the statement. A total of 10% - 12% of the respondents did not always agree that they would think more critically. The students enrolled in Business Policy 320 agreed that they would evaluate when to use the problem solving processes (50%) and managed the project given to them effectively. The Year 1 (58.3%) and Year 2 students (52.3%) agreed that statement was frequently true of them.

The respondents across the three units (47.7% - 50.0%) agreed (frequently true) with the statement, that the units had helped them to think and apply theories and concepts to work situations. All the students enrolled in the three units agreed (frequently true) that they could apply appropriate problem solving processes. Twenty five percent of the students enrolled in Marketing 100 sometimes agreed with the statement. The three units also helped to improve students' oral and written communication skills. The students across the units agreed that the statement was frequently true of them (45.5% - 46.9%).

Based on the above analysis, the CHC learners enrolled in the three units still thought it was important to repeat what they had learnt. Repeating what they had learnt helped them to further understand concepts and theories. The CHC learners tended to memorise while reading over and over again what they needed to learn. Though they used the repeating techniques, the CHC learners from Year 2 and Year 3 used the knowledge which they acquired to apply it to business situations. This was not as evident with Year One CHC learners. Most of the Year One CHC learners needed to memorise and repeat what they had learnt so that they would be able to apply the knowledge, usually in assessment tasks associated with the unit.

The Approaches to Learning pattern is similar across the three units. Based on what they perceived to be learning, the CHC learners still rote learnt although sometimes their approaches changed depending on what they had to learn. The type of assessment for the unit played a vital role in the CHC learner's approaches to learning and this issue will be elaborated upon in Chapter 5. The CHC learners normally related what they had learnt to the outside world. The assessment for the three units required the CHC learners to apply what they had learnt in real business situations and this was a requirement of the first year unit. Although a participatory pedagogy was applicable for the three units, it seemed not much discussion happened in the three units as the CHC learners preferred to accept the word of the lecturers. Repeating to learn during the learning process had slowed down the process of understanding, thus the motivation to participate in any classroom discussion was very low.

Fear of failure could be one of the reasons why the CHC learners take learning very seriously. They may not be able to analyse critically the information but the assessment activities for the three units had taught the CHC learners to learn how to learn (approaches which they used in their learning). The CHC learners responded positively to the unit learning outcomes which assisted them in developing their higher order thinking skills. They understood the concepts and theories which made it easier for them to integrate different business perspectives and think critically although majority of the students were from the third year unit.

#### 4.6 Summary of the Analysis

The analysis of the questionnaire results was focussed on the working hypothesis that CHC learners' perception will have an impact on their learning strategies and the teacher's classroom pedagogy. In summary, the three elements used in the questionnaire - the conceptions of learning, approaches to learning and the levels of learning outcomes - had influenced CHC learners' development of higher order thinking skills to some extent. The significant result from the questionnaire was that CHC learner's perception of learning (what they think of learning) was a motivating factor for them to move ahead in their learning process. The CHC learners' conceptions of learning aligned with Saljo's (1979) classification of conceptions of learning. Learning to CHC learners involved in the study was:

- a **quantitative increase in knowledge** (acquiring of knowledge);
- **memorising** (storing information);
- **acquiring facts** (skills and methods that can be retained and used as necessary);
- **making sense** (relating parts of the unit matter to each other and to the real world); and
- **interpreting** and understanding reality in a different way.

The CHC learners acquired knowledge through the process of learning and memorising what had been taught so that they could retain what was learnt and relate it to the real world. Approaches to learning were confirmed as another factor which influenced the development of CHC learners' higher order thinking skills. Between the approaches to learning (Marton and Saljo, 1976; Ramsden 1992; Biggs, 1987, 1993; and Entwistle, 1981) about deep, surface and strategic approaches to learning, the CHC learners involved in the study used a surface approach. However, the effort made by me as the teacher in the three units was to engage the surface learners in more complex contextualising exercises, not just memorising the facts, but assisting the CHC learners to relate previous knowledge to new knowledge and different business areas. The motivation to improve their performance based on the assessment activities shaped the CHC learners' learning approaches. With a teaching

pedagogy to support learning, the CHC learners managed to develop their higher order thinking skills to a certain extent. The learning outcomes for the units were achieved to some extent but it was clearly seen in students' assessment results that their achievements were at the middle level of the higher order thinking skills hierarchy. Thus, the analysis addressed the research questions that conceptions of learning and approaches to learning were factors that influenced the ways in which CHC learners in business curriculum acquired higher order thinking skills. The teacher played a vital role in shaping their minds towards learning. The teaching styles and the conduct of lectures and tutorials helped to develop their level of thinking. The CHC learners' style of learning also had an impact on their learning outcomes and the assessment practices supported the CHC learners thinking development. The CHC learners' learning style will be further discussed in Chapter Five.

#### **4.7 Summary of the Chapter**

The analysis has shown some relationship between the conceptions of learning and the learning approaches that influenced the development of CHC learner's higher order thinking skills. However, the relationship was not strong as the findings were averages based on mean scores which were between 2.7- 3.0. A mean score of 3 out of 4 is considered high. The mean score (highest) for the conceptions of learning items was 3.37 where the CHC learners perceived learning was when they were able to use the information that they acquired. The lowest mean was 2.75 (making sure I remember things well, so that I can recall). The highest mean score for the approaches to learning item was 3.18 where the learners often thought of real life situations to relate to while they are learning. This suggested that the items from the high mean scores for both the conceptions of learning and approaches to learning influenced the development of students' critical thinking skills and would be factors that could help to further develop their critical thinking skills. The same trend was seen in the mean scores for levels of learning outcomes (2.98 to 3.36). The highest mean score (3.36) was shown in item 1 (the unit helps me to think more critically). This suggested that the assessment activities influenced critical thinking skills development of CHC learners.

The factor analysis of the conceptions of learning and the units taken showed that there was a weak positive (0.119 to 0.644) relationship between the units and how they perceived learning. In the third year (Business Policy 320) CHC learners perceived learning (0.644) as a process where they could build new facts and information based on their current knowledge. The CHC learner's perception of learning suggested that as they move to a higher level of study (third year) having to acquire the higher order thinking skills was significantly important in their learning and teaching process. The first year students enrolled in Marketing 100 also agreed (0.454) that learning was when they were able to build new facts and information. In terms of the approaches to learning, the study demonstrated a weak positive (0.080-0.416) relationship between the units and students' approaches to learning. The third year CHC learners found that most of the new topics that they learnt were very interesting and would spend extra time to read and obtain more information. This concurred with their perception of learning (learning is when they are able to build new facts and new information). There was also a weak positive (0.092- 0.582) relationship between the units and the levels of learning outcomes. The CHC learners enrolled in the three units agreed that the units helped them to apply the appropriate problem solving processes (0.462- 0.582).

There were not a big difference in terms of the Semesters of study and the CHC learners' perceptions of learning. Most of them (40% - 57%) perceived learning as the process of acquiring knowledge and using the concepts and theories to relate to the real business situations. The CHC learners enrolled in the three units agreed that it was still important for them to rote learn by repeating in order to remember the concepts and theories taught. Their approaches varied depending on the assessment type and what they had to learn. Further analysis to identify other factors which might limit the development of the CHC learners thinking skills are detailed in Chapter Five.

The questionnaire results showed that in the process of their learning using a strategy of strategic approach was used mostly by third year students. In this case, the students connected what they had learnt with the real business world. Nevertheless, CHC learners still relied on memorisation in their learning process. Even though the CHC learners memorised the information, their 'rote learning' theory was not just

about memorising. It seemed students' approach in memorising was more about their limitation in the use of English language. The memorisation techniques assisted the CHC learners to grasp the main idea which then enabled them to recall what they had learnt and only then would the information be brought to bear on further elaboration of new ideas.

# CHAPTER FIVE

## Interviews, Observations, Blogs and Curriculum Design

### 5.0 Introduction

The summary of the quantitative analysis in Chapter Four showed that the three elements used in the study, the conceptions of learning, approaches to learning and the levels of learning outcomes (levels of higher order thinking skills), had influenced CHC learners' development of higher order thinking skills to some extent. The CHC learners' perceptions of learning, that is, what they think of learning, was one of the main motivating factors for them to move ahead in their learning process.

Besides the conceptions of learning, approaches to learning was another set of factors which helped the CHC learners involved in the study to develop their higher order thinking skills. The effort made by the teacher was to engage the surface learners into more complex contextualised class exercises by not just memorising the facts but assisting the CHC learners to relate their prior knowledge to new knowledge and relate this to different business areas. The motivation to improve their performance based on the assessment activities shaped the CHC learners' learning approaches. The teacher also played a vital role in shaping their minds towards learning. With the teaching pedagogy to support learning, the CHC learners have managed to improve their higher order thinking skills. The teaching styles and the conduct of the lecture and tutorial helped to develop their level of thinking. Students to some extent achieved the unit learning outcomes but it was more seen at the middle level of the higher order thinking skills hierarchy.

This Chapter is concerned with Phase Three and Four of the research design and is focussed on the analysis of the ethnographic techniques adopted in the study. Each Phase, once again, was guided by working hypotheses. Further to the quantitative data collected, structured focus group interviews were conducted to identify other situational factors which might influence CHC learners' learning perceptions and the learning strategies they used. Besides the structured interviews, other data were

collected and analysed through classroom observation (using videos) and learners' learning journals posted in the researcher's blog (littledinosaur@blogspot.com). The classroom observations were used based on my researcher's Action Classroom Research (see **Appendix C**) protocol as one of the process for continuous improvement in teaching. The working hypothesis for Phase Three of the study was that a teacher's classroom pedagogy and other situational factors do have an impact on CHC learners' perceptions.

### **5.1 Structured Focus Group Interviews**

Focus group interviews were chosen as the method of conducting interviews. The participants for the focus group interviews were selected from the students who had responded to the questionnaire. The qualitative data presented in this Section emerged in terms of students' responses to the questions asked during the structured interview sessions. The structured interview sessions assisted me to gather more information which was not revealed in the questionnaire. The structured group interview sessions were conducted throughout the period of the study (refer to Chapter 3, Table 3.5 and Table 3.8). The sessions were conducted twice in a semester. The recorded interviews were coded using Microsoft Word. The analysis was grouped based on semesters as the interviews involved different groups of students. However, illustrative interviewee comments are used in this Section to exemplify the data analysis. Different interviewees are denoted by the symbol R and so remain anonymous. The focus group interview data were transcribed by segmenting the data according to the themes mentioned below. These were

- 1) CHC learners' conceptions of the way they learnt.
- 2) CHC learners' use of higher order thinking skills and the ways in which they acquired these in marketing units.
- 3) The best approaches to learning which impact on CHC learners' learning outcomes.
- 4) Planning for teaching, learning and assessment to accommodate the development of higher order thinking skills of CHC learners.

Focus groups were formed in Semester 1 2006 based on the questionnaire respondents who participated in this study and they were selected based on their availability for the interviews. The focus group participants were then briefed on the protocols of the interview. The interview sessions were carried out separately based on the units taken by the students. The structured interview questions (see Table 3.4) were designed based on the feedback on the survey that was conducted in 2005. The second round focus group interview was conducted using the same questionnaire in Semester 2 2006. This was to make sure that the number of interview participants was sufficient to represent the population of CHC learners taking the three units Marketing 100, Strategic Marketing 310 and Business Policy 320.

As illustrated in Figure 1.1, the study was conceptualised around three themes in terms of CHC learners and their thinking. The themes were:

1. The CHC learners' conceptions of their own learning (conceptions of learning);
2. The CHC learners' approaches to learning (approaches to learning); and
3. The teaching approaches, including assessment that enabled CHC learners to acquire and use higher order thinking skills in marketing units (levels of learning outcomes).

Thus, a decision tree model (see Figure 5.1) was applied to overlay the qualitative data to reduce the amount of data collected and to organise the analysis. The analysis supported addressing the research questions stated elsewhere. The following section provides further discussion on the analysis using the decision tree-CHC learners' higher order thinking skills.

## **5.2 Conceptions of Learning**

The analysis of conceptions of learning was based on the questions asked during the interview in terms of CHC learners' way of reasoning about learning. A study about conceptions of learning was first conducted by Saljo (1979). In this study, the conceptions were classified into different categories of descriptions. The students' conceptions of learning were characterised as:

- Increase knowledge;
- Memorising;
- Acquisition of facts, procedures, which can be retained or utilised in practice;
- Abstraction of meaning; and
- An interpretative process aimed at understanding reality.

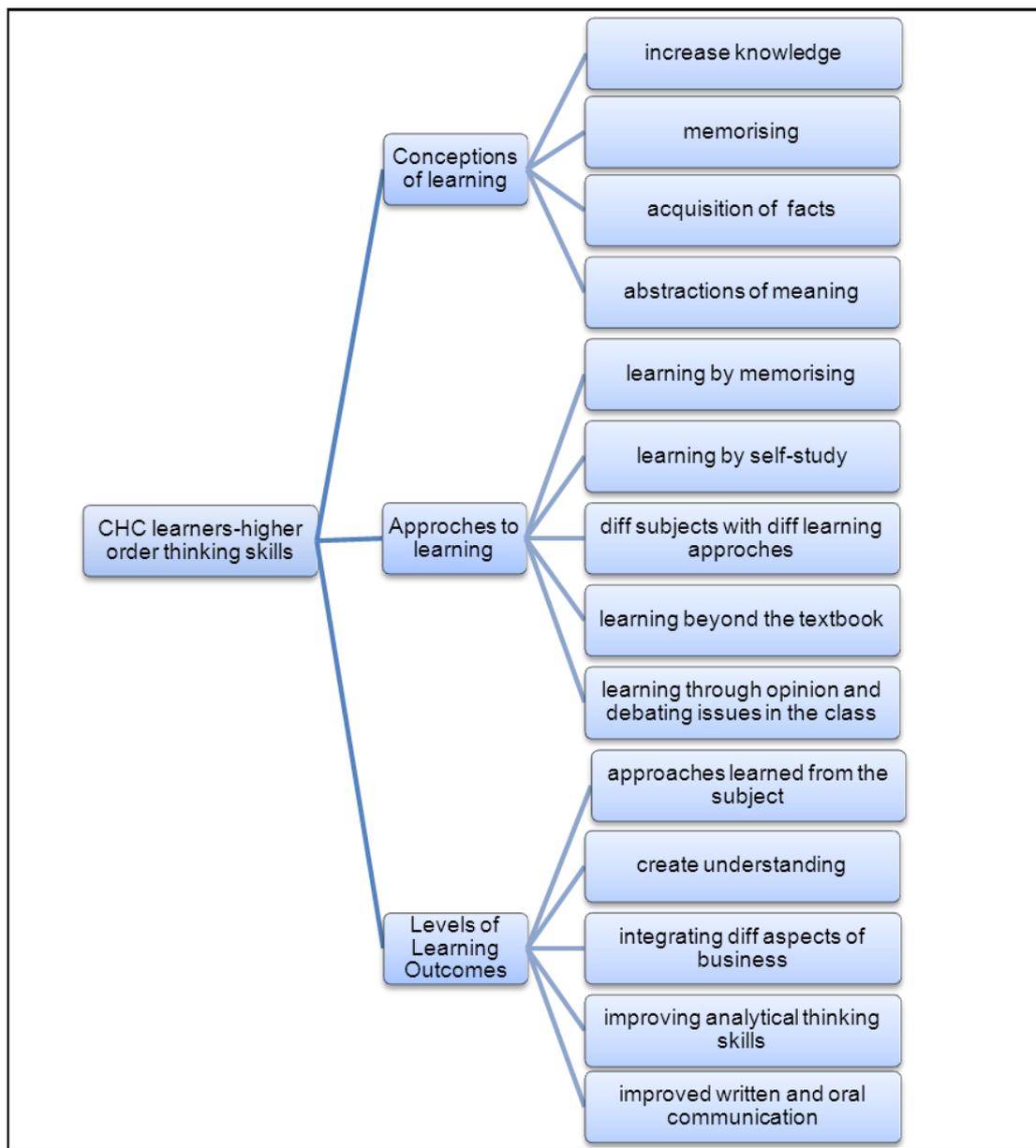


Figure 5.1. Decision Tree - CHC Learners' Higher Order Thinking Skills

The characteristics which described the CHC learners' Conception of Learning, and reaffirmed the findings noted by Marton et al. (1996), were used as referents to further analyse the qualitative data. The analysis then assisted me to find out whether

there were any elements of classroom pedagogy used by me as a classroom teacher and other situational factors which might have had an impact on CHC learners' approaches to learning and whether the learning support had increased their levels of higher order thinking skills.

### **5.2.1 Increased Knowledge**

Most of the CHC learners' used theories and concepts which they had learnt to apply in the unit assessments. Some of information needed to complete assessments was not found in the prescribed textbooks for the units. Students understanding of theories and concepts had increased their knowledge of the unit learnt but they needed to remember and understand the facts before they could actually apply the theories and concepts. In this case, the students were heavily reliant on lower order thinking skills with a minimum usage of application (Bloom's taxonomy and the multi structural level in the SOLO Taxonomy). The students from both semesters agreed that understanding the content was very important for them to connect what they had learnt to the outside world. One of the assessments in the Marketing 100 unit was to develop a real business project. The students needed to understand very well the concepts and theories as they translated these into the business project. The business project was based on a real company's marketing strategies. In response to the question "*When do you use what you have learnt to relate to the outside world?*" a third year CHC learner said that:

*"Based on my understanding of what I have learnt, I used the information to help me with my project; also based on my understanding I find it much easier for me to relate the information found in business magazines or the newspaper". (R3)*

This response typified that the CHC learners needed to understand the concepts and theories before they could explain and relate what they had learnt with the outside world. Learning to them was to understand what was being taught in class. In marketing units, it is important for a student to be familiar with the real business world. The strategies in marketing, as stated in the textbook and during the class, are applicable to the real business world. The participatory pedagogy used by me as a

teacher in the classroom environment assisted the CHC learners to understand better the concepts taught. The project, one of the assessments for the units, demanded that the CHC learners not just be involved in discussions with others during the class but also when they had discussion outside the classroom. As quoted by a second year student:

*“Marketing is about everyday life and so most of the discussion is important especially when it comes to doing a project- choosing a real company. I need to relate the concepts to the real world”. (R6)*

The CHC learners agreed that learning was not just reading from the textbook but involved using other supporting materials such as business newspapers, academic journals and the electronic media (such as television and internet). By going beyond the classroom text, it helped them to better understand what was happening in the real business world.

*“When I watched current news, I try to relate what I have learnt in the class and now I know what is meant by knowledge outside the classroom”. (R24)*

A first year group of CHC learners agreed that knowing the real business would enhance their understanding of the unit matter. Thus, their experience as a consumer was used as an example to relate to the outside world.

*“Every time when my friend and I went shopping, we observed how the businessman used their pricing tactics to win the customer’s heart and from there we understand better what is taught in the class”. (R31)*

The CHC learners used their ‘shopping spree’ experience to understand the concept and theories taught in class. Besides acquiring knowledge, the CHC learners perceived learning as the ability to memorise what they had learnt. Based on the above analysis, the CHC learners perceived that learning was about acquiring knowledge and understanding the content and then being able to make sense of their business related experiences.

### 5.2.2 Memorising

The majority of the interviewees agreed that they would have to take a longer time trying to understand the facts as memorisation comes first in their learning. In response to the question about how they related what they learnt to the outside world, most of the CHC learners indicated that it took them a longer time to grasp new information as they needed to memorise what they had learnt before they could work out what it really meant. However, in marketing units most of the assessment required the CHC learners to relate the concept and theories with the outside world. Most of the CHC learners only related what they had learnt when they needed to complete an assignment or a project. Thus, only based on the assessment given to them, the students would then relate to the outside world what was important to them which was ‘learning is remembering and understanding’. Examples of how CHC learners replied when asked, “*How do you relate what you have learnt to the outside world?*” are provided.

First year CHC learners found it difficult to relate to the outside world because of their English language limitations, thus, they only related to the outside world when they had to complete a business project as part of the unit assessment.

*“Due to my language problem and limitation in my vocabulary, I was not able to relate what I have learnt with the outside world”. (R1)*

*“We only used what we have learnt and applied to the outside world when doing the project for the unit. It is not easy as we really need to understand the concept but due to language problem, we resort to memorisation. This makes it more difficult”. (R9)*

Despite the difficulty in understanding the unit because of their English language capability, some of the CHC learners acknowledged that knowing what was happening in the real business helped a lot in their understanding of what was taught in class. They grasped the relationship between the textbook and the outside world.

*“I observed how companies deal with their business strategies and found out that they actually used some of the concepts that I learnt in class. Thus, I am able to see the relevance of the theories”. (R42)*

The analysis showed that the assessment activities such as projects (assignments) about a real life business situation are vital. Such activities enhanced the development of students’ thinking skills.

### **5.2.3 Acquisition of Facts and Procedures to Use in Practice**

Mostly, the interviewees thinking levels were at the lower level of the SOLO Taxonomy identified as the knowledge/pre-structural and comprehension/uni-structural categories (see Table 5.1). The students saw the importance of acquiring facts as the first thing that they needed to know in order to lead them to understand the concepts in-depth. The students reacted to the question, **“What kind of knowledge has to be known and recall?”** in the following ways. A first year and a second year CHC learner commented that they needed to comprehend the theories and concepts and it had to be understood well as this was important in terms of application of the knowledge.

*“Once you are clear of the concept, then everything else will go smoothly”. (R11)*

*“I must make sure that I understand the concepts. This is important so that I will be able to relate and apply the concepts with the real business”. (R12)*

*“I will make sure that the theories and concepts are learnt by heart. This is important as you need to know and recall the concepts/theories in order to understand it”. (R 41)*

*“I need to know by heart the theories and definitions; understand and memorised for the examination. I need to memorise due to my language limitation”. (R46)*

The CHC learners agreed that they needed to know by heart the theories and concepts taught in class. They needed to make sure that they were clear about the

concepts before understanding them. Once they understood the concepts, then it was much easier to explain them further to others and in their assessment tasks.

#### 5.2.4 Abstraction of Meaning

Mind mapping has been an important choice of strategy throughout my teaching to help students remember and keep ideas in mind. The mind map strategy helped the interviewees as they visualised what they had learnt. The CHC learners found it useful when I used mind maps during the class to explain the topic overview. However, there were a few interviewees who still memorised the concepts. They learnt by heart the concept and tried to understand what they had learnt. Most of the interviewees revealed during the interviews that they used mind maps to assist them in acquiring meaningful learning. When asked, “*What kind of strategies do you use, to remember what you have learnt?*” most students replied that remembering and understanding enabled them to interrogate their newfound knowledge. Besides that, there were a few who used a blog as part of their learning platform. One student had her own power point slide on the blog and did her own notes based on her understanding of the topic.

*“For me, I must make sure I understand the key concept. I write the facts and used the techniques shown by my lecturer (mind maps) while I study and I will then memorise. Then I tried to recall the examples used in the class”. (R7)*

*“I do revision after class. Sometimes I can’t help it but to memorise because I need to remember the concept. This is the knowledge that I need to know”. (R13)*

*“I used the blog as a tool to remember what I have learnt in the class. I will post the information in the form of a power point slide. I do my own slide and notes. This technique helped me to test my understanding”. (R25)*

The above analysis exemplify that the CHC learners used the understanding of the concepts and theories to acquire knowledge. Acquiring of knowledge is one of the factors that drive the CHC learners to enrol in their degree program. Thus, it is important for them to learn and acquire new knowledge.

### 5.2.5 Integrating and Combining Knowledge

Business areas are interrelated, thus business students (as in the case of this study-marketing students) should use their understanding of the concepts to interpret meaning and relate the theories and concepts. Most of the interviewees indicated that it was important to understand the concepts in each of the business areas so that the knowledge could be used in analysing overall business strategies. At this point, the interviewees indicated that they used knowledge for the application and analysis of the information to help them integrate and combine the discrete knowledge. CHC learners enrolled in the third year marketing unit agreed that it was important for them to learn and understand theories and concepts.

*“In the real world, all the business units that we (I) learnt in school are interrelated. Thus we would apply all the concepts in analysing the strategies in completing our project”. (R8)*

It appeared the in-depth understanding of the theories and concepts would help students to combine the knowledge and integrate it into the different areas in business especially during the process of completing assessments.

The above analysis concurred with the notion that learning was to gain knowledge. However, the students emphasised first knowing and understanding the basic concepts and theories. Knowing the concepts and theories increased the CHC learners' acquisition of more elaborate knowledge. They indicated that they must know the concepts and theories which is the root to the units, in this case, knowing the concepts and theories by heart (memorising) and understanding it at the same time. Part of higher order thinking is applying concepts and theories but the interviewees acknowledged that they did not use much in-depth application skills. Most of the CHC learners were still dependent on the textbook and the nature of the learning task or assessment given to them. Based on the analysis for the conceptions of learning of CHC learners, there was a similarity with the conceptions of learning that was first established by Marton (1979). This can be used as an important referent point that there is a difference between students' beliefs and conceptions of learning

and how these differences can be affected by their experiences during their process of learning at the university level.

### **5.3 Approaches to Learning**

In this Section five main approaches to learning mostly used by CHC learners were identified from the analysis of the questionnaire. These were learning by memorising, learning by self study, using different learning approaches in different units, learning beyond the textbook and learning through debating opinions and issues in the classroom.

#### **5.3.1 Learning by Memorising**

In general, it has been demonstrated empirically that the way in which learners can handle learning situations is conditional on what learning means to them (Marton and Booth, 1997, cited in Wen and Wong, 2001). It was no different for the CHC learners in this study in terms of what they thought about learning predicting their learning process (approaches to learning). A series of cross-cultural studies have noted that even though CHC learners are more prone to memorisation and understanding, in certain fields of study, such as science and mathematics, they achieve at higher grades as compared to the other students (Marton, Dall'Alba and Tse, 1996; Watkins and Biggs, 1996, 2001).

This interesting phenomenon led to further studies on CHC learners. Issues related to the CHC learners' approaches in their learning were an important element to look at. In this study, the interviewees were asked the question "***Why do you think you need to rote learnt?***" The interviewees from the focus group interviews provided several reasons as to why they needed to rote learnt. Most of them associated their rote learning strategies with their lack of capabilities in expressing their thoughts especially when writing their thoughts using English. Most of the interviewees believed that memorising assisted them to remember key points. With the rote learning technique, they read and recalled at the same time before understanding. The long process of learning was due more to their English language problems. With their limited vocabulary, the CHC learners resorted to memorising concepts. The

English language problems were another situational factors that impacted CHC students' learning in the Australian curriculum which focused unit learning outcomes on higher order thinking skills.

*“Due to limited vocabulary, I have to memorise especially the concepts. After that, the information will then be written down so as to be familiarise with the information”. (R19)*

*“I need to know the facts first and due to my limitation in language, I have to memorise and read over and over again so that I will get familiar with the information”. (R11)*

*Due to language limitation, we need to memorise the content especially the concept and theories. This is to help us to familiarise with the information”. (R36/R40)*

Their style of learning has not provided these students with the capacity to foster higher order thinking skills. The challenges occurred mostly when the CHC learners were in their first year of study.

### **5.3.2 Learning by Self Study**

The analysis of the interviews showed that the CHC learners preferred to learn things within their own context. They preferred self-study. Their limitations in English language skills inhibited the process of thinking productively as group discussion required them to communicate and they needed to read and understand ideas before being able to articulate them in English. The CHC learners also agreed that their language limitations did not enable them to engage in quality group study as most of them used their preferred language to communicate during the group study. This posed a problem especially when they were attempting to answer questions during examinations as they could not recall all of what was discussed. Students continually needed to translate in their thinking processes what was discussed in their own language. Due to these types of challenges, most of the students resorted to self-study. Students tended to believe that it was a waste of time participating in group activities because before they commenced group study, for example, they had to understand what they had learnt for them to be involved in any ‘meaningful group discussion’. During the interviews, the interviewees were asked ‘*Why do you think it*

*is better to learn by yourself?* Most agreed that they preferred to self-study rather than be involved in group study.

*“Due to my limitation in my language, I prefer self-study. The discussion would need one to acquire as much knowledge and most of us do not do a lot of reading but tend to memorise”. (R14)*

Nevertheless, there were a few interviewees who reckoned that their involvement in a group discussion provided them with more ideas and thus helped enhanced their learning.

*“I prefer to be involved in a group study when the topic or unit requires me to have detailed elaboration on a concept. Having a group discussion will provide me with more ideas and will enhance my level of understanding”. (R12)*

Besides the language limitations, some interviewees also identified other challenges and why self-study was a choice for them. A few interviewees revealed that the way they were brought up and their educations upbringing made them unwilling to share the knowledge they learnt because they were very competitive with each other.

*“I was brought up in a school system where I needed to compete with my classmates. My teacher would always use the ‘competing technique’ that if I cannot answer the question, I will be transferred to another class. Due to that I wouldn’t want to share knowledge with my friends”. (R7)*

Social factors such as ‘who’s who in the group’ also contributed to the success, or not, of any group study. To avoid disturbances during the group study and to ensure the sessions would not be a waste of time, several interviewees declared that they would not participate in group study if other group members were not prepared for the discussion.

*“It depends on who is in the group study. If it does not fit, then I will resort to self-study” (R43).*

One of the interviewees pointed out the way some of the CHC learners learnt – memorising and thus they did not emphasise meaningful learning (a deep approach). Thus the group study would not benefit some students if there was no in-depth knowledge held by other group members and they did not read widely due to their memorising techniques. Many interviewees were clear that they found group study was not a successful learning activity for them.

*“Discussion would need one (CHC learner) to acquire much knowledge- CHC learners do not read a lot...so they cannot discuss with their friends”. (R14)*

The social intelligence skills of the CHC learners, especially in terms of academic interaction, needed to be improved to ensure all learners engaged in quality group discussion. Group discussion could be one of the ways to help the CHC learners to improve their higher order thinking skills. As pointed out by Sauter (2007), group discussion as an instructional tool can help to facilitate alternative learning especially in improving students’ thinking skills in a marketing curriculum.

### **5.3.3 Different Learning Approaches for Different Units**

The CHC learners’ revealed during interviews that learning calculation type units was much easier for them as they only needed to understand the steps or processes to perform the calculation and later memorised the formula. This was different for a reading heavy unit, like marketing units, which required an in-depth understanding of the concepts and theories to participate in learning activities in class and complete assessment tasks successfully.

*“I have to understand the step/process of doing the calculation... I then memorised the formula but it is different in marketing units which required an in depth understanding of the concepts/theories is important.*

*“From the comprehension, I am more confident in applying the concepts with the business world” (R12)*

*“I prefer a calculation unit because it is easier to understand and does not need a long process to understand one thing”. (R27)*

To be able to explain and apply the concept and theories, a student needs to be able to comprehend the unit matter so that they are more confident in applying the concepts into business world experiences. Thus, a teacher needs to find ways to assist CHC learners in understanding the unit matter especially in relation to those learning activities and assessment tasks which are heavily dependent on reading, writing, listening and speaking. The compounding factor here is when the teaching, learning and assessment are through the English language medium.

#### **5.3.4 Learning beyond the Textbook**

During the interviews the CHC learners agreed that in any business unit, it was necessary to go beyond the textbook as this would help in their understanding of the unit matter. However, it appeared that the practice of rote learning and memorisation lessen further reading by the students around the unit matter. Thus, it took a longer time in the process of learning to learn about what was required in assessments.

*“I believed that in any business units especially marketing units, reading beyond the textbook will enhance the understanding”. (R12)*

The CHC learners also agreed that for marketing units, one needs to know more than just information from textbooks. Marketing is one of the activities which forms part of the business environment. Knowing how business environments worked would help the CHC learners to apply what they learnt in class.

*“Marketing units demand from the students to know beyond the textbook, thus business students should go beyond the textbook”. (R6)*

It appeared several interviewees recognised that learning beyond the textbook was beneficial to them but the strategy was not commonplace for all interviewees.

### 5.3.5 Learning through Debating Opinions and Issues

The CHC learners interviewed indicated that they have been brought up to respect knowledge and wisdom which is part of their cultural upbringing. A teacher was regarded as all knowing and was the sole provider of knowledge. This idea is similar to that stated by Chan (1999, cited in Nield, 2009). Due to their cultural upbringing, most of the interviewees stated that they were not allowed to question a higher authority (the teacher) as a matter of respect. With their cultural upbringing it had been very difficult for the CHC learners to engage in classroom activities and thus they tended to be passive learners.

*“We were brought up not to questions our teachers as a matter of respect. This practice has been part of the learning process for me”. (R15)*

*“Since my primary school, only teachers asked questions. When I enter the University, I became very shy to ask questions what more to criticise my friend’s opinion”. (R27)*

However, the interviewees disclosed that the teacher and style of teaching were elements that motivated students to participate in class, for example, the way questions was asked. The teaching approaches that the teacher used can influence students’ participation in classroom activities and engagement in learning.

*“Our teacher would normally pick on those students who are ‘loud’ and as a result most of us preferred not to question our teachers. Due to that, it is difficult for us to engage in the session”. (R20 and R7).*

Sometimes how the teacher responded to the questions can also create challenges for the students to speak up response in the class or to debate a given issues.

*“We feared that if the answer is wrong, we will be criticised in the open”. (R39 and R40)*

The CHC learners’ needed to be comfortable with the classroom situations, and only then, will they be able to reciprocate in classroom dialogue. Besides their cultural upbringing which the system of education has reinforced, CHC learners were

impelled to respect the teacher and respect their elders. Debating of issues in the classroom by CHC learners would be the last choice for them in terms of their approaches to learning. Another factor that constrained the CHC learners from debating in class was their language. The CHC learners feel that they were not able to express themselves well enough due to their English language challenges.

*“Due to language problems, it demotivates me to ask questions”. (R27)*

*“We feel that Chinese student[learners] don’t have the confidence to ask questions because our English is not good”. (R29)*

They will take some time to construct a sentence and also to put across their idea to the other party if they were to debate issues.

#### **5.4 Levels of Learning Outcomes (Higher Order Thinking Skills)**

In this Section five main influences on improving CHC learner’s higher order thinking skills were revealed. The influences worked best when students learnt new approaches from the unit, when the unit enabled them to create better understanding, when they were assisted in integrating different aspects of the business area, when they had opportunity to improve their analytical thinking skills, and importantly, when they engaged in activities that improved their oral and written communication in English.

##### **5.4.1 Approaches Learnt from the Units**

The CHC learners agreed during the interviews that they managed to try new approaches in their learning. They wished for not just understanding the concepts but the ability to apply the concepts especially when undertaking a project in a marketing unit such as a third year unit. As an example, a third year student agreed that she learnt new things from her learning approaches. The unit, Business Policy 320 has taught her to learn how to learn.

*“Learning process which not only involved knowing the facts but analysing the facts. I normally question myself on some of the concepts”. (R20)*

The assessment given in the units has also taught the interviewees to be independent as they needed to find their own sources of information.

*“We learnt about how to be more independent especially when it comes to doing a project”. (R25 and R40)*

The new approaches that they used in their learning managed to assist them in improving their level of thinking skills.

#### **5.4.2 Understanding Created through the Units**

The units that the CHC learners were involved had assessments that gave opportunity to the CHC learners to further undertake their reading to understand better the concepts and theories.

*“I was able to answer the essay questions given in the examination- I think now I am better in answering the essay questions”. (R14)*

Many other interviewees especially the third year CHC learners agreed with the response given by R14.

*“The assignment that we had has put us in a better position in understanding the theories and has helped us to understand better”. (R25)*

*“I am more confident to sit for the examination as I understood well the theories”. (R27)*

The essay questions also helped the interviewees to analyse and apply the concepts by providing examples of the business activity in the real world.

### **5.4.3 Integrating Different Aspects of the Business Area**

The CHC learners understanding of the unit matter opened an avenue for the CHC learners to integrate the concepts of one unit with other business areas. For example, the knowledge in economics was used in strategising the pricing in marketing. Thus, the comprehension of concepts in a unit was important to help link various areas in business.

*“We used what we learnt from other units to do the assignments given to us and we find it useful even though it takes time for us to relate between one area with the other”. (R27)*

The type of assessment played a role to help the CHC learners to practise the different aspects of business. The application of what they learnt is part of the process to improve their thinking levels.

### **5.4.4 Improving Analytical Thinking Skills**

Most of the CHC learners interviewed agreed that they had to understand the concepts first before putting these into practice. Thus, memorising alone is not enough as there has to be meaningful learning through having an in-depth understanding of the concepts and theories. The assessment activities designed for the unit involved in this study has assisted the CHC learners in improving their analytical thinking skills. Most of the interviewees concurred that they have improved in terms of understanding and analysing the information given to them.

### **5.4.5 Improving Oral and Written Communication**

The interviewees’ conceptions of learning that ‘meaningful learning’ occurred when they were able to relate (apply) their knowledge with real business situations. The project presentation as part of the assessment for marketing units helped the interviewees in their communication skills. This would improve their thinking skills through the oral communication skills. Based on the data (focus group interviews, learning journals and observational notes), I found that their oral communication was

better as they were more confident to communicate with their friends whom they had known during their process of learning. Though having difficulties due their English language capabilities, they were able to analyse what they had learnt and had managed to answer the essay questions with examples.

## **5.5 Classroom Observations**

Besides the interviews, classroom observations were conducted throughout the period of the study. Classroom observations were conducted twice in a semester. The purpose of the classroom observation was to identify patterns of classroom behaviour of the students involved in the study. During tutorial sessions, the students were divided into small groups (students were given a choice to choose their own team members). The tutorial discussions were based on the assigned tasks required by the unit outline. Based on the tutorial discussion assessment for the unit, students were given a pre-reading assignment (one week) before the discussion. It was found that the students were engaged as a group when there was a 'discussion'. However, throughout the discussion, the CHC learners used their own language. This happened almost at all levels (from Year One to Year Three). The observer (myself as the researcher and the classroom teacher) had to check and interrupt the discussions. The CHC learners were told to use the English language. The discussions continued with difficulty. The time taken for the discussion was very long as it took a while to read and discuss the issues (normally a 2 - 3 page length case study was given to read and analyse), especially when the students came to the class activity unprepared. There was not much difference between the two semesters except for the Business Policy 320 students. These students took Strategic Marketing 310 with me as the teacher. There was an improvement in the group discussions for the third year students as these students had an in-depth understanding of the marketing aspects and they were more responsible as a participatory group member. Moreover, these students were more attuned to my expectations about using English for the purposes of group discussions.

Through the observations, I noticed that CHC learners were more participative in the second half of the semester. This was due to their in-depth understanding of concepts and theories. Based on the knowledge that they acquired in the first half of the

semester, there was an increased confidence level for them to participate in group discussions and thus, their interactions were more productive. Though they often had difficulties in understanding the case study, but due to their enthusiasm level and the trust level between CHC learners and me, they consulted me and rectified the misunderstanding about the content of the case under discussion. This pattern was seen in the Marketing 100 and Strategic Marketing 310. However, it was not seen in the Business Policy 320 unit. As mentioned earlier, CHC learners in this unit had gone through their learning process with me when they were in the Strategic Marketing 310 class. Thus, the classroom discussion culture was attuned to the way they approached learning.

The majority of the CHC learners agreed that they were much more comfortable discussing in their 'mother tongue language'. The problem occurred when answering examination questions as they had to virtually translate what they understood from the discussion and put it on paper. As the observer, I noticed that some of the CHC learners were involved in a more interactive discussion if the group was composed of a multicultural background, that is, with students whose first language was English. The CHC learner had to complete oral presentations as one of their assessment pieces in the marketing units, and students were assessed based on their oral presentation. Students worked hard for the presentation. However, the majority of the students would present their work by reading from a set of visual slides. This occurred mostly for the first year CHC learners. Some of the students could hardly communicate their ideas and the slide text did not make sense to the audience. The objectives of such presentations were not achieved as the students failed to communicate any ideas clearly and without confidence. The analysis from the classroom observation in terms of their presentation task concurred with the analysis on CHC learners' preference to study on their own without having to discuss with their other group members. Their English language problems were highlighted as clear factor as to why they were rated low in their communication skills during the presentation. Photographs of some of the different pedagogical techniques used to improve student communicative and thinking skills are displayed in Appendix C.

## 5.6 Students' Learning Journals through Blogging

Apart from the structured focus group interview sessions and classroom observations (using videos), the participants in the study were also invited to post their learning journey in my researcher's blog ([littledinosaur@blogspot.com](mailto:littleddinosaur@blogspot.com)). The participants were given the blog address and they were free to post their ideas pertaining to unit matters and also informal chatting using English language for communication in the blog. It was incredible to see the participants respond to the invitation. As the researcher, I also became part of the social network. From the observations, it was seen that the CHC learners were more open in the 'social media network'. Questions were asked on the areas that they were not clear about during the lectures. As the researcher and teacher, I had to be alert and I needed to visit the blog regularly as questions were posted quite often.

The discussion blogs continued for a year among the CHC learners who participated in the learning journal. An issue was normally highlighted by one of the participants and the rest of the CHC learners would give their opinions. At one point, the discussion was about "why Chinese learners don't talk in class" and some amusing comments emerged.

*"I don't like to talk..." "Why should I talk in class...!"*

Through the learning blog, the gap between the teacher and the students was narrowed due to the virtual interaction. A positive impact transferred into class. The CHC learners who participated in the blog were more pro-active in all learning activities in class. They were more open to discussion and willing to participate in the classroom discussion. The discussion using their own language reduced after they participated in the learning journal. There were initiatives taken by the CHC learners to improve their communication skills. They were more careful in posting questions in the blog and answering or contributing to the ideas. This was an improvement knowing the fact that the CHC learners preferred to do their own study and limit their discussion in class. Towards the end of the observation period, it was found that the learning blog showed a different type of interaction between the students as compared to that in the classroom. This could be due to the fact that CHC learners

who were from generation Y were more technology savvy and their social skills worked far better than in classroom. Based on their technology skills, they used Blogs as one of their learning tools to put forward their ideas and make comments.

It appeared that the working hypothesis for Phase Three of the study held true. A teacher's classroom pedagogy and other situational factors do have an impact on CHC learners' perceptions. The pedagogical and situational factors which impacted on CHC learner perceptions, as revealed through this Phase of the study, are further illuminated.

Different pedagogical techniques such as group Jigsaws, Gallery Walks, Role-plays and Informal Discussions were used in the classroom. It was important for me as the teacher to plan a variety of interesting and engaging activities so that students were motivated and comfortable to "have a go" with their communication and thinking processes. For example, in the Jigsaw technique, students worked in groups with each group member assigned to become an "expert" on some aspect of a topic of study. After reading about their area of expertise, the experts from different groups met to discuss their topic to confirm their shared understandings. The students then returned to their original groups to take turns "teaching" the topic to their group members. The teaching and learning process involved in the jigsaw approach enabled students to communicate and think on a range of levels. As another example, when the students were engaged in Gallery Walk activities they were involved as small teams in synthesising important concepts, in consensus building, in writing and in public speaking. Teams rotated around the classroom composing answers to questions as well as reflecting upon the answers given by other groups. Questions were posted on charts or just pieces of paper located in different parts of the classroom. These questions were powerful reinforcing activities for learning. Photographs of these teaching and learning activities are contained in Appendix C.

Situational such as classroom fixtures and furniture arrangements allowed flexibility to structure and manage a range of teaching and learning activities. A classroom setting was changed based on the needs and the nature of the teaching, learning or assessment task. The assessment tasks in the units geared the student towards participating and sharing of ideas, communicating and thinking. The class size for

tutorials was 20-25 students per tutorial which allowed more space for participative teaching and learning activities in the classroom. The language background of the students was an important consideration. Some students were educated in English while other came with a range of languages. It was important to ensure that the CHC learners were in group activities where English was the medium of communication. Some of the classroom arrangements are shown in Appendix C.

## **5.7 Planning for Learning, Teaching and Assessment**

This part of the Chapter reports Phase Four of the study which involved the analysis of assessment practices in the three units which were featured in the study. The working hypothesis for this Phase was that CHC learners would acquire higher order thinking skills more effectively when the learning design supports and encourages using higher order thinking skills. The CHC learners' learning outcomes depended on the design of the learning outcome statements for a unit and assessment activities. There must be constructive alignment between these curriculum design elements to optimise students' learning. As mentioned in Chapter 3, assessment is one of the elements underpinning the conceptual framework of the study. Thus, an analysis of the CHC learners' performance was taken into consideration. The analysis was based on the assessment activities for the three units.

### **5.7.1 Assessment Performance in Units**

The three marketing units used for analysis of students' thinking skills bound the study. Marketing 100 is an introductory unit in the business curriculum and a common core unit offered at the Curtin Sarawak campus for all Year 1 students (Semester 1 and 2). Thus, all first year students were required to take the unit. This unit requires students' application of critical thinking skills. The students should be able to identify the role of marketing in both business and society. The overall aim of the unit is for students to understand the role that external environments have upon firms and their marketing decisions such as new product development. Students are required to apply and explain the concepts. They should be able to demonstrate their proficiency of application through verbal and written communication. In Marketing 100, the marketing discipline is introduced through topics such as consumer

behaviour, marketing research, product planning, promotion planning, distribution planning, product and service pricing, and the topical issue of ethical and societal marketing.

Strategic Marketing 310 requires Year Two (Semester 4) students not only to understand concepts, but also gain the ability to apply concepts and make decisions concerning the formulation of a marketing strategy. This unit presents the conceptual idea of integration of marketing planning and process. Business Policy 320, a third year unit (Semester 5 and 6), demands higher order thinking skills from the students. Students should be able to demonstrate their proficiency in applying theories and concepts to real life situations. They should be able to devise and implement strategies for the resolution of problems. Concepts associated with Business Policy 320 are introduced through topics such as the roles of corporate governance and leadership in strategic management, interpreting an organisation's macro, competitive and internal environments, understanding corporate, business and functional strategies, as well as developing an understanding of how to plan, implement, evaluate and control a workable strategic plan by integrating concepts, theories and skills developed in this and other units covered in the business degree.

The assessment showed that the CHC learners did not do well during the class participation activities in the units chosen for this study. For Marketing 100, the CHC learners were expected to read the article, which is a short case study. During the tutorial sessions, I gave them 10 minutes to go through the case study as a small group. The CHC learners had to discuss the case and summarise the main items and each group were required to organise an 'informal' presentation. Not all the groups completed the presentation which was basically summarising what the case study was all about. The weekly presentations were based on a topic given at the start of the Semester. The CHC learners did not perform well for this assessment as most of them only provided the basic answers to the questions and did not focus on the analysis and application of any knowledge that they might have acquired.

For the second year unit, Strategic Marketing 310, the same pattern was evident in the tutorial participation and discussion in the class. Most of the CHC learners chose not to participate as they were not confident in defending their ideas. The

participation marks were published in the student common folder for them to check their weekly performance. Even then, most chose to keep quiet in class as they were not prepared for the session or could not elaborate further on any statements made by others. However, an improvement was seen as they moved forward in the Semester as they began to gain more in-depth knowledge of the theories and concepts associated with the unit. The CHC learners used their knowledge of the unit to provide feedback in their group project discussions before they came up with a report of the Plan. Their knowledge of aspects in other business areas also helped them in the project. The assessment designed for this unit (weekly discussion and presentation of the project) contributed significantly to student higher order thinking skills in terms of their analytical write up. However, there were still a few weak areas in terms of interpreting the financial performance of a company, for example, the financial statement and the Return on Investment (ROI).

An improvement was seen in higher order thinking skills when the CHC learners reached their third year. Business Policy 320 was the last unit in the Marketing degree for the students. Here, the CHC learners needed to acquire the highest level of thinking to pass the unit. Most of the assessment pieces demanded the students to demonstrate their application of analytical thinking skills that they had acquired throughout their study. Further, I had modified the case study and industry insight session by giving them flexibility in handling the session. Such flexibility included giving them the choice to conduct their own sessions. This allowed the students to use their own creativity to discuss and present their ideas. The multi-cultural group discussion had improved the group discussion inputs. However, a few still struggled with learning tasks due to their poorer English language competencies. An average student performance was recorded for the Audit Report and the final examination, assessment pieces that were moderated by the home campus lecturers. These two assessments warrant the students the students with academic writing of reports and understanding and answering questions asked during the final examination. Table 5.1 summarised the assessment performed by the CHC learners during the study.

Using different teaching techniques to accommodate the learning styles of the CHC learners was one of the ways used by me to assist the learners in the development of their thinking skills. I improvised a participatory pedagogy based on their higher

order thinking skills level. CHC learners in their third year were given more autonomy in terms of their learning. They were given the responsibility to conduct industry insight sessions (an assessment for Business Policy 320). Instead of the CHC learners submitting a page report of the real business activity, the CHC learners were asked to search for recent articles (at least three to six months) from the date of the classroom activity. I found that the CHC learners were actively engaged in the session as my role was only to facilitate the sessions. Every week the CHC learners learnt from their peers and each session was conducted in a different way. There was less participation in the first year CHC learners as the level of knowledge was much lower as compared to the third year students. Case presentation was one of the assessment tasks that the first year CHC learners needed to complete. This group presentation did not assess much of their thinking skills as most of the questions asked were from the lower order thinking skills (knowledge, comprehension and pre-structural). Thus, using the teaching techniques which required a lot of thinking from the CHC learners' perspectives was a challenging task for me.

The assessment tasks used for the second year unit included the components of higher order thinking skills. The assessment for the second year unit was somewhat like the third year unit. However, most of the CHC learners taking the second year unit lacked the analytical thinking skills to complete the task successfully. They were not able to analyse the information gathered from the business environment. These students' learning approaches were very much surface approaches as their main aim was to know the unit by heart. Most of the units taken by the second year CHC learners did not really assess their higher order thinking skills. Here a problem with the design of the unit required examination. This point was significant in terms of creating design change for the unit outline.

### **5.7.2 Assessment and Development of Higher Order Thinking Skills**

The structured way of teaching in some way has reduced the process of developing the thinking skills. Continuing their education at the tertiary level, the CHC learners stumbled on the difficulty in accepting a new way of learning and teaching. Although the effort to learn for self-improvement is there but the main focus of knowing by heart has resulted in a slow development of the higher order thinking skills. This

study showed that the higher order thinking skills are only showed towards the end or nearing the completion of their study. It was reported from this study that the way the curriculum is designed and the way the curriculum content is taught has an influenced on the development of the higher order thinking skills. This finding is found to be similar to the study that was conducted by Kember (2000, cited in Ming 2003). The assessment activities designed for the three units of this study showed that the CHC learners did not do well during the class participation activities in their first and second year of their study. However, an improvement is seen as they shifted to the end of the second year and when they were in their third year. At this level, they have acquired an in depth of the knowledge and they were more confident to discuss and present their ideas. The way the examination questions are being structured also has influenced the CHC learners to not just learn by heart. As they progressed to their third year, they changed their approaches in their study as the unit requirement became more demanding. The qualitative data also revealed that the CHC learners agreed that for marketing units, one needed to know more than just information from the textbooks. Marketing is one of the activities that form part of the business environment. Thus, it is crucial for the CHC learners to not only understand the knowledge from the text but to be able to use what they have learnt and apply to the real world.

The three elements used in the study, which are, the Conceptions of Learning, Approaches to Learning and the Levels of Learning Outcomes (levels of higher order thinking skills) has influenced (to a certain extent) the CHC learners' development of higher order thinking skills. This study concurred with the literature as reported by Thomas and Chandrika (2006) that the antecedent conditions, which are, the attitude towards the subject, concern of academic excellence and course design conditions are the variables that influence student's motivation. Unless, learners are adequately motivated, they will not perform effectively and they will find learning as something which is not rewarding or satisfying (Mouton & Blake, 1984, cited in Thomas & Chandrika, 2006). As mentioned in Chapter 2 of the literature review (Watkins & Biggs, 2006), the CHC learners are governed by the motivational factors (intrinsic and extrinsic). These factors have an impact on their perceptions towards learning and the way they learnt which will then resulted in their academic performance. Thus, it is important for teachers to understand what motivate his or her students.

This study provided me as the researcher an avenue to propose a model for learning and teaching for CHC learners. This model is the focus of Chapter Six.

In summary, planning for teaching, learning and assessment are important elements that will help to develop CHC learner's higher order thinking skills. This was part of the research questions for this study, and thus, the proposed teaching and learning model would incorporate these elements. The working hypothesis for this Phase of the research design that CHC learners will acquire higher order thinking skills more effectively when the learning design supports and encourages using higher order thinking skills.

Table 5.1. *Assessment Analysis*

<b>Unit</b>	<b>Learning Activities</b>	<b>Assessment Task</b>	<b>Bloom's Taxonomy</b>	<b>SOLO Taxonomy</b>	<b>Performance</b>
Marketing 100	1.Group discussion on Pre-reading topics (weekly)	1.Weekly group presentation based on topic given.	Knowledge	Prestructural	Very Low
	2. Tutorial discussion	2. Tutorial participation	Knowledge and Comprehension	Prestructural and Unistructural Multistructural and Relational level.	Very Low
	3. Academic writing skills(group written project)	3. Written Submission (Marketing Plan).	Application and Analysis		Average
		4. Mid term examination	Knowledge and Comprehension	Prestructural and Unistructural.	Average
		5.Final examination			
Strategic Marketing 310	1.Tutorial activities (submit summary of topic discussed)	1. Tutorial participation and case study discussion	Knowledge/Comprehension/ Application	Prestructural/ Unistructural/ Multistructural.	Very Low
	2. Academic writing skills (group written project)	2. Major Project.	Knowledge/ Comprehension/ Application	Prestructural/ Unistructural/ Multistructural.	Average
		3. Final examination	Knowledge and Comprehension	Prestructural and Unistructural	Average
Business Policy 320	1.Tutorial Activity/ Discussion (case study given).	1.Case presentation	Knowledge and Comprehension	Prestructural/ Unistructural.	Average
	2. Oral case study group presentation.	2. Company analysis	Application and analysis	Multistructural and Relational level.	Good
	3.Company analysis (Audit report)	3. Final examination	Analysis and Synthesis Knowledge and Comprehension	Relational and Extended abstract level. Prestructural and Unistructural.	Average

## 5.8 Summary of the Chapter

Due to English language difficulties of many CHC learners, most of them resorted to memorisation of information in order for them to remember the facts. Students most applied the lower order skills which are knowledge and comprehension (Bloom's Taxonomy) and pre-structural and uni-structural (SOLO Taxonomy). Due to the reliance on memorisation, it was difficult for students to relate what they had learnt to the outside world. Although research has shown (Watkins, 1991; Kember, 1996, Marton et al., 1997) that most of the CHC learners are between the surface and deep approach, this study has shown that the CHC learners studying at the Australian Offshore campus where this study is being conducted are more inclined to the Strategic Approach or Achieving Approach (Chan, 1999) This was a significant revelation in the study.

As reported by Biggs (1996), Chinese learners are trying to understand the concepts and theories in coping with assessment. Their motivation is to make sure they succeed in their examination thus both the memorisation and learning by heart (to understand) comes hand-in-hand. However, they have difficulties in expressing their thoughts and this contributes to why they need to study by hard and later try to understand. If they fall short to understand, then the easiest is to memorise as their main target is to pass the unit. Learning processes take a much longer time to acquire as students need time to digest the information. Most of the CHC learners in this study still preferred self-study than group study unless the assessment type demanded group work. Social factors are influential in dampening CHC learners' development of thinking skills. Some of them were taught to compete among themselves and sharing of knowledge was not part of their cultural upbringing. Thus, classroom engagement (classroom discussion) was still very minimal as noted in interviews and observations conducted unless it was a requirement in the assessment.

The CHC learners acquire higher order thinking skills when their learning conceptions and the teacher's learning design are in harmony. A comprehensive program needs to include two critical components. First, a program must encompassed general aspects of thinking approaches in all business units. Second,

the business program needs to address thinking tasks that are commonly encountered in the CHC learners learning process. These two components will be incorporated into the proposed learning and teaching model for the CHC learners.

# CHAPTER SIX

## A Model for Learning and Teaching

### 6.0 Introduction

The previous Chapters, Chapters Four and Five, presented the quantitative and qualitative data analysis which were concerned with Phases Two, Three and Four of the research design and contributed to addressing the research questions presented in Chapter One. The study was conducted to investigate CHC learners' critical thinking skills in the area of marketing units. The specific research questions that were stated for investigation in the study are reiterated here.

5. What are the factors which influence the ways in which CHC learners in marketing units acquire higher order thinking skills?
6. What enhances the opportunities in the classroom in terms of learning activities, teaching strategies and assessment for CHC learners to develop higher order thinking skills in marketing units?
7. To what extent do the learning and teaching approaches used in classrooms influenced the learning outcomes of CHC learners in marketing units?
8. How do instructional approaches for marketing units influence the CHC conceptions of learning, their approaches to learning and thinking in classrooms and their learning outcomes?

This Chapter discusses the assessment practices that are part of the design of a curriculum and how the conceptions of learning, approaches to learning and the levels of expected higher order thinking encourage CHC learners to move to more sophisticated levels of thinking. The Chapter also discusses a proposed learning and teaching model to be used in developing CHC learners' higher order thinking. This aspect formed Phase Five of the study. The working hypothesis for Phase

Five was that CHC learners acquire higher order thinking skills when their learning conceptions and the teacher's learning, teaching and assessment design are in harmony.

### **6.1.1 Conceptions of Learning**

Confucius Heritage Culture learners' conceptions of learning, as mentioned in Chapter Four, are classified accordingly. They are conceptions of learning as a 'quantitative increase in knowledge' (acquiring of knowledge), learning as 'memorising' (storing information), learning as acquiring facts (skills and methods that can be retained and used as necessary), learning as making sense (relating parts of the unit matter to each other and to the real world), and learning as interpreting and understanding reality in a different way. This study reported that CHC learners perceived learning as acquiring knowledge. It was important to them to be sure that from every lesson they acquired what they learnt in class through knowing the concept and theories by heart. They remembered by heart what had been taught in class so that knowledge could be retained and then related to the real world. The CHC learners perceived learning as the ability to use information that they acquired to build up new knowledge and blend the new knowledge with what they already knew. The new knowledge would help them to relate the information to the outside world through the application and analysis of new information. They also perceived learning as the ability to see things from different perspectives. This suggested that the CHC learners' perception about learning was that it was more than just memorising and remembering.

### **6.1.2 Approaches to Learning**

Students' approaches to learning were clear factors that enabled the CHC learners' higher order thinking skills to be developed and how readily the development occurred. Research conducted on deep, surface and strategic approaches to learning had reported that most CHC learners used various approaches to their learning and moved between surface and deep approaches (Marton & Saljo, 1976; Entwistle, 1981; Biggs, 1987, 1993; Ramsden, 1992; Watkins, 1996; Kember, 1996; Marton et al., 1996). In this study, it was shown that CHC learners were

more inclined to the strategic or achieving learning approach. The CHC learners in this study used memorising techniques as one of the ways of learning as their first step to understand knowledge which is better known as deep memorising. The idea concurred with that identified in previous literature (Kember, 1996; Chalmers and Volet, 1997; Marton et al., 1997; Salder-Smith, & Tsang, 1998, cited in Chan, 1999). Asian learners use memorising as a first approach strategy. Importantly, in this study, it was revealed that the CHC learners, in the main, required longer time to understand concepts and theories before they attempted to apply them to real business situations. The longer learning time requirement to arrive at this point appeared due to the medium of instruction, English, which was their second, if not third, language.

Some research related to CHC learners' learning processes claimed that repetition and memorising might lead to a deeper understanding of ideas and a higher level of achievement (Cooper, 2004; Neild, 2004). It was seen in this study, that the CHC learners, though they used memorising techniques, took the effort to understand in-depth concepts and theories to understand these better and apply them to real business situations. Salili (1995) reported that despite not questioning the teacher and being resigned to the acceptance of teacher knowledge and an emphasis on memorisation, Chinese learners still showed effort to learn knowledge for self-improvement and to perform better. The findings in this study demonstrated similar ideas. The CHC learners paid close attention to understanding the knowledge. However, due to their lack of capability in the English language, many of the CHC learners opted to first memorise the information. The CHC learners were then more comfortable to grapple with the information in order for them to apply the concepts and theories that they learnt in class to outside world experiences. This is important as most of the assessment in the marketing units that bounded the case study, Marketing 100, Strategic Marketing 310 and Business Policy 320, were related to real business situations. This resulted in the CHC learners involved in the study shifting from the surface approach to the strategic approach in their learning. The assessment activities that demanded the application of higher order thinking skills influenced the way CHC learners learnt. The effort made by me as the teacher to engage the surface learners into more complex contextualising exercises, not just memorising the facts, also

assisted them to relate previous knowledge to new knowledge and different business areas. The study showed that it was imperative for teachers to explicitly teach learning approaches that revealed to learners *how* to develop their higher order thinking skills.

### **6.1.3 Levels of Learning Outcomes (Higher Order Thinking Skills)**

The findings from the study reported that CHC learners enrolled in the three marketing units disclosed that the units helped them to improve their level of thinking skills. The topics associated with the units required CHC learners to relate one business area with another. This requirement allowed the CHC learners to expand their repertoire of higher order thinking skills. Undergraduate students should be able to demonstrate their proficiency in applying theories and concepts to real life situations. They should be able to devise and implement strategies for the resolution of problems. In this study, the assessment tasks played a central role in shaping the CHC learners' levels of thinking. Their learning processes not only involved knowing facts but also analysing facts. The CHC learners became more independent in their learning. The analysis of information further reported that the CHC learners agreed that assessment activities had taught them not just to understand knowledge but also to further analyse and blend the facts with new knowledge. However, the CHC learners did not do so well during class participation activities with peers especially during the first year of their study. This inadequacy appeared to be linked to the newness of their university experience with a Western curriculum and their limited understanding of concepts and theories being taught. From the analysis of information it became evident, however, that there was an improvement when the students reached their third year. Given the requirement of the units that they had studied over the previous years, and equipped with in-depth knowledge associated with the units, they performed better during class participation activities, engaged more fruitfully in class learning experiences and the quality of their assignments showed greater scope of understanding. The CHC learners agreed that they needed more time spaced over longer periods for them to understand knowledge being taught. As mentioned earlier, their achievement was gauged as being in the middle level of the higher order thinking skills. They faced challenges in expressing their thoughts

related to their English language proficiency and this had contributed to their approaches to learning typified by memorising. Students termed this process as “*study by heart and try to understand later*”. With my teaching pedagogy that supported learning, the CHC learners had managed to better their higher order thinking skills but still the CHC learners mostly applied lower order skills which were knowledge and comprehension in the Bloom’s Taxonomy and pre-structural and uni-structural levels in the SOLO Taxonomy.

While discussed more fully further in this Chapter, overall, the analysis responded to the research questions that conceptions of learning and approaches to learning and levels of higher order thinking outcomes were factors that influenced the ways in which CHC learners learnt in a business curriculum. Apart from these factors, the study indicated that a teacher also played a vital role in shaping CHC learners’ minds towards learning. My teaching style and the conduct of the lectures and tutorials had assisted CHC learners' enhance their levels of thinking. In this Chapter, the elements that better supported CHC learners moving towards becoming critical thinkers in the area of marketing units are explored. The four elements underpinning the conceptual framework of the study were confirmed as the elements that structured the proposal of a learning and teaching model applicable to CHC learners.

## **6.2 Classroom Practices**

In this Section of the Chapter, the importance of the design of assessment tasks, a teacher’s personal teaching style and the selection of appropriate teaching strategies are discussed.

### **6.2.1 Design of Assessment Tasks**

It was noted in the literature that the development of students’ critical thinking skills in higher education was essential for the preparation of business undergraduates for the workforce. Critical thinking enables students to tackle a multitude of challenges that they are likely to face in their futures. Previous research highlighted that Asian students were viewed as rote learners because they

relied more on memorisation than understanding, adopted mainly surface approaches to learning and were very much dependant on textbooks (Kaputin, 1988; Samuellowicz, 1987a, b; Philips, 1990; Ballard & Clanchy, 1991). Students seemly adopted a surface approach in their learning but their intent was to understand what they learnt. However, due to the regime of their studies, they resorted to reading and memorising content in order to pass examinations. In Chinese classrooms, teaching approaches and activities which were oriented towards surface approaches to learning were featured because lessons were characterised by limited discussions. Students preferred not to express their opinions in public (Chan, 1999). However, other researchers such as Prosser and Millar (1989) and Ramsden (1981; 1991) reported that clear differences between students emerged. Biggs (1978, 1979, 1985, and 1987 cited in Nield, 2007) claimed that while some students used the surface learning approach to pass examinations through memorising and arranging disconnected pieces of course content, others focused on the process of linking together and abstracting personal meaning from the same material. Interestingly, in this study, the CHC learners used more of a strategic approach to learning. From the findings of this study, CHC learners not only memorised information but also learnt to understand by heart and use the knowledge that they had acquired to apply it to outside world situations. The motivation to excel in their academic work drove the CHC learners to study beyond the textbook as this was one of the ways that would assist them to acquire an in-depth understanding of concepts. This idea of meaningful learning assisted CHC learners in synthesising and analysing concepts. It appeared that the assessment activities in the marketing units which were designed to help CHC learners develop their critical thinking skills promoted the development of their higher order thinking skills.

Assessment issues in this study focused on the three units Marketing 100 (Year 1), Strategic Marketing 310 (Year 2) and Business Policy 320 (Year 3). The assessment activities for the three units were designed to accommodate the students' learning demonstrated according to stated unit learning outcomes. Both formative and summative assessment types were used interchangeably in the units. Formative assessments were embedded during the lectures or tutorial sessions which were conducted either formally or informally as suggested by Glencoe

(n.d.). Examples of formative assessments used were case study discussions in the class before the submission of a write ups or weekly quizzes. The summative assessment, also described by Glencoe (n.d.), was intended to examine and monitor the progress of students' conceptual development and their attainment of higher order thinking skills developed over a certain period of time. This type of assessment occurred in the middle of the semester as a mid semester examination or at the end of a semester as a final examination or final project.

To illustrate the desirable learning outcomes for students to demonstrate, the assessment activities for the Marketing 100 unit were designed using formative assessment, such as tutorial participation and group presentation, and summative assessment, such as a written project and final examination. The students were assessed based on the unit learning outcomes. It was expected that they identified the role of marketing in business and society, explained and applied key marketing concepts and demonstrate proficiency in applying these marketing concepts to real business situations. The assessment activities also assisted the students in terms of their written and verbal communication, presentation and teamwork skills. In the second year unit Strategic Marketing 310, students were assessed on a group Strategic Marketing Plan report, tutorial exercises and participation and a final examination. The assessment assisted students to define their understanding of concepts and their application and analysing skills. The students were expected to be able to apply key analytical techniques to the strategic planning process. The unit learning outcomes fostered students' achievement of critical thinking skills, writing skills and the ability to research for information. Students were then assessed on their ability to develop critical thinking to formulate and implement marketing strategies, to manage projects and demonstrate proficiency in applying theories and concepts related to real-life situations. The unit learning outcomes assisted the students sharpen their problem solving, writing and teamwork skills. The third year unit Business Policy 320 incorporated different business areas that students had studied and they had to use a range of knowledge that they learnt throughout their three years of study to analyse a company performance. Students had to produce an Audit Report which demanded the application of a range of higher order thinking skills. An overview of the assessment tasks associated with thinking skills is featured in Tables 3.1, 3.2 and 3.3.

The use of memorising techniques by CHC learners in their learning processes should not be viewed as a negative characteristic of their learning behaviour. This idea concurs with the finding by Ming (2003). The important signpost is to provide learning situations that allow repeated encounters with the same ideas that must be learnt which then leads to understanding of the underlying concepts and ultimately to the achievement of higher performance in assessment tasks. The assessment activities and the nature of the units, especially Business Policy 320 which integrated all the other business related areas (management, finance, accounting, economics), had actually improved the CHC learners' thinking skills. Both the quantitative and qualitative findings in the study revealed that CHC learners used memorising techniques which had shaped them as rote learners during their prior processes of learning. The education system and the way they have been taught during their primary and secondary education had impacted the way they thought they should and could learn at the university level. The CHC learners at the beginning of this study were very much dependent on the way past teachers had taught them to learn.

Although they were brought up in the learning environment that did not allow much exposure to develop higher order thinking skills, and despite their lower level thinking skills, the CHC learners in this study performed better in the examinations as they were motivated to work harder to perform. The first year CHC learners who came from a study environment which emphasised knowing by heart faced challenges to meet various unit requirements. They learners did not perform well in classroom discussions and presentations. Their performance in terms of these types of classroom activities prevailed into their second year but when they reached their third year of study the CHC learners' oral communication skills greatly improved. Students' culture disposition towards memorisation persisted but greater emphasis had been put on understanding and analysing facts in the marketing units. In this study, the assessment activities that incorporated higher order thinking skills activities from the CHC learners' first year of studies and onwards greatly assisted them in developing these skills. The business curriculum which incorporated assessment activities requiring critical thinking skills had somehow influenced the way CHC learners learnt.

Continuous assessment activities which incorporate critical thinking skills throughout their higher education appears to assist CHC learners develop higher order thinking skills. This notion was reinforced in this study. If the CHC learners in the study remained static in their thinking abilities, they did not cope with assessment tasks especially those which required complex thinking. Most of the CHC learners performed at an average level in the units conducted in this study. Their performance was confirmed through the moderation process, undertaken by other lecturers at the home campus, against each other and their home campus peers. Due to their 'culture of memorisation' they were not able to perform confidently in their essays or case study analysis components of the course. The situation was similar to the examination culture as reported by Wong (1980). He identified that Chinese learners who relied heavily on textbooks and memorising facts seemingly possessed a lack of higher order thinking skills. A curriculum predicated on thinking skills is vital so that behavioural change in CHC learners' ways of learning is fostered and demonstrated. It is desirable that CHC learners improvise in their learning approaches to help them in classroom learning where social and human interactions are considered important for active participation in the learning process. Significantly in this study, through the variety of assessment tasks to which they were exposed, students were explicitly guided about first *how* to apply concepts and theories. Later in their second year, the CHC learners encountered a bigger project in terms of strategic planning and, finally in their third year, they analysed a company's performance. All these tasks required higher order thinking skills to complete the assessments and the skills had to be taught directly and explicitly.

### **6.2.2 Personal Teaching Style**

Assessment which was focused on developing higher order thinking skills did not necessarily guarantee that CHC learners were fully equipped with these skills. The classroom environment which was imbued with a student-centred climate had influenced the CHC learners in this study to question the teacher and even to engage in discussions in class. This somehow influenced the way they perceived learning which was to gain as much knowledge as possible, concepts and theories being the two most important aspects of their learning.

Thus, the teacher's role was equally important in the development of CHC learners' critical thinking skills. It was noted in this study that the teaching style I had developed in the classroom had assisted the CHC learners to develop their thinking skills. My major role was to facilitate learning especially during tutorial sessions, and as stated, to explicitly teach thinking skills. In the beginning, only a few of the CHC learners wanted to share ideas and information during the tutorial sessions. Besides their English language challenges, most of them came to class unprepared and would only wait till the last minute to study material by heart using memorisation. The presentation type activities ended up as more like reading sessions. In this study, teacher factors influenced and motivated CHC learners to participate in class. It depended on how I created the classroom to foster engagement in learning not merely participation by only arriving for class. For example, it was important to actively manage the classroom discussions and group activities. It required me to play the role as a facilitator during the discussions. In addition, the type of questions or case studies that I designed had to foster students' critical thinking skills.

### **6.2.3 Teaching Strategies**

The lack of critical thinking skill development for CHC learners in this study was related to the level of their English language proficiency. This notion is reported in the literature. Chinese learners experienced considerable challenges in their academic learning due to their lack of English understanding (Huang, 2006). Several researchers reported that students often were not able to analyse and synthesise concepts and theories in their academic studies (Sun & Chen, 1997; Yuan, 1982 cited in Huang, 2006). Most of the CHC learners at the beginning of this study resorted to self-study because they were cautious about sharing their ideas as it required them to debate and critique topics. Similarly in this study, joining study groups was not a preferred choice of learning for the CHC students as the study group activities required that students understand the information and then share it with the rest of the group members. Self-study had resulted in most of them being comfortable with memorising as part of their learning process which then impacted on their contributions to classroom learning activities. The lack of open discussions in the classroom impeded many of my initial attempts to develop

the CHC learners' higher order thinking skills.

In this study, with most of the CHC learners' English language proficiency being underdeveloped, they needed more spaced time to understand the case studies before starting any discussion about them. The group composition was also important. If all students in a group were from the same cultural background, the discussion ended up being conducted in their mother tongue language. This study also showed that CHC learner's cultural upbringing of not questioning those with the higher authority (the teacher) had resulted in the classroom being very quiet. The students expected the input to come from the teacher who delivered the knowledge without much discussion occurring in the class. Here, I had to improvise with my teaching techniques to develop a participatory pedagogy. In Chapter Five, examples of participatory teaching and learning activities were provided and evidenced in Appendix C. Learning activities had to be conducted systematically to allow students to follow their own process of learning and to understand their thinking style. Such a teaching approach was demanding of time, thoughtfulness, classroom organisation and curriculum delivery strategies.

The use of higher order thinking was central to producing meaning, understanding and structuring other forms of knowledge. By structuring classrooms around pedagogical and situational factors, as discussed in Chapter Five, teachers, and even whole institutions, can establish and maintain precisely the kind of thoughtful learning environments essential for the exercise and potential improvement of students' critical thinking. Such approaches not only provided numerous occasions for students in this study to engage in different kinds of higher order thinking but they also provided repeated occasions to engage in whatever kind of thinking the students needed to improve. These matters were highlighted in an earlier study (Abdullah et al., 2002). Teaching pedagogy that is supportive and motivating will assist CHC learners to achieve learning outcomes associated with higher order thinking. The classroom activities in this study were designed to support CHC learners in their learning process. Some such activities have already been mentioned but others such as discussion forums, essay question analysis and industry visits helped students to organise and improve their learning strategies.

### **6.3 Findings and the Research Questions**

The literature reviewed provided ample evidence that critical thinking skills were undoubtedly important criteria in preparing undergraduates to meet the demands from industry. As stated in Chapter Two (Jailani et al., 2006), recent undergraduates in Malaysia were perceived to lack both technical know-how and generic skills which includes critical thinking skills. Thus, the findings of this study are relevant to stakeholders particularly those in higher education institutions. The study indicated that the learning processes for CHC learners took much longer than that often allocated in a Semester study period. These students needed more time to not just acquire, recall and remember theories and concepts but to understand the theories and concepts before they could apply these to real business situations. The students' approaches to learning needed to be at a deep approach or strategic approach to developing their higher order thinking skills.

#### **6.3.1 Research Question One: What are the factors which influence the ways in which CHC learners in marketing units acquire higher order thinking skills?**

The CHC learner's conceptions of learning in the study aligned with Saljo's (1979) classification of conceptions of learning. Based on their perception that learning was the acquisition of facts, knowledge and storing information which sometimes might make sense, by the time the CHC learners in this study had reached university they had fallen into the habit of only practising thinking skills at the lower level of the taxonomy categorisations used in the study. As mentioned earlier, the surface approach that they used in their learning approaches restrained their ability in grappling with using higher order thinking skills. However, the analysis from this study suggested that CHC learners' learning experiences at the university level could influence their acquisition of the higher order thinking skills given time. They managed to slowly develop their thinking skills to a higher level depending on how the teacher addressed pedagogical and situational factors over a length of time.

Along with the requirement and the nature of the units, CHC learners realised that

only using a surface approach would limit their acquisition of their higher order thinking skills. The assessment activities that required CHC learners to know more than just memorisation of the concepts and theories had influenced their approaches to learning. When they were first exposed to the degree program, the culture of knowing by heart through memorisation continued while they went through their process of learning. However, the structuring of a learning environment which involved a synergy between the unit content, teaching pedagogy and the assessment tasks slowly changed the way the CHC learners in this study approached their learning. A teacher who takes up the responsibility and commitment to devise creative and engaging ways to impart unit content to influence CHC learners' involvement in active and communicative learning will impact fruitfully on their learning approaches.

### **6.3.2 Research Question Two: What enhances the opportunities in the classroom in terms of learning activities, teaching strategies and assessment for CHC learners to develop higher order thinking skills in marketing units?**

Through the process of learning, CHC learners involved in the study gradually, but steadily, moved to in-depth and meaningful learning. They acquired knowledge through the process of learning and memorising what had been taught so that they could retain what had been learnt and relate their learning with real world examples. The activities conducted in the classroom and the effort made by me to engage the surface learners into more complex, contextualising exercises, not just memorising the facts, assisted CHC learners to relate previous knowledge to new knowledge and different business areas.

The motivation to improve their performance based on the assessment activities began to reshape CHC learners' learning approaches. With a teaching pedagogy to support learning, the CHC learners in the study managed to develop their higher order thinking skills to a certain extent. The unit learning outcomes were achieved somewhat but it was more at the middle level of the higher order thinking skill levels. As mentioned, the analysis of information responded to research question one that learning activities, teaching strategies and assessment were factors that influenced the ways in which CHC learners in marketing units acquired higher

order thinking skills. However, the focus of research question two was on *what* enhanced the opportunities in the classroom in terms of learning activities, teaching strategies and assessment to improve CHC learners' acquisition of higher order thinking skills.

One of CHC learners' perceptions about learning was firmly fixed on acquiring knowledge but regardless of this learning approach, they used every opportunity in their learning environment to strive and do better in their academic performance. The opportunities in the classroom which maximised CHC learners' development of higher order thinking skills were abundant. First, they needed to understand the requirements of the course and the units in which they enrolled. I had to clearly explicate these expectations. Second, a clear expectation had to be set about students' participative involvement in classroom learning activities which had to be creatively designed and structured by me to enable students to explore their thinking styles and developed alternative ways of solving problems. Third, the opportunity to capitalise on their motivation to strive for their best in relation to demands from industry was ever present. Fourth, surrounded by peers from multicultural backgrounds, there were many opportunities which provided the CHC learners to use different learning skills in the classroom and to participate in classroom discussions. Even though this was hard going for many CHC learners in this study, they achieved what was needed in relation to unit learning outcomes. Last, it cannot be overlooked that a teacher who has a passion for teaching and uses different teaching strategies to motivate CHC learners to challenge themselves and move a step ahead is paramount. These characteristics provide countless opportunities in the classroom for learning activities, teaching strategies and assessment for CHC learners to develop higher order thinking skills in marketing units.

### **6.3.3 Research Question Three: To what extent do the learning and teaching approaches used in classrooms influenced the learning outcomes of CHC learners in marketing units?**

It appeared in this study that most of the new information encountered by CHC learners had to be memorised in order for them to remember facts. As an only

approach to learning, this created difficulties in their learning process at the university level in a Western curriculum. In response to research questions one and two, it was evident that careful thought given to the selection and nature of the teaching, learning and assessment approaches used in the classroom supported students in developing their higher order thinking skills. However, even with such effort on behalf of the teacher and other curriculum planners, the analysis of CHC learners' performance in relation to unit learning outcomes was still only at the lower order skills level in their first and second years of study. Happily, as they progressed into their third year, the CHC learners were more confident in completing learning and assessment tasks. By using more of a deep or strategic approach to learning, the CHC learners managed to complete tasks that demanded the application of higher order thinking skills. The capacity that they acquired in their first and second years of study gradually influenced their successful achievement higher order thinking skills in final year marketing units. The caution here is that CHC learners cannot just suddenly become students applying higher order thinking skills in their learning and assessment tasks when they first arrive at university. The design of and the systematic delivery of the curriculum and the explicit teaching approaches adopted in a classroom over a long period time are major influences on CHC learners' performance in relation to higher order thinking skills and marketing units. It was clear that CHC learners have to be overtly taught about the way they think in order to develop other ways of thinking.

#### **6.3.4 Research Question Four: How do instructional approaches for marketing units influence the CHC learners' conceptions of learning, their approaches to learning and thinking in classrooms and their learning outcomes?**

As mentioned earlier, in relation to research questions one, two and three, instructional approaches impact on CHC learners' conceptions of learning, their approaches to learning and thinking in classrooms and their learning outcomes? Research question four specifically focussed on *how* the influence manifested itself. In this study, the instructional approaches necessarily had to model what learning behaviour was required of CHC learners. They had to be more than just listeners in the class but to participate actively. As the teacher in this study, I used

a two-way learning process. In each tutorial, CHC learners were expected to have prior information before their arrival in class so that they could use the information to discuss matters at hand. The CHC learners were given the choice to arrange the classroom setting which was conducive for discussion. They had to use different visual aids from chalk and talk to power point presentations, wall charts, posters and role-plays to communicate information to others. The move of power for learning from the teacher to the student allowed for creative and flexible options for the CHC learners to confidently perform in classroom discussions and assessment tasks. How students took control of the learning environment and their own learning was important. The learning environment in the classroom which fostered the development of not only their confidence in their abilities, but their higher order thinking skills, influenced how CHC learners approached the challenges to tackling new thinking strategies.

The CHC learners acquired higher order thinking skills when their learning conceptions and the teacher's learning design were in harmony. Thus, in designing the curriculum, there needed to be a comprehensive program which incorporated two essential components. First, the curriculum design of an undergraduate marketing degree needed to encompass general aspects of thinking approaches in all units comprising the degree. Second, the marketing program needed to address thinking tasks that are commonly encountered in CHC learners' learning process. These two components were incorporated into the proposed learning and teaching model for CHC learners.

The research questions in this study were sufficiently addressed. However, further questions arise from this study and these are discussed in Chapter Seven in relation to possible further research. For example, this study gave me an insight into the idea that different students have different views of what learning means to them. These findings warrant further investigation into the life and learning experiences of Chinese learners in different universities because while the findings of the study may apply to all students, including CHC learners, pedagogical and situational factors can be diverse from one institution to another, even from one teacher to another in the same institution.

#### **6.4 Proposed Learning and Teaching Model**

Learning and teaching should be a balanced system in which all component parts support each other and are interdependent. For the components to work effectively all need to be aligned to each other. As well as learners and teachers, the critical components in a balanced system include the curriculum (learning outcomes and the content and knowledge base of a program), the teaching methods (how the teaching is structured, the learning activities and their context) and the assessment procedures (processes, systems, standards frameworks and roles of those involved). Apart from the curriculum components, the environment in which learners learn, their support and access to further learning resources and the institutional environment and its constraints (such as the location of learning activities and the policies and constraints therein) surrounding them have an impact on CHC learners. These components are the elements in the proposed model which is the nub of this thesis. The components included in the proposed model are the course content, course learning outcomes, teaching methods, assessment tasks and learning support such as the classroom facilities and other related areas.

Although CHC learners in this study were in the same class and taking the same units of study, their learning-related predispositions had resulted in different perceptions towards their own learning. However, in a general sense, the CHC learners in the study processed new knowledge by learning by heart and at best through reference to prior knowledge. This was based on what they already knew, thought and had experienced. Unfortunately, sometimes knowing by heart and not understanding led the CHC learners in the study to just memorise and given back what they remember during examinations. Due to their determination to excel in their examinations and the way CHC learners were guided in their earlier encounters with learning had hugely influenced their approaches to learning. The difficulties for CHC learners emerged as they grappled with higher order thinking processes to negotiate, understand and apply new knowledge in a Western curriculum based on the English medium of delivery.

This idea was acknowledged early by educational researchers such as Dunkin and

Biddle (1974). They identified the process of negotiating new knowledge in a 'presage-process-product' model of the learning and teaching process. The model was otherwise termed a 3P model. Dunkin and Biddle (1974) believed that presage factors, or the knowledge and ability that students acquire before new learning takes place, influenced the way they approached their learning strategies. Students bring their abilities, personalities and motives to the learning process and decided how they prefer their process of learning to be. The 3P model was refined by Biggs (1996, 1999) who also recognised that students' pre-learning characteristics such as prior knowledge, abilities, values and expectations, their perceptions towards learning and their ways of learning had important measurable effects on their learning process and their learning outcomes. He termed such characteristics as student presage factors. Student presage factors are relatively stable having been developed before the student enters the university system. Biggs (1996, 1999) further stated that teacher characteristics also constitute presage factors. Both student and teaching factors interact to produce an approach to learning and teaching which produces specific resultant outcomes. Therefore, learners accordingly perceive and interpret the teaching context and adopt a study approach that they think will ensure they meet the demands of teachers and courses. The process aspect of the 3P model is that learning and teaching are concerned with the development of quality learning outcomes in the students such as deep learning, understanding, independent learning, critical and creative thinking, problem solving and other lifelong learning attributes. Thus, there has to be a system that creates contexts to minimise surface approaches and encourage deep approaches to learning. The teaching context is the classroom environment set by the teacher and the institution through course structure, curriculum content, methods of teaching and assessment. Thus, in the learning process, it is important for the teacher to structure an environment that promotes students to think critically. The product aspect of the 3P model is based on the underlying assumption that learning outcomes are a result of the interactions in learning and teaching contexts in concert with students' approaches to learning. Biggs (1999) asserted that the relationship between the presage, process and product elements of the 3P model were highly dynamic and for the components to work effectively all components needed to be aligned to each other.

The proposed model to emanate from this study uses the components outlined in the 3P model. The student and teacher predispositions, the learning processes that CHC learners experience and the end product which is expected of them underlies the proposed model. The assumption underscoring the proposed model is that learning outcomes are a result of the interactions of learning and teaching contexts in relation to CHC learners' approaches to learning. However, the proposed model in this thesis also takes into account a newer idea of constructive alignment termed and explained by Biggs in 2003.

The 'constructive' idea refers to what a learner does to construct meaning through relevant learning activities. The proposed model identifies three components which are supportive of CHC learners' development of higher order thinking skills. The three main components are learning, teaching and thinking. The 'alignment' aspect refers to what the teacher does to set up a learning environment that supports the learning activities appropriate to achieving desired learning outcomes. The key message is that the components in the teaching system, especially the teaching methods and the assessment tasks used, are *aligned* to ensure students achieve intended learning outcomes. In simple terms, constructive alignment means that all assessment tasks, learning and teaching experiences, and therefore content and methods, must be linked to the desired unit of study learning outcomes. The focus then is to facilitate the students' achievement of the learning outcomes and all tasks should be geared towards providing a learning environment in which students are able to show what they know and can do.

The essential purpose of this thesis was that the proposed learning and teaching model for CHC learners will ensure that at the end of their learning process, they will be equipped with the necessary skills such as higher order thinking skills as part of their employability potential. Thus, in order for students to acquire the necessary skills, the proposed model takes into consideration the learning processes of CHC learners which include prior presage factors as introduced by the Biggs 3P model (1989). With knowledge about CHC learners' background, academics, as teachers and curriculum planners, can support CHC learners' learning process with best practice and structuring a conducive learning environment.

In the learning and teaching process, the route to learning and teaching is complex. Hence, it was important to recognise that the foundation of good teaching must be predicated on the learning activities of the students and not the teaching activities of the teacher. This alert was provided by Reaburn (2009). The specific role of the teacher is to get students to engage in learning activities that were likely to result in their achieving those [learning] outcomes” (Shuell, 1986, p. 429). In the study conducted by Biggs (2003), he suggested that traditional teaching methods such as the lecture, tutorial and private individual study did not provide much support for the development of the skills required for higher order thinking and learning processes. These methods are effective for the academic, highly motivated student, but not for the majority of students who performed at the average level in their academic performance. In order to achieve successful outcomes, he argued that students must want to learn which reflects the attitude of the highly motivated student.

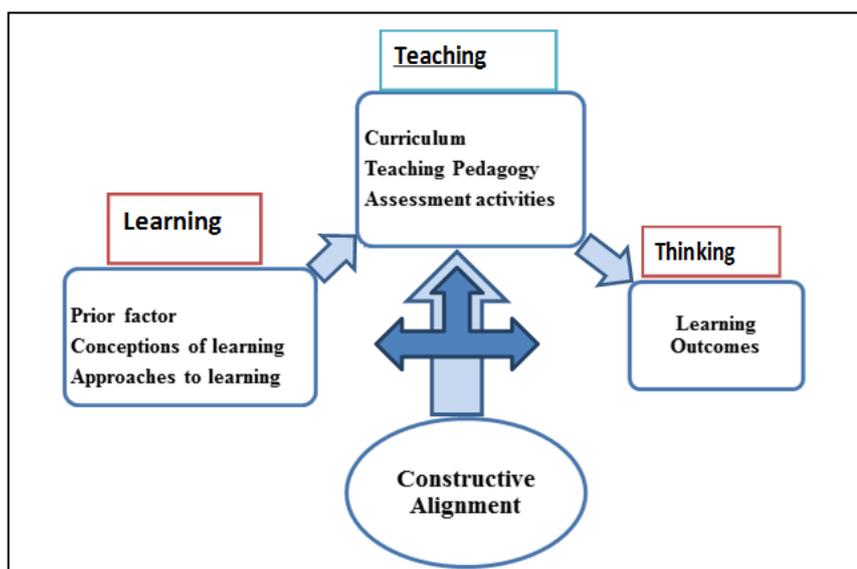
## **6.5 Learning and Teaching Thinking Model**

For convenience and intrigue the proposed learning and teaching thinking model is termed the L2T Model. The components of the L2T model are as follows.

1. The learning component which takes into consideration the students’ predisposition factors such as CHC learners’ prior knowledge and background, their conceptions of learning and their approaches to learning.
2. The teaching component which takes into consideration the curriculum content, teaching pedagogy and assessment activities.
3. The thinking component which takes into consideration the CHC learners’ learning outcomes and evaluation of their learning.

It is envisaged that the proposed model will work interchangeably with the constructive alignment approach introduced by Biggs (2003). The approach should be adapted according to different situational influences on different CHC learners’ learning environments to best fit an overall delivery of marketing units in

an undergraduate business degree. Figure 6.1 illustrates the L2T model.



*Figure 6.1.* Learning and Teaching Thinking Model for CHC Learners (L2T Model)

The model could be adapted to the planning and delivery of other business degrees. The three components of the L2T model are further elaborated upon.

### 6.5.1 The Learning Component

This component was similar to the presage factors which were part of the 3P model of learning introduced by Biggs (1999). The learning component takes into consideration CHC learners' learning environment before any new actual learning takes place. This includes CHC learners' prior knowledge, their educational backgrounds and their learning culture before they embark on the process of new learning. In this component, the CHC learner is the focal point in the process of learning. The component is not just about the learners themselves but the environment that surrounds them.

The CHC learner' prior knowledge to learning will have an impact on how they perceive learning. They will have a worldview which includes their conceptions of learning which in turn will have an impact on their learning approaches. A student's approach to learning is one of the relevant areas that is a focus in the proposed model. A student's approach to learning is not a new research problem

in educational research but it is important for a teacher in a higher education institution to take note of the different approaches used by CHC learners to their learning in the classroom. The CHC learners' approaches have been discussed extensively in this study, thus it was important that this factor was incorporated into the proposed L2T model for CHC learners. Students are capable of taking different approaches to their learning and one of the most important influences on which approach students take is the design of the course and the assessment strategies used and this finding is consistent with Biggs' notion of constructive alignment (Biggs, 1999). Over the last two decades, there has been a shift in learning and teaching in higher education. Instead of characterising learning as a simple acquisition process based on teacher transmission, learning is now more commonly conceptualised as a process whereby students actively construct their own knowledge and skills (Biggs, 2003; Boud, 2000; Sadler, 1998).

### **6.5.2 The Teaching Component**

According to Shuell (1986), the teacher's fundamental task is to ensure students engage in learning activities that were likely to result in their achieving set learning outcomes. How then, can teachers provide the best teaching practices in terms of learning activities that resembles the students' approaches' to learning while making sure the learning outcomes are achieved? Traditional teaching methods such as the lecture, tutorial and individual study seemingly do not provide much support for the development of the skills required for higher level learning processes. In order to achieve successful outcomes, Biggs (2003) argued that students must want to learn and reflect the attitude of highly motivated students. Students' conceptions of learning must be challenged. They must be encouraged to see the process of learning that is, learning to learn, to be important. Learning to learn must have value to the learner. Following this view, the L2T model for CHC learners incorporates constructive alignment. Constructive alignment is central to the role of the teacher in the learning and teaching process. The notion of constructive alignment is discussed further on.

### **6.5.3 The Thinking Component**

This component of the L2T model is the result of the learning and teaching process. It exemplifies the intended outcomes of the learning process which includes quantitative outcomes in terms of the amount of knowledge and the scope of skills a student has acquired. The culmination of the learning and teaching process, which should be neatly aligned, is that CHC students through their engagement in learning and assessment activities will integrate newly learnt knowledge with previous learnt information and add to and build their structure of discipline knowledge in the marketing field. In the business curriculum, it is important to look at the business school curriculum to ensure that it is “broad in scope and forward-looking so undergraduates may effectively handle the challenges and issues that will accommodate the industry needs” (Demoss & Nicholson, 2005, cited in Spiller & Scovotti, 2008). The Advance Collegiate Schools of Business (AACSB) was clear that business students should be prepared to enter useful professional, societal and personal lives (AACSB, 2007a, 2007b).

### **6.5.4 The Constructive Alignment Component**

Constructive alignment provides a useful framework for students to achieve desired outcomes such as developing ‘functioning knowledge’ or professionally relevant understanding as described by Entwistle and Entwistle (1997) and Biggs (2003). The constructive alignment approach to university learning and teaching demands that students learn the necessary skills to seek out required knowledge as changing situations demand. The approach facilitates active student engagement in authentic learning activities that are designed to achieve desired learning outcomes and which are assessed in terms of what students can do, rather than knowing about something they can recite or write down (Biggs, 2003). The approach facilitates active student engagement in authentic learning activities that were designed to achieve desired learning outcomes and assessed in terms of what students can do, rather than the ‘declarative knowledge’ or knowing about something they can recite or write (Biggs, 2003).

The constructive alignment works on the basis of looking at the intended learning

outcome as the main focus to student learning and teacher teaching. The constructive alignment will make sure that there is a balance and synergy between the students' need and wants, the teaching components (curriculum, teaching methods and the like) and a balance in the product of the learning. Each of these components needs to work towards common goals. Imbalance in the system will lead to poor teaching and surface learning (Biggs 2003).

## **6.6 The Relevance of the L2T Model**

First, the L2T model is relevant to the bigger idea concerning the purpose of higher education. One of the goals of higher education is to promote thinking and enhance understanding in students (Barnett, 1990; Baharin, 2000). The understanding and awareness on views on conceptions and philosophy of learning and teaching may help teachers in higher education settings improve their teaching preparations and presentations. The quality of learning and teaching are evidently connected to the quality of the interactions between teachers and students (Staton, 1960; Kyriacou, 1986; Brown & Atkins, 1988; Ornstein, 1990; Cullingford, 1995; Bligh, 1998; Baharin, 2000). This evidence points to good teachers delivering good teaching will focus on quality explanations to students and emphasise students' understanding, learning processes and thinking skills. Both the teachers and the learners are partners in the process and they are considered as 'shareholders' working symbiotically to make learning and teaching a successful experience. By exposing and understanding both teacher and student views about the conceptions and philosophy of learning and teaching at the university level, there is a chance to promote greater understanding about improving students' learning.

Second, the L2T model is relevant to identifying institutional appeal for students. Today, as higher education institutions adopt an open education policy and a concept of 'lifelong learning', students will enter these institutions from wider and richer backgrounds in their beliefs, values, perceptions and cultures. They will come from various socio-economic backgrounds and bring different prior learning experiences. Knowing CHC learners' background is very important before the learning process starts. Factors such as CHC learners' prior knowledge, education

system, their personal characteristics and social and cultural factors will provide some background information to the teacher. The information will help the teacher to understand the CHC learners better and the process of learning and teaching can be better accomplished through a proper designing of curriculum and using teaching pedagogy that best fits CHC learners. This concept depicts the marketing idea that highlights the importance of the customer. In marketing, it is essential to analyse the needs of the customers and then make decisions to satisfy those needs. The same aspect is highlighted in the learning and teaching processes.

Understanding what CHC learners have experienced in their previous learning will have an influence on what and how they perceived learning to be. Biggs (1993) had notably stressed that the students may have a preferred orientation towards, or an intention to use, one type of learning approach based on what they believe what learning is about and how it should occur.

Third, the L2T model has potential to provide local academic scholars, those teaching in offshore campuses, an avenue to provide input to their home campus counterparts in terms of course content and outcomes and the design of new courses. Local input into course design is imperative as the success of the course is when CHC students as end users succeed in their education because a conducive learning environment has been provide for them and their learning outcomes match their true capacity and capability.

Finally, the relevance of the L2T model is closer to the classroom environment. Setting expectations and planning for good learning and teaching in the class have always been two challenges for teachers. At the end of the learning process, when students complete a unit or a course, a teacher can sometimes be left with a question without an answer. Did I do the best for these students? One way to ponder with this dilemma is to ensure that learning and teaching processes tie students' conception of learning to their approaches to learning. The L2T model becomes a useful tool for the teachers to design a curriculum and strategise pedagogy and situational influences associated with the classroom to best balance all factors impacting on CHC learners. Important in this matter, is to ensure that students and teachers are stakeholders in the learning and teaching process. Student and teachers must know how they learn so that learning and teaching can

be a 'mix and match' process to maximise students' learning outcomes.

## **6.7 Summary of the Chapter**

Based on the findings from the study and the discussion that followed, as a teacher - researcher I have gained an insight into how CHC learners' best learn and the critical importance that assessment holds in the learning and teaching process. I have proposed a learning and teaching model which I have titled the "Learning and Teaching Thinking model for CHC Learners". As pointed out in the earlier research, Asian learners, in particular CHC learners are as good as their counterparts in terms of their academic performance. In some areas, especially in the quantitative aspects of curricula, CHC learners outperform their Western counterparts but in language related areas, especially those predicated on the English medium, there must be a way that the learning and teaching process can be modelled to help develop CHC learners' range of higher order thinking skills.

The era of stereo typing the Asian learners, in particular CHC learners, as 'rote learners' is coming to an end. Confucius Heritage Culture learners, who are known as 'brainy Asians' by some scholars, have the capacity and the capability to think critically, analyse information and built new information. The proposed model may be the start to changing the learning and teaching process for CHC learners in the Malaysian context. It may be a starting point for the academic scholar who is responsible for curriculum design to look at the process that CHC learners in particular experience in their learning and teaching processes. The model can be used by scholars to incorporate information from this thesis into designing course objectives while not jeopardising the quality of the learning and teaching for students. This is important as the learning and teaching process has many stakeholders but importantly industry partners with whom CHC learners deal when they start their workplace journey after completing their undergraduate degree. As stated in the working hypothesis, CHC learners will acquire higher order thinking skills more effectively when their learning conceptions and the teacher's learning, teaching and assessment design are in harmony.

# CHAPTER SEVEN

## CONCLUSION

### 7.0 Introduction

The growing emphasis on the importance of undergraduates who demonstrate that they have acquired appropriate employability skills which suit the working environment uphold the direction of this study. Currently, in Malaysia, the shift towards a 'knowledge driven economy' has made this study important because its outcomes have much potential relevance. If used by interested parties who are involved in analysing the learning and teaching process of undergraduate students, a contribution towards industry development, as part of achieving Malaysia's vision of 2020, can be made. It was noted by Jailani et al. (2006) in the Ninth Malaysian Plan that university undergraduates now are lacking in both technical know-how and generic skills, skills which are paramount in shaping employee capabilities.

In the context of the business curriculum, the importance of incorporating employability skills into curricula, part of which should focus on the attainment of higher order thinking skills, has been discussed at length. Based on the literature reviewed in this thesis, it was evident that higher order thinking skills are imperative for business studies students to acquire. Thus, it becomes the responsibility of any group involved in the learning, teaching and assessment processes associated with undergraduate students to find ways that enable students to develop their higher order thinking skills. This expectation of a business curriculum and students' development of higher order thinking skills were the dominant factors which drove the momentum in this study. Due to the gap between CHC learners, the way they learnt and the curriculum requirements of them, this study was conceptualise to contribute to the literature on the learning processes of CHC learners with the view of contributing to the development and improvement of their higher order thinking skill capabilities.

This conclusion Chapter comprises six main sections. The first section focuses on the summary of the research process. The second section revisits the conceptual framework of the study and is followed by a summary of the overall findings in the study. The third section discusses the significance of the study and then a section on the strengths and limitations of the study is provided. The fifth section discusses the implication of the study and section six presents the implications of the proposed model and its contribution to future research.

## **7.1 Summary of the Research Process**

This study was conducted to investigate CHC learners' thinking and learning behaviour and to identify how the behaviour influenced their learning in a multicultural university campus environment. As mentioned in Chapter Three, the methodology of the study was based on the interpretive model of research and incorporated a mixed method approach using survey and ethnographic techniques. The concept of the mixed method approach, and the process of working with both qualitative and the quantitative data, signifies two distinctly different methodological research paradigms used to understand the contextual nature embedded in the study. The developmental research design of the study was a case study which progressed over Fives Phases (see Figure 3.1) and was bounded by two main referents. First, the case was bounded by the participation of a distinct group of students, those enrolled in a business degree at an offshore campus and who were defined as the CHC learners. Second, the three marketing units which were the basis for analysis of students' thinking skills bound the case study.

As part of the survey approach, a sample of the Curtin Sarawak campus population was identified to collect data through the use of questionnaires during the course of 2006. This involved CHC students as a distinct group of students and involved different groups of respondents studying in a different semester but who were involved in the same learning environment and undertaking the same units, learning activities and assessments. The sample size of 136 CHC learners involved in the study was identified from different marketing units which were Marketing 100 (a first year unit), Strategic Marketing 310 (a third or fourth semester unit and a pre-requisite unit) and Business Policy 320. The cohort sampling allowed me as

a researcher to compare the patterns of student perceptions of their learning, their approaches to learning and whether CHC learners from different study periods had achieved the desired learning outcomes based on the learning and teaching activities they had experienced.

The questionnaire was designed based on the conceptual framework of the study (see Figure 1.1). A questionnaire (see Appendix B) was developed based on the approved proposal which was approved by an ethics committee (see Appendix A). The questionnaire was developed based on Bloom's Taxonomy and Biggs' SOLO Taxonomy. The Bloom's Taxonomy (Anderson & Krathwohl, 2001) was used to examine the students' learning activity and assessment in terms of the level of knowledge or cognitive level required for its understanding or application used (see Tables 3.1, 3.2 and 3.3). The SOLO Taxonomy, originally developed by Biggs in 1999, was selected because of its consideration of CHC learners. The Taxonomy was used for classifying students' responses in terms of their learning. These two taxonomies specifically focused on differentiating students' thinking levels and cognitive complexity levels in their learning capabilities.

In the context of the qualitative approach, all relevant documentation relating to the study including the records of interviews, journal reflections by the students, classroom observations, which were videoed, relevant photographs and student performance information were analysed. By constantly revisiting the evidence, I was assisted in addressing the research questions. I acknowledged that my role as the researcher and participant in the study may have impacted on the trustworthiness of the data and the objectivity of interpretations made, so a range of members check were put in place throughout the Phases of the developmental research design. As the researcher for this study, I was totally involved in all Five Phases of the study. The data were collected and analysed from multiple sources to enhance the reliability of the study. In this study, I was integrally involved in the social setting of the research site at all times.

My prolonged engagement with the participants came not only with teaching each cohort over the period of a year but also in the time taken for the focus group interviews sessions. The interviews assisted me in understanding the problems

faced by the participants as CHC learners. Member check techniques were used to establish the conformability of interview interpretations of the data collected. The information gathered was summarised with the groups and comments were revisited and validated by the groups to confirm that the interpretations I made were accurate. I also invited a colleague to read the transcribed data to provide me with feedback to gain another point of view about the analysis of the data.

## 7.2 The Conceptual Framework of the Study

The purpose of the study was to explore under what circumstances CHC learners in a multicultural university environment can become critical thinkers in the area of marketing units. It appeared that learning occurred when CHC learners were able to use what they had been taught in class and relate learnt concepts and theories to the outside world. Understanding of knowledge gave them a better position to recall what they had learnt. The study was conceptualised around four themes in terms of CHC learners' conceptions of their own learning, their preferred learning styles and approaches to learning, the learning, teaching and assessment approaches which best suited CHC learners and the extent to which CHC learners in the study achieved higher order thinking skills through the level of learning outcomes set for them (see Figure 1.1). These four elements in the conceptual framework underpinning the study provided a way to collect, analyse and present the findings from the study.

The conceptual framework enabled the examination of the types of critical thinking skills which CHC learners used and how these skills could be developed, how learning and teaching approaches accommodated the development of student's higher order thinking and the proposal of a learning and teaching model for CHC learners with a focus on higher order thinking skills.

The first emphasis of the study was to analyse the CHC learners' **conceptions of their own learning**. Learners' perceptions of their learning were that they had learnt something when they were able to build new information by bringing in and synthesising new facts and information with what they understood. The ability to use the information and see things from a different perspective made learning

more meaningful and helped them to build new knowledge. This suggested that the CHC learners' perceptions towards learning were that it was more than just memorising and remembering. This new knowledge would help them to relate the information to the outside world through analysing and application of new information.

In the main, CHC learners' conceptions of learning were culturally laden but were generated by a genuine desire to learn, analyse and apply new knowledge, but their **approaches to learning** showed changeable characteristics and the patterns was similar across the three marketing units investigated. The CHC learners remained reliant on rote learning techniques, however, sometimes their learning approaches changed according to what they had to learn. The CHC learners used a surface learning approach interchangeably with the deep and strategic approaches. It seemed that the type of assessment for the units played a vital role in the type of learning approach CHC learners adopted to complete an assessment task. The motivation to improve their performance based on the assessment activities shaped the CHC learners' learning approaches.

The **learning, teaching and assessment** activities, which CHC learners encountered during the study, were paramount to their academic success. The various assessment tasks for the three units required the CHC learners to apply what they had learnt into real business situations. Apart from the assessment activities, the effort made by me as the teacher to engage the surface learners in more complex and contextualised exercises, not just memorising the facts, managed to develop their higher order thinking skills. Learning activities and teaching strategies necessarily demanded that thinking skills be taught explicitly and to lead students to understand the ways they learnt. It was important students could articulate which level of thinking skills need to be used to best solve specific and different types of problems. The CHC learners responded positively to the **unit learning outcomes** which demanded they used their **higher order thinking skills**. They understood the concepts and theories which helped them to integrate different business perspectives and think critically. However, in the study it was mostly evident in students undertaking their third year level unit while first and second year students tended to remain using thinking skills at the knowledge and

comprehension levels.

### **7.3 The Findings**

The central research question in the study was:

Under what circumstances can CHC learners in a multicultural university environment become critical thinkers in the area of marketing units in a business curriculum?

Based on the central research question, the following research questions were constructed to provide the specific direction for the study.

1. What are the factors, which influence the ways in which CHC learners in marketing subjects acquire higher order thinking skills?
2. What enhances the opportunities in the classroom in terms of learning activities, teaching strategies and assessment for CHC learners to develop higher order thinking skills in marketing subjects?
3. To what extent do the learning and teaching approaches used in classrooms influenced the learning outcomes of CHC learners in marketing subjects?
4. How do instructional approaches for marketing subjects influence the CHC conceptions of learning, their approaches to learning and thinking in classrooms and their learning outcomes?

These four research questions which were generated from the central research question were addressed in the Chapter Six discussion and identified learning and teaching approaches that could be implemented in classrooms and the kinds of support required or necessary to assist CHC learners in offshore campus contexts to build their capabilities to use higher order thinking skills. The need to address these research questions in Chapter Six was to establish a clear premise for the proposed learning and teaching model which was a culminating outcome of the

study.

However, a summary of the finding related to the four research question is provided here. First, the factors which influence the ways CHC learners acquire higher order thinking skills were identified as pedagogical and situational. Units of study must be higher order thinking related in all learning, teaching and assessment activities and teachers must be passionate about their professional work to creatively engage students in active and communicative learning. The selection and nature of the teaching, learning and assessment approaches used in the classroom must be considered carefully in order to develop students' higher order thinking skills.

Second, opportunities which enhanced classroom activities were identified to support the development of students' higher order thinking skills. There has to be constant reminders provided to students at every turn to explicitly explain the requirements of the course and the units in which they enrolled and to set clear expectations about students' participative involvement in classroom learning activities. The students required continued encouragement and reassurance to work productively with other students from different cultural backgrounds. Thus, the learning activities which CHC learners encounter must be creatively designed and structured to enable them to explore and understand their own thinking styles and developed alternative ways of solving problems. Students' motivation to strive for their best in relation to demands from industry has to be capitalised upon at every opportunity. Importantly, CHC learners must be challenged to step ahead and risk taking up new opportunities to learn in alternative ways independent ways.

Third, the extent to which the learning and teaching approaches used in the classroom setting can influence the learning outcomes of CHC learners will be variable. In a Western curriculum delivered through the English medium, language proficiency issues arise. Despite the best efforts of teachers and other curriculum planners, CHC learners' performance in relation to unit learning outcomes might still manifest in their higher order thinking skills levelling at the lower categories. This can be especially so for CHC undergraduates in their first and second years

of study. However, given time, and in association with the design of and the systematic delivery of the curriculum, CHC learners who are shown **how** to learn with a deep or strategic approach will more ably develop their higher order thinking skills. Those CHC learners who are overtly taught about the way they think and observe higher thinking through teacher modelling can discover other ways of thinking.

Finally, how do instructional approaches influence CHC learners? The main influence on CHC learners and their development of higher order thinking comes down to the teacher. High expectations must be set for CHC learners to aspire to academic excellence. They cannot be mere listeners sitting in class. They must engage openly and cooperatively with their peers, given that the opportunities to do so are provided, by being prepared prior to lessons, participating in a range of communication activities and believing that they have control over their own learning. For a teacher to engender such qualities in CHC learners may seem insurmountable for some but the study showed such an achievement was possible.

The essence of the thesis then became the proposal of learning and teaching model which best supported CHC learners' development of higher order thinking skills in the classroom setting. It is envisaged that the model proposed in Chapter Six will provide guidance to the curriculum design of marketing units in a transnational education system. In a nutshell, this study has provided the foundation for the future curriculum design of marketing units in terms of the assessment and instructional approaches that tailor CHC learners' learning environment. In addressing the central research question, the circumstances that support CHC learners to become critical thinkers in the area of marketing units in a business curriculum became evident.

#### **7.4 Significance of the Study**

At the broad level, the literature on higher order thinking skills for CHC learners undertaking a business degree is not prolific. The study contributes to the literature on CHC learners studying a business related curriculum and identifies the issues that teachers of marketing units face to enable CHC learners to achieve expected

learning outcomes especially those studying in a multicultural university environment.

At a more local level, the information gathered in the study has the potential to provide assistance to stakeholders of the Australian University, its offshore campuses and those in industry who will be employing business undergraduates from the University. The University and all those associated with it desire a good reputation about its teaching and the business courses provided to students. In the end, if business undergraduates are commended as ‘first class human capital’, then much has been achieved by the University for its students. Such commendation will strengthen the reputation of the University and its relationships with international students and their parents. In the Malaysian context, improved outcomes for CHC learners will become part of the national effort to build the human capital capacities of the country. The Australian University has implemented a curriculum strategy, the Course Comprehensive Review, to establish and maintain precisely the kind of thoughtful learning environment essential for the exercise and potential improvement of students’ critical thinking abilities. The Comprehensive Course Review, which is to be conducted regularly across all courses, is to make sure that all undergraduates defined as work-ready achieve the nine graduate attributes articulated by the University. It is expected that undergraduates will know their discipline, have key employability skills (critical thinking, information, communication, technology, lifelong learning and professional skills) and possess an international perspective based on intercultural understandings. This study has an important place and contribution to the University’s Comprehensive Course Review. All students must achieve the identified graduate attributes but those who work with CHC learners must be cognisant of the different ways that CHC learners might need to journey in the classroom to reach such a goal. The study provides insight for curriculum planners to ensure that the marketing degree for CHC learners is relevant, delivered to achieve outcomes, especially those associated with higher order thinking, and shapes the CHC learners as work-ready.

Specifically, the study provides a foundation for the future design of marketing units in terms of instructional and assessment approaches which best fit CHC learners’ learning environment. Based on the literature reviewed, it was evident

that higher order thinking skills are imperative for business studies students to acquire. It is the responsibility of any group involved in the learning, teaching and assessment processes associated with CHC learners to find ways that can help students to develop these skills. A new model of learning and teaching was developed which will assist in the process of all curriculum design for marketing units and for CHC learners in particular. Classrooms for CHC learners must become student centre rather than teacher centre and the design of the marketing curriculum must generate such a shift.

People with critical thinking skills in the business world are essential as the ‘world knowledge economy’ demands volumes of information to be reviewed daily for effective decision making. As such, the task of improving critical thinking in business school undergraduates is vital in preparing students to engage productively in such a world. With the business curriculum that demands higher order thinking skills, CHC learners’ learning process must move towards countless opportunities to analyse what has been understood and to reason things out. Given these opportunities, CHC learners will be able to move from learning through memorisation to more meaningful learning, understanding and with a foundation not only to reproduce knowledge but also to produce new knowledge.

At the teacher level, the study has much potential to guide classroom practices in which CHC learners can be found. Part of the student population in a transnational education system comprises CHC learners. The study showed clearly that CHC learners’ approaches to learning need to be changed to suit the demand from the industry for undergraduates who can communicate effectively in English and think creatively. The L2T model can be used by teachers to ensure that once they have a curriculum design with which to work, they become responsible for planning, organising and implementing creative classroom settings and learning activities. Further, teams of teachers can use the L2T model to ensure that CHC learners who are taught by different teachers experience a cohesive and holistic learning environment where expectations of students are similarly set.

## **7.5 Strengths and Limitations of the Research Design**

### **7.5.1 Strengths of the Research Design**

The research design was a developmental case study with five progressive phases of data collection and analysis conducted over one year. The study was triangulated using mixed methods of survey and ethnographic techniques which generated both quantitative and qualitative information. A study-specific questionnaire was designed which was validated in the literature, approved by an ethics committee and conducted with a reasonable sized sample of CHC learners across three marketing units of study. The response rate to the questionnaire was high as was the reliability of the instrument. The quantitative data were statistically analysed. The same sample of CHC students was focused upon for classroom observations, involvement in a learning blog and selection of interviewees who provided further rich information about their conceptions of learning, their approaches to learning and their beliefs about their higher order thinking skills. Student performance data were analysed which was based on moderated assessment tasks. Standards of research were applied to the methodology of the study. I worked closely as a teacher-research with CHC participants to gather and analyse information and all interpretations made from the qualitative data were continuously member checked with participants to check the soundness of my interpretations. This process enabled participants to correct, revise or expand their comments. The research records associated with the study were kept and stored safely and I have protected the identity of the participants.

During the course of the study, many people have become interested in my work. I have conducted several in-house, local and international workshops on CHC learners and published papers in referred journals. The foundation of these workshops and papers has been based on the findings of the study.

### **7.5.2 Limitations of the Research Design**

As with any case study, it must be acknowledge that the study was conducted at a unique site and at specific time with a particular group of students. Many factors

affected the study not the least being a time constraint on my work as a faculty leader, a teacher, a researcher and a part-time doctoral student.

As the teacher-researcher in the study, one could easily slip into situations to represent social settings and the students in ways that were inaccurate. My own cultural background is different from that of the students who were involved in the study. I constantly had to reflect on the data collection and analysis to remain intellectually honest and not to bias my opinions about a cultural group based on my own worldview. There was no attempt in the study to statistically control contextual factors in the study and the analysis of the quantitative data remained at a descriptive level with only some correlational work completed. Some criticism might be levelled at the focus on the participants studying a Western curriculum delivered through the medium of English because language is susceptible to cultural and background experiences. However, this contextual factor could not be controlled but provided insight into what all CHC learners might experience at the university level when faced with learning in English which is not their first language.

## **7.6 Implications of the Study**

### **7.6.1 Theory Implications**

The issue of thinking skills has been one of the recent debates among educators in the South East Asian region. Employers today are not just seeking graduates with ‘domain skills’ and knowledge relevant to their field. They are looking for people who possess ‘generic skills’ such as problem solving and analytical thinking skills. These skills are lacking as student outcomes in the Malaysian education system according to Aminuddin (2011). One of the issues that has been a discussion in recent Malaysian Education forums was the overwhelming emphasis on examination grades which in turn has encouraged students and teachers alike to get through the syllabus by memorising key points rather than taking the time to understand concepts. The education system that has trained CHC learners to remember facts and study by heart has wedged their perception of learning. The examination culture demanding that CHC learners MUST know what has been taught has also influenced the way they think of learning. Apart from the study having the scope to impact on CHC learners, it will also offer insight for those

academics and industry partners who are involved in the learning and teaching processes associated with CHC learners. University policy makers will be able to use findings from the study to ascertain if changes are required to current learning environments to better CHC learners' educational outcomes.

The study revealed that the learning process for the CHC learners takes much longer. More time must be utilised not just to recall and remember knowledge but also to understand and apply the knowledge. The positive belief of CHC learners about learning is a promising good start in their learning process. However, with an education system that expects undergraduates to have higher order thinking skills and meet industry demands, CHC learners need the confidence to improvise with their learning approaches. Different learning approaches will afford them not just the acquisition of knowledge but with the ability to analyse, synthesise and even produce new knowledge. They need to move away from the traditional surface approach to deep or strategic approaches to learning as these approaches enable CHC learners to develop their critical thinking skills such as the higher order thinking skills.

Memorisation has been the larger part of techniques used in acquiring knowledge by CHC learners. The culture of memorise and learnt by heart had also influenced teaching approaches. At the university level, faculty academics often face the dilemma of which best teaching approaches they should use in order to make sure that at the end of the day required student learning is achieved. The study has discussed and reiterated the issues related to CHC students' learning processes and the factors that impact their development of higher order thinking skills. Literature has shown that critical thinking skills are undoubtedly important criteria in preparing students to meet the demand from the industry. This study concurred with the literature as reported by Thomas and Chandrika (2006) and Watkins and Biggs (2001) that several factors impact on CHC learners' perceptions towards learning and the way they learn which is then translated into their academic performance. The findings of this study will help relevant stakeholders in higher education institutions to establish strategies which support CHC learners with their critical thinking skills development.

The findings of the study have given me an avenue to propose a learning and teaching thinking model (L2T model) for CHC learners. The proposed model will assist the many stakeholders, in particular, the CHC learners who are part of the population at the Australian offshore campus where this study was conducted. It is hoped that the model will provide a new path for the CHC learners to improve their learning strategies and prepared them to meet the industry demands.

## **7.7 Implications of the Proposed Model and Future Research**

### **7.7.1 Practical Implication**

To have a balance in the process of learning and teaching, a system in which all component parts support each other and are interdependent should exist. For the components to work effectively, curriculum, teaching methods, learning activities and assessment and environment considerations need to be aligned to each other. The proposed L2T model considers these components. I acknowledged the work of Biggs in my study and have incorporated his approach on the notion of ‘constructive alignment’. This approach takes into account the intended learning outcome as the basis to students’ learning and teachers’ teaching and ensures that there is a consistency between assessment, teaching strategies and learning outcomes. If such an approach is adopted and aligned to CHC learners’ learning environment in business studies, improved higher order thinking skill will be achieved.

To date, research has shown that Asian students such as CHC learners have comparable achievement in their academic performance and in some quantitative type subjects outperform their Western counterparts. Thus, there must be a way that the learning and teaching process can be modelled to help develop their thinking skills in more qualitative type subjects. Further research beyond the contextualised case study illuminated in this thesis is required.

Based on my observations, one of the startling aspects that has not been taken into consideration for CHC learners is their backgrounds as a platform for curriculum design. For example, first year CHC learners at university may not have a great capacity to synthesise and analyse information but this can be learnt at this level and established more firmly in their second year of study. By third year, CHC

learners should be blossoming into far more able work ready graduates. There should be cyclic continuity and iteration in the design of the business curriculum and teaching faculty should work hand in hand in designing and then delivering the business curriculum. The potential for further research is ever present when curriculum design is dynamic alongside the attempts to improve the learning and teaching experiences of CHC learners. There should be evidence found through research that changes made to learning teaching and assessment for CHC learners have the most desirable impacts for them.

## **7.8 Summary of the Chapter**

With previous cross-cultural studies on learning in general and on Chinese learners in particular by Wen and Wong (2001) and Watkins and Biggs (cited in Wen & Wong, 2001), CHC learners have been mostly taught in large classes and with expository methods. However, they have managed to outperformed Western counterparts in at least science, mathematics and quantitative units in business. In such studies, the students were found to have deeper and more meaning-oriented approaches to learning and despite using memorisation techniques; they still placed effort in understanding subject matter. Due to their English language competency, they were perceived as passive learners but with their memorisation linked to understanding, they displayed high levels of performance. In other research conducted by Huang (2006) with students for whom English was a second language, there was an indication that Chinese learners experience considerable challenges in their academic learning due to their lack of understanding. Their poor English language proficiency became a major challenge for these students to acquire higher order thinking skills. Other studies conducted by Sun and Chen (1997) and Yuan (1982, cited in Huang, 2006) have shown that with Asian students' dependency on memorising a topic and their surface approaches to learning, further constrained by their difficulty in understanding content taught in English, placed them in difficult positions. These students were often are not able to analyse and synthesise concepts and theories in their academic studies. However, research indicated that it may be erroneous to assume that Chinese learners are merely rote learning with little or no understanding of the subject (Nield, 2007). Cooper (2004) in his report, noted that

the Chinese approach of learning through repetition may lead to deeper understanding and high levels of achievement (Cooper, 2004, cited in Nield, 2007). However, critical thinking is a form of higher order thinking which involves the ability to reason, solve problems and make decisions. If students are to function successfully in a highly technical society, they must be equipped with lifelong learning and thinking skills necessary to acquire and process information in an ever-changing world. Thinking skills are necessary tools in a society to cope with the rapid changes in the environment. Learning approaches have to be conducted systematically to allow CHC learners to follow the process of learning. Their use of higher order thinking is central to producing meaning, understanding and structuring other forms of knowledge.

The era of stereotyping Asian learners, in particular CHC learners, as 'rote learners' is coming to an end. Education scholars indicate that these students have the capacity and the capability to think critically, analyse information and built new information. This study also showed that CHC learners can develop their higher order thinking skills in a marketing curriculum. The L2T model proposed in this thesis may be the start of change in the learning and teaching processes for CHC learners in the Malaysian context. It may be a springboard for academics who are part of curriculum design work and involved in transnational education systems to look at the educational processes that CHC learners need to experience. Course outcomes and the quality of teaching and learning for CHC learners must be examined so that in a multicultural university environment they become critical thinkers in the area of marketing units in a business curriculum. Outcomes for business courses and the CHC learners who complete them must meet the expectations of industry partners. It is those in industry partnerships who will employ the undergraduates knowing that CHC learners have successfully completed a marketing degree which meets the standards set by accreditation bodies, in particular the AACSB, as this is the trade mark for any business program to be recognised throughout the world.

If universities are to remain places where CHC learners acquire and apply knowledge and teachers are responsible for managing their learning processes and

how learning can be supported, then it is important for academics to heed the prior environmental experiences which have surrounded CHC learners. Academics need to explore ways that they can improvise and adapt the curriculum content to accommodate CHC learners' potential capacities. The findings from this study showed a positive outcome for CHC learners in acquiring higher order thinking skills. The importance of incorporating CHC learners' conceptions of learning, their approaches to learning and their levels of learning outcomes blended with teaching approaches which are constructively aligned will have a positive impact on them.

I am confident that the L2T model can be a starting point for the future development of learning and teaching processes to inculcate higher order thinking skills among CHC learners. It may not be something new in the learning and teaching sphere as the elements incorporated in the L2T model have been researched and studied previously. However, the proposed L2T model emphasises the CHC learning characteristics. I am strongly committed to the belief that this model should be examined by many academics who are involved in transnational education in order to revisit their thoughts about learning, teaching and assessment. The L2T model also will provide local academics teaching in the offshore campuses an avenue to provide feedback to their counterparts in terms of the program and the course content especially before mounting any new programs. This is imperative. The success of a business program and course is when the end users who are CHC learners succeed in their education which provides them with a conducive learning environment and higher order thinking outcomes learning outcomes which match their capacity and capability.

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# **APPENDICES**

## **APPENDIX A**

### **Consent Form**

Curtin University of Technology  
Faculty of Education  
Division of Humanities  
Perth, Western Australia

Dear students,

I am a PhD candidate with Curtin University of Technology, Perth who is exploring Confucius Heritage Culture (CHC) Learners learning behavior in marketing units (a case study). I am currently working on my research as a requirement for this degree. This research is being conducted under the supervision of Assoc Prof Dr. Rozz Albon. You may contact my supervisor at r.albon@curtin.edu.my if you have any questions or concerns.

The main purpose of this research is to identify how Confucius Heritage Culture (CHC) learners' think and how their current learning experiences reflect their thinking. The learning experience covers students' behavior during class interactions and also the responses towards their experience in terms of completing the project assignment. The analysis will then be used to develop a learning model. However, as you are important participants in this research, your cooperation is sought in a number of ways.

Participation in the data collection strategies are voluntary. You will be notified earlier and your involvement will be based on your consent. There are no known or anticipated risks to your participation in these sessions. You may decline answering any questions you feel you do not wish to answer and may decline contributing to the session in other ways if you wish so. All information you provide will be considered confidential and grouped with responses from other participants. No faculty member will be present during the session and your name will not be identified with the input you give to this session. Further, you will not be identified by name in the report.

The objective of the research is to develop a model of learning, which reflects the thinking of CHC learners', and this cannot be achieved without collective data. Individual responses are not central to the research question and will not be used in the analysis and reporting of the findings.

If you decide to participate, your participation means that you give me permission to use your feedback listed in either or all of the following:

- Questionnaire:

You will be given a set of questionnaire, which contain section A, and B at the start of the data collection process (early of semester 1 2006). You are given a week to respond to the questionnaire (section A only). If you have responded earlier, you are committed to respond to Section B towards the end of semester 1 2006. You will be assigned using a pseudonym (a made-up name) at the beginning of the study, as this will help me to identify you towards the end of the semester. The time taken to complete this should be approximately 15 to 20 minutes.

You have a choice whether to participate or not in this data collection procedure:

- Classroom observation and Videos:

The classroom observation will be conducted during normal class sessions throughout the semester. The observations will be done four times in a semester (the first fifteen and last fifteen minutes of the class session) unless further observations are needed. To support the class observation I will be using video. If all students participate, no announcement will be made. However, if there are any non-participants then they will be personally notified. The non-participants will be allowed to be in the class and their decisions will not jeopardize their learning experience. The video will be used to access any data that is difficult to record by observation alone. The video sessions will runs not more than 30 minutes.

- Interviews:

The interviews will be conducted twice through out the data collection process and you will be invited to participate in this interview as a member of a group. Each interview will run from 30 to

45 minutes. You may decline to participate in this interview if you so wish. Your permission will include the interview being tape-recorded.

- Sharing diaries (journal) with the researcher.  
You are free to share with me your learning journal. I would be most interested in knowing more about how and when you process and learn information. Your participation to share is voluntary.

- Project (assessment item)  
Your participation in the process to complete the project will be analyzed.

To complete this research, I need your full and sincere participation. I reassure you that your participation is independent to your personal studies and all data remains confidential. I will take all care to be sensitive to your needs in the classroom settings. You are free to choose to participate in this research. The signed agreement is not related to any data and will be collected separately from any data collection.

All data including consent letters, written notes, and questionnaire results will be kept in a locked filing cabinet and will be held for up to one year after the completion of the study, at which time it will be destroyed. Any computer files I have regarding this project will also be erased after the duration of the one-year. Sessions on videotaping and interviews will be erased upon finishing the data analysis.

Should you have any problem, queries, comments or concerns resulting from your participation in the study, please contact the researcher (Shamsul Kamariah Abdullah at shamsul.a@curtin.edu.my or phone 085-443841)

This study has been approved by the Curtin University Human Research Ethics Committee. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/ - Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 08-92662784.

Your agreement to participate will be the signing of your name at the end of the letter.

To participate in this research, please complete the attached questionnaire by providing the information as accurately as you can.

After you have completed the questionnaire, please forward to the address below (by hand):

Shamsul Kamariah Abdullah  
School of Business  
GP2-201.  
Curtin University of Technology, Sarawak, Malaysia.

#### Agreement to participate

I have read the information presented in the information letter about the research objectives and the related sessions being facilitated for Shamsul Kamariah Abdullah. I have had the opportunity to ask the facilitator any questions related to this session, to receive satisfactory answers to my questions, and any details I wanted.

As a participant in this study, I agree to take part in the lists of data collection below:

- Questionnaire
- Observations/videotaping
- Group interviews
- Sharing diaries
- Group project (assessment item)

I am aware that I have the option of allowing my interview to be tape recorded to ensure an accurate recording of my responses.

I am also aware that I have the option of not participating in the video session and that I still receive the care I would receive if I were not in the study.

I am also aware that excerpts from the interview may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I am aware that I may withdraw from the session without penalty at any time by advising the researcher of this decision.

In the case of concerns, complaints, or consequences, I may contact the researcher: Shamsul Kamariah Abdullah at the email address: shamsul.a@curtin.edu.my or the supervisor: Assoc Prof Rozz Albon at the email address: r.albon@curtin.edu.my

This study has been reviewed by, and has been approved by the Curtin University Human research Ethics Committee. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, C/o Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth 6845 (or by telephoning 9266 2784)

With full knowledge of all foregoing, I agree, of my own free will, to participate in this research, and the data gathering strategies.

\_\_\_\_\_

Print Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

Please provide a code name for data collection purposes: \_\_\_\_\_

## **APPENDIX B**

### **Questionnaire**

**Introduction:**

The aim of this questionnaire is to explore/examine your learning behavior in terms of thinking during your process of learning. This will assist the researcher in identifying the extent the learning experience reflect your thinking.

The questionnaire has two parts. You are requested to complete sections A now and complete section B at the end of the semester.

How to answer:

Each item has a four-point scale on the Answer Sheet attached. Circle one of the five options for each statement to show your response. The numbers stand for the following response:

- 1 = this item is **never or only rarely** true of me
- 2 = this item is **sometimes** true of me
- 3 = this item is **frequently** true of me
- 4 = this item is **always or almost always** true of me

**Example:**

I study best with the radio on.

If this is **almost always** true of you, you would circle 4 on the answer sheet.

If you **sometimes** studied well with the radio on, you would **circle 2**.

Do not worry about projecting your good image. As noted in the cover letter, answers are CONFIDENTIAL and there are several different approaches to studying. **Please answer each item.**

**Thank you for your cooperation.**

**Section A**

**Your code name:** \_\_\_\_\_

**Conception of learning:**

1. Learning to me is when I can relate what I have been taught to the outside world.

1	2	3	4
---	---	---	---

2. Learning is when I can repeat something I have learnt.

1	2	3	4
---	---	---	---

3. Learning to me means making sure I remember things well, so I can recall.

1	2	3	4
---	---	---	---

4. Learning to me means building up knowledge by acquiring facts and information, like data banks.

1	2	4
---	---	---

5. Learning to me means building up knowledge by blending new facts and information with what I already know.

1	2	3	4
---	---	---	---

6. Learning to me means being able to use the information I have acquired.

1	2	3	4
---	---	---	---

7. Learning to me means being able to apply the knowledge to an unfamiliar context or situation.

1	2	3	4
---	---	---	---

8. Learning to me means understanding new ideas and information by myself.

1	2	3	4
---	---	---	---

9. Learning to me means seeing things in a different and more meaningful way.

1	2	3	4
---	---	---	---

10. Learning to me is when I know I have made sense of information.

1	2	3	4
---	---	---	---

11. From the above list of conceptions of learning statement, which one best describe you

--

### Approaches to Learning

1. I learn by rote, going over and over the information until I know this by heart.

1	2	3	4
---	---	---	---

2. I use different ways to learn depending on what it is I have to learn.

1	2	3	4
---	---	---	---

3. I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra.

1	2	3	4
---	---	---	---

4. I relate what I have learned in one subject to that in another.

1	2	3	4
---	---	---	---

5. While I am studying, I often think of real life situations to which the material that I am learning would be useful.

1	2	3	4
---	---	---	---

6. I find most new topics interesting and often spend extra time trying to obtain more information about them.

1	2	3	4
---	---	---	---

7. I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances.

1	2	3	4
---	---	---	---

8. I like to think about how the new information I am learning might be applied in the future.

1	2	3	4
---	---	---	---

9. As I read information, I think of what I already know about it.

1	2	3	4
---	---	---	---

10. After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be read) and that I understand them.

1	2	3	4
---	---	---	---

11. From the above list of approaches to learning statement, which one best describe you

--

**(Please return this section (A) to the researcher after you have completed the questionnaire)**

**Section B**

**Your code name:** \_\_\_\_\_

**Levels of learning outcome**

**(Students to fill in this section towards the end of the semester)**

1. On the whole, this unit helps me to learn how to learn.

1	2	3	4
---	---	---	---

2. This unit helps to acquire knowledge from the strategy and international business discipline.

1	2	3	4
---	---	---	---

3. This unit helps me to obtain an understanding of selected models that underlie the field.

1	2	3	4
---	---	---	---

4. This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis.

1	2	3	4
---	---	---	---

5. This unit helps me to think more critically.

1	2	3	4
---	---	---	---

6. This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking.

1	2	3	4
---	---	---	---

7. This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work.

1	2	3	4
---	---	---	---

8. This unit helps me to think and apply the theories and concepts to work

1	2	3	4
---	---	---	---

9. This unit helps me to apply appropriate problem solving processes.

1	2	3	4
---	---	---	---

10. This unit improves my written and oral communication skills.

1	2	3	4
---	---	---	---

11. From the above list of levels of learning outcome statement, which one best describe you

--

## APPENDIX C

### **Photographs of Classroom Settings**

*Note:* These photographs are included in this thesis for examination purposes only and are not for publication.

**Photograph 1: The Jigsaw techniques (1)**



The above photo shows part of the process of the jigsaw techniques, each team is assigned to discuss and deliberate on their area of expertise.

Photograph 2: The Jigsaw Techniques (2)



Peers Working Together in Group Discussion and finalising their topic before the presentation

Photograph 3: The Jigsaw Techniques (3)



The 'sharing session'; students get together to share knowledge from each of the team.

Photograph 4: The Gallery Walk (1)



The first process to the gallery walk. Each team were in their own gallery discussing and finalising their inputs.

Photograph 4: The Gallery Walk (2)



The gallery in the making. Before the students start their walks, each team prepares their points using posters and etc.

Photograph 5: The Gallery Walk (3)



One of the team is doing a presentation at their gallery.

Photograph 6: The Role Play



One of the team is doing a role play based on the assigned task. At the end of the role play the student explained to the class the significance of the role play and how it is related to the concept learned from the textbook.

Photograph 7: The Informal discussion



Students were divided into groups at the start of the semester and in each tutorial they will sit in their small group for an informal discussion in completing the task given to them.

# APPENDIX D

## Statistical Data Report of Means

### Conception

#### Statistics

	Learning to me is when I can relate what I have been taught to the outside world	Learning is when I can repeat something I have learnt	Learning to me means making sure I remember things well, so I can recall	Learning to me means building up knowledge by acquiring facts and information, like data banks	Learning to me means building up knowledge by blending new facts and information with what I already know	Learning to me means being able to use the information I have acquired	Learning to me means being able to apply the knowledge to an unfamiliar context or situation	Learning to me means understanding new ideas and information by myself	Learning to me means seeing things in a different and more meaningful way	Learning to me is when I know I have made sense of information
N Valid	136	136	136	136	136	136	136	136	136	136
Missing	0	0	0	0	0	0	0	0	0	0
Mean	3.1029	2.7721	2.7500	3.2059	3.1176	3.3750	3.0956	3.1103	3.3309	3.1103
Std. Error of Mean	.06199	.06346	.06982	.07389	.06606	.06080	.06673	.06738	.06848	.06056
Std. Deviation	.72295	.74004	.81423	.86167	.77037	.70907	.77821	.78573	.79866	.70630
Variance	.523	.548	.663	.742	.593	.503	.606	.617	.638	.499
Range	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

### Approaches

**Statistics**

	I learn by rote, going over and over the information until I know this by heart	I use different ways to learn depending on what it is I have learn	I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra	I relate what I have learned in one subject to that in another	While I am studying, I often think of real life situations to which the material that I am learning would be useful	I find most new topics interesting and often spend extra time trying to obtain more information about them	I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances	I like to think about how the new information I am learning might be applied in the future	As I read information, I think of what I already know about it	After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them
N Valid	136	136	136	136	136	136	136	136	136	136
Missing	0	0	0	0	0	0	0	0	0	0
Mean	2.5588	3.0074	2.2941	2.8529	3.1838	2.6176	2.7059	3.0441	2.8750	2.3971
Std. Error of Mean	.07288	.06559	.06693	.06965	.07321	.06439	.06528	.07370	.06879	.07327
Std. Deviation	.84996	.76494	.78048	.81222	.85377	.75089	.76126	.85952	.80220	.85444
Variance	.722	.585	.609	.660	.729	.564	.580	.739	.644	.730
Range	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Outcomes

Statistics

	After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them	From the above list of approaches to learning statement, which one best describe you	On the whole, this unit helps me to learn how to learn	This unit helps to acquire knowledge from the strategy and international business discipline	The unit helps me to obtain an understanding of selected models that underlie the field	This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis	This unit helps me to think more critically	This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking	This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work	This unit helps me to think and apply the theories and concepts to work	This unit helps me to apply appropriate problem solving processes	This unit improves my written and oral communication skills
N Valid	136	136	136	136	136	136	136	136	136	136	136	136
Missing	0	0	0	0	0	0	0	0	0	0	0	0
Mean	2.3971	5.2794	3.1544	3.2647	3.1103	3.1103	3.3676	3.1397	3.1985	3.1765	3.0588	2.9853
Std. Error of Mean	.07327	.21960	.06075	.05833	.05490	.06406	.05793	.06277	.05603	.05985	.05500	.06763
Std. Deviation	.85444	2.56093	.70845	.68025	.64029	.74707	.67559	.73205	.65342	.69796	.64135	.78867
Variance	.730	6.558	.502	.463	.410	.558	.456	.536	.427	.487	.411	.622
Range	3.00	9.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	2.00	2.00	3.00
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00
Maximum	4.00	10.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

# APPENDIX E

## Statistical data report -Frequencies

### Frequency Table

#### Semester

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Semester 1	65	47.8	47.8	47.8
Semester 2	71	52.2	52.2	100.0
Total	136	100.0	100.0	

#### Unit

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Business Policy 320	32	23.5	23.5	23.5
Marketing 100	60	44.1	44.1	67.6
Strategic Marketing 310	44	32.4	32.4	100.0
Total	136	100.0	100.0	

#### Learning to me is when I can relate what I have been taught to the outside world

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	1	.7	.7	.7
This item is sometimes true of me	26	19.1	19.1	19.9
This item is frequently true of me	67	49.3	49.3	69.1
This item is always or almost always true of me	42	30.9	30.9	100.0
Total	136	100.0	100.0	

#### Learning is when I can repeat something I have learnt

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	6	4.4	4.4	4.4
This item is sometimes true of me	38	27.9	27.9	32.4
This item is frequently true of me	73	53.7	53.7	86.0
This item is always or almost always true of me	19	14.0	14.0	100.0
Total	136	100.0	100.0	

**Learning to me means making sure I remember things well, so I can recall**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	6	4.4	4.4	4.4
	This item is sometimes true of me	48	35.3	35.3	39.7
	This item is frequently true of me	56	41.2	41.2	80.9
	This item is always or almost always true of me	26	19.1	19.1	100.0
	Total	136	100.0	100.0	

**Learning to me means building up knowledge by acquiring facts and information, like data banks**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	3	2.2	2.2	2.2
	This item is sometimes true of me	30	22.1	22.1	24.3
	This item is frequently true of me	39	28.7	28.7	52.9
	This item is always or almost always true of me	64	47.1	47.1	100.0
	Total	136	100.0	100.0	

**Learning to me means building up knowledge by blending new facts and information with what I already know**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	4	2.9	2.9	2.9
	This item is sometimes true of me	21	15.4	15.4	18.4
	This item is frequently true of me	66	48.5	48.5	66.9
	This item is always or almost always true of me	45	33.1	33.1	100.0
	Total	136	100.0	100.0	

**Learning to me means being able to use the information I have acquired**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	1	.7	.7	.7
	This item is sometimes true of me	15	11.0	11.0	11.8
	This item is frequently true of me	52	38.2	38.2	50.0
	This item is always or almost always true of me	68	50.0	50.0	100.0
	Total	136	100.0	100.0	

**Learning to me means being able to apply the knowledge to an unfamiliar context or situation**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	3	2.2	2.2	2.2
	This item is sometimes true of me	26	19.1	19.1	21.3
	This item is frequently true of me	62	45.6	45.6	66.9
	This item is always or almost always true of me	45	33.1	33.1	100.0
	Total	136	100.0	100.0	

**Learning to me means understanding new ideas and information by myself**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	3	2.2	2.2	2.2
	This item is sometimes true of me	26	19.1	19.1	21.3
	This item is frequently true of me	60	44.1	44.1	65.4
	This item is always or almost always true of me	47	34.6	34.6	100.0
	Total	136	100.0	100.0	

**Learning to me means seeing things in a different and more meaningful way**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	3	2.2	2.2	2.2
	This item is sometimes true of me	19	14.0	14.0	16.2
	This item is frequently true of me	44	32.4	32.4	48.5
	This item is always or almost always true of me	70	51.5	51.5	100.0
	Total	136	100.0	100.0	

**Learning to me is when I know I have made sense of information**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	2	1.5	1.5	1.5
	This item is sometimes true of me	21	15.4	15.4	16.9
	This item is frequently true of me	73	53.7	53.7	70.6
	This item is always or almost always true of me	40	29.4	29.4	100.0
	Total	136	100.0	100.0	

**I learn by rote, going over and over the information until I know this by heart**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	14	10.3	10.3	10.3
	This item is sometimes true of me	50	36.8	36.8	47.1
	This item is frequently true of me	54	39.7	39.7	86.8
	This item is always or almost always true of me	18	13.2	13.2	100.0
	Total	136	100.0	100.0	

**I use different ways to learn depending on what it is I have learn**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	2	1.5	1.5	1.5
	This item is sometimes true of me	33	24.3	24.3	25.7
	This item is frequently true of me	63	46.3	46.3	72.1
	This item is always or almost always true of me	38	27.9	27.9	100.0
	Total	136	100.0	100.0	

**I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	22	16.2	16.2	16.2
	This item is sometimes true of me	57	41.9	41.9	58.1
	This item is frequently true of me	52	38.2	38.2	96.3
	This item is always or almost always true of me	5	3.7	3.7	100.0
	Total	136	100.0	100.0	

**I relate what I have learned in one subject to that in another**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	7	5.1	5.1	5.1
	This item is sometimes true of me	35	25.7	25.7	30.9
	This item is frequently true of me	65	47.8	47.8	78.7
	This item is always or almost always true of me	29	21.3	21.3	100.0
	Total	136	100.0	100.0	

**While I am studying, I often think of real life situations to which the material that I am learning would be useful**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	7	5.1	5.1	5.1
	This item is sometimes true of me	18	13.2	13.2	18.4
	This item is frequently true of me	54	39.7	39.7	58.1
	This item is always or almost always true of me	57	41.9	41.9	100.0
	Total	136	100.0	100.0	

**I find most new topics interesting and often spend extra time trying to obtain more information about them**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	5	3.7	3.7	3.7
	This item is sometimes true of me	59	43.4	43.4	47.1
	This item is frequently true of me	55	40.4	40.4	87.5
	This item is always or almost always true of me	17	12.5	12.5	100.0
	Total	136	100.0	100.0	

**I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	8	5.9	5.9	5.9
	This item is sometimes true of me	41	30.1	30.1	36.0
	This item is frequently true of me	70	51.5	51.5	87.5
	This item is always or almost always true of me	17	12.5	12.5	100.0
	Total	136	100.0	100.0	

**like to think about how the new information I am learning might be applied in the future**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	9	6.6	6.6	6.6
This item is sometimes true of me	20	14.7	14.7	21.3
This item is frequently true of me	63	46.3	46.3	67.6
This item is always or almost always true of me	44	32.4	32.4	100.0
Total	136	100.0	100.0	

**As I read information, I think of what I already know about it**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	7	5.1	5.1	5.1
This item is sometimes true of me	32	23.5	23.5	28.7
This item is frequently true of me	68	50.0	50.0	78.7
This item is always or almost always true of me	29	21.3	21.3	100.0
Total	136	100.0	100.0	

**After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	19	14.0	14.0	14.0
This item is sometimes true of me	58	42.6	42.6	56.6
This item is frequently true of me	45	33.1	33.1	89.7
This item is always or almost always true of me	14	10.3	10.3	100.0
Total	136	100.0	100.0	

**On the whole, this unit helps me to learn how to learn**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	1	.7	.7	.7
	This item is sometimes true of me	22	16.2	16.2	16.9
	This item is frequently true of me	68	50.0	50.0	66.9
	This item is always or almost always true of me	45	33.1	33.1	100.0
	Total	136	100.0	100.0	

**This unit helps to acquire knowledge from the strategy and international business discipline**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	1	.7	.7	.7
	This item is sometimes true of me	15	11.0	11.0	11.8
	This item is frequently true of me	67	49.3	49.3	61.0
	This item is always or almost always true of me	53	39.0	39.0	100.0
	Total	136	100.0	100.0	

**The unit helps me to obtain an understanding of selected models that underlie the field**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	1	.7	.7	.7
	This item is sometimes true of me	18	13.2	13.2	14.0
	This item is frequently true of me	82	60.3	60.3	74.3
	This item is always or almost always true of me	35	25.7	25.7	100.0
	Total	136	100.0	100.0	

**This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	2	1.5	1.5	1.5
	This item is sometimes true of me	25	18.4	18.4	19.9
	This item is frequently true of me	65	47.8	47.8	67.6
	This item is always or almost always true of me	44	32.4	32.4	100.0
	Total	136	100.0	100.0	

**This unit helps me to think more critically**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	1	.7	.7	.7
	This item is sometimes true of me	12	8.8	8.8	9.6
	This item is frequently true of me	59	43.4	43.4	52.9
	This item is always or almost always true of me	64	47.1	47.1	100.0
	Total	136	100.0	100.0	

**his unit helps me to evaluate when to use problem solving processes, arguments, critica and creative thinking**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is never or only rarely true of me	3	2.2	2.2	2.2
	This item is sometimes true of me	19	14.0	14.0	16.2
	This item is frequently true of me	70	51.5	51.5	67.6
	This item is always or almost always true of me	44	32.4	32.4	100.0
	Total	136	100.0	100.0	

**This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This item is sometimes true of me	18	13.2	13.2	13.2
	This item is frequently true of me	73	53.7	53.7	66.9
	This item is always or almost always true of me	45	33.1	33.1	100.0
	Total	136	100.0	100.0	

**This unit helps me to think and apply the theories and concepts to work**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is sometimes true of me	23	16.9	16.9	16.9
This item is frequently true of me	66	48.5	48.5	65.4
This item is always or almost always true of me	47	34.6	34.6	100.0
Total	136	100.0	100.0	

**This unit helps me to apply appropriate problem solving processes**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is sometimes true of me	24	17.6	17.6	17.6
This item is frequently true of me	80	58.8	58.8	76.5
This item is always or almost always true of me	32	23.5	23.5	100.0
Total	136	100.0	100.0	

**This unit improves my written and oral communication skills**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid This item is never or only rarely true of me	4	2.9	2.9	2.9
This item is sometimes true of me	31	22.8	22.8	25.7
This item is frequently true of me	64	47.1	47.1	72.8
This item is always or almost always true of me	37	27.2	27.2	100.0
Total	136	100.0	100.0	

# APPENDIX F

## Statistical data report Crosstab by Units

### Crosstab by Units-Conceptions of learning

**Learning to me is when I can relate what I have been taught to the outside world \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me is when I can relate what I have been taught to the outside world	This item is never or only rarely true of me	0	1	0	1
	This item is sometimes true of me	2	15	9	26
	This item is frequently true of me	22	29	16	67
	This item is always or almost always true of me	8	15	19	42
Total		32	60	44	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$ <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.038	.079	.440	.660 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.057	.084	.659	.511 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

## Learning is when I can repeat something I have learnt \* Unit

### Crosstab

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning is when I can repeat something I have learnt	This item is never or only rarely true of me	2	3	1	6
	This item is sometimes true of me	9	15	14	38
	This item is frequently true of me	16	35	22	73
	This item is always or almost always true of me	5	7	7	19
Total		32	60	44	136

### Symmetric Measures

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. <sup>†</sup>	Approx. Sig.
Interv al by Interv al Pearson's R	.023	.088	.270	.788 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.012	.089	.133	.894 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

## Learning to me means making sure I remember things well, so I can recall \* Unit

### Crosstab

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means making sure I remember things well, so I can recall	This item is never or only rarely true of me	2	0	4	6
	This item is sometimes true of me	13	21	14	48
	This item is frequently true of me	13	25	18	56
	This item is always or almost always true of me	4	14	8	26
Total		32	60	44	136

### Symmetric Measures

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. <sup>†</sup>	Approx. Sig.
Interv al by Interv al Pearson's R	.024	.089	.283	.778 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.027	.088	.317	.752 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Learning to me means building up knowledge by acquiring facts and information, like data banks \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means building up knowledge by acquiring facts and information, like data banks	This item is never or only rarely true of me	0	3	0	3
	This item is sometimes true of me	10	11	9	30
	This item is frequently true of me	9	18	12	39
	This item is always or almost always true of me	13	28	23	64
Total		32	60	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.098	.082	1.145	.254 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.099	.084	1.147	.253 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Learning to me means building up knowledge by blending new facts and information with what I already know \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means building up knowledge by blending new facts and information with what I already know	This item is never or only rarely true of me	1	2	1	4
	This item is sometimes true of me	8	11	2	21
	This item is frequently true of me	13	34	19	66
	This item is always or almost always true of me	10	13	22	45
Total		32	60	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.214	.085	2.537	.012 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.228	.086	2.712	.008 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Learning to me means being able to use the information I have acquired \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means being able to use the information I have acquired	This item is never or only rarely true of me	1	0	0	1
	This item is sometimes true of me	4	6	5	15
	This item is frequently true of me	11	29	12	52
	This item is always or almost always true of me	16	25	27	68
Total		32	60	44	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.105	.090	1.224	.223 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.103	.088	1.202	.232 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Learning to me means being able to apply the knowledge to an unfamiliar context or situation \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means being able to apply the knowledge to an unfamiliar context or situation	This item is never or only rarely true of me	1	1	1	3
	This item is sometimes true of me	5	14	7	26
	This item is frequently true of me	14	30	18	62
	This item is always or almost always true of me	12	15	18	45
Total		32	60	44	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.036	.088	.422	.674 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.043	.088	.497	.620 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Learning to me means understanding new ideas and information by myself \***  
**Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means understanding new ideas and information by myself	This item is never or only rarely true of me	2	0	1	3
	This item is sometimes true of me	7	14	5	26
	This item is frequently true of me	9	29	22	60
	This item is always or almost always true of me	14	17	16	47
Total		32	60	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\uparrow$ <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.059	.092	.686	.494 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.042	.090	.490	.625 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Learning to me means seeing things in a different and more meaningful way \***  
**Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me means seeing things in a different and more meaningful way	This item is never or only rarely true of me	1	2	0	3
	This item is sometimes true of me	6	7	6	19
	This item is frequently true of me	8	24	12	44
	This item is always or almost always true of me	17	27	26	70
Total		32	60	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\uparrow$ <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.088	.086	1.017	.311 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.077	.087	.898	.371 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Learning to me is when I know I have made sense of information \* Unit**

**Crosstab**

Count		Unit			Total
		Business Policy 320	Marketing 100	Strategic Marketing 310	
Learning to me is when I know I have made sense of information	This item is never or only rarely true of me	1	1	0	2
	This item is sometimes true of me	5	11	5	21
	This item is frequently true of me	16	34	23	73
	This item is always or almost always true of me	10	14	16	40
Total		32	60	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\chi^2$ <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.094	.085	1.093	.276 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.087	.087	1.012	.313 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Crosstabs - Approaches to learning and Units**

**Unit \* I learn by rote, going over and over the information until I know this by heart**

**Crosstab**

Count		learn by rote, going over and over the information until I know this by heart				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	4	11	12	5	32
	Marketing 100	4	25	25	6	60
	Strategic Marketing 310	6	14	17	7	44
Total		14	50	54	18	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\chi^2$ <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.003	.092	.040	.968 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.007	.090	.082	.935 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* I use different ways to learn depending on what it is I have learn**

**Crosstab**

Count		I use different ways to learn depending on what it is I have learn				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	8	13	10	32
	Marketing 100	1	16	29	14	60
	Strategic Marketing 310	0	9	21	14	44
Total		2	33	63	38	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\tau^b$	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.064	.087	.740	.460 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.058	.087	.672	.503 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra**

**Crosstab**

Count		I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	6	10	15	1	32
	Marketing 100	6	29	23	2	60
	Strategic Marketing 310	10	18	14	2	44
Total		22	57	52	5	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\tau^b$	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	-.083	.091	-.966	.336 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.094	.090	-1.090	.278 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

## Unit \* I relate what I have learned in one subject to that in another

### Crosstab

Count

		I relate what I have learned in one subject to that in another				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	7	16	8	32
	Marketing 100	4	21	24	11	60
	Strategic Marketing 310	2	7	25	10	44
Total		7	35	65	29	136

### Symmetric Measures

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.022	.082	.250	.803 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.034	.083	.398	.691 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

## Unit \* While I am studying, I often think of real life situations to which the material that I am learning would be useful

### Crosstab

Count

		While I am studying, I often think of real life situations to which the material that I am learning would be useful				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	6	15	10	32
	Marketing 100	4	6	21	29	60
	Strategic Marketing 310	2	6	18	18	44
Total		7	18	54	57	136

### Symmetric Measures

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.044	.082	.512	.610 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.051	.084	.592	.555 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* I find most new topics interesting and often spend extra time trying to obtain more information about them**

**Crosstab**

Count		I find most new topics interesting and often spend extra time trying to obtain more information about them				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	14	15	2	32
	Marketing 100	3	26	23	8	60
	Strategic Marketing 310	1	19	17	7	44
Total		5	59	55	17	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\tau^b$	Approx. Sig.
Interval by Interval Pearson's R	.061	.081	.705	.482 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.049	.083	.568	.571 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances**

**Crosstab**

Count		I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	9	21	2	32
	Marketing 100	6	19	27	8	60
	Strategic Marketing 310	2	13	22	7	44
Total		8	41	70	17	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\tau^b$	Approx. Sig.
Interval by Interval Pearson's R	.007	.075	.080	.936 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.011	.080	.132	.895 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* I like to think about how the new information I am learning might be applied in the future**

**Crosstab**

Count		I like to think about how the new information I am learning might be applied in the future				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	3	3	17	9	32
	Marketing 100	2	13	29	16	60
	Strategic Marketing 310	4	4	17	19	44
Total		9	20	63	44	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.075	.090	.869	.386 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.098	.087	1.139	.257 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* As I read information, I think of what I already know about it**

**Crosstab**

Count		As I read information, I think of what I already know about it				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	8	16	7	32
	Marketing 100	2	18	32	8	60
	Strategic Marketing 310	4	6	20	14	44
Total		7	32	68	29	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.056	.091	.647	.519 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.085	.090	.987	.325 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me is when I can relate what I have been taught to the outside world**

**Crosstab**

Count		Learning to me is when I can relate what I have been taught to the outside world				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	2	22	8	32
	Marketing 100	1	15	29	15	60
	Strategic Marketing 310	0	9	16	19	44
Total		1	26	67	42	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.038	.079	.440	.660 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.057	.084	.659	.511 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning is when I can repeat something I have learnt**

**Crosstab**

Count		Learning is when I can repeat something I have learnt				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	2	9	16	5	32
	Marketing 100	3	15	35	7	60
	Strategic Marketing 310	1	14	22	7	44
Total		6	38	73	19	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.023	.088	.270	.788 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.012	.089	.133	.894 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me means making sure I remember things well, so I can recall**

**Crosstab**

Count		Learning to me means making sure I remember things well, so I can recall				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	2	13	13	4	32
	Marketing 100	0	21	25	14	60
	Strategic Marketing 310	4	14	18	8	44
Total		6	48	56	26	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.024	.089	.283	.778 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.027	.088	.317	.752 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me means building up knowledge by acquiring facts and information, like data banks**

**Crosstab**

Count		Learning to me means building up knowledge by acquiring facts and information, like data banks				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	10	9	13	32
	Marketing 100	3	11	18	28	60
	Strategic Marketing 310	0	9	12	23	44
Total		3	30	39	64	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	.098	.082	1.145	.254 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.099	.084	1.147	.253 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me means building up knowledge by blending new facts and information with what I already know**

**Crosstab**

Count		Learning to me means building up knowledge by blending new facts and information with what I already know				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	8	13	10	32
	Marketing 100	2	11	34	13	60
	Strategic Marketing 310	1	2	19	22	44
Total		4	21	66	45	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.214	.085	2.537	.012 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.228	.086	2.712	.008 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* Learning to me means being able to use the information I have acquired**

**Crosstab**

Count		Learning to me means being able to use the information I have acquired				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	4	11	16	32
	Marketing 100	0	6	29	25	60
	Strategic Marketing 310	0	5	12	27	44
Total		1	15	52	68	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.105	.090	1.224	.233 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.103	.088	1.202	.232 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* Learning to me means being able to apply the knowledge to an unfamiliar context or situation**

**Crosstab**

Count		Learning to me means being able to apply the knowledge to an unfamiliar context or situation				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	5	14	12	32
	Marketing 100	1	14	30	15	60
	Strategic Marketing 310	1	7	18	18	44
Total		3	26	62	45	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.036	.088	.422	.674 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.043	.088	.497	.620 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me means understanding new ideas and information by myself**

**Crosstab**

Count		Learning to me means understanding new ideas and information by myself				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	2	7	9	14	32
	Marketing 100	0	14	29	17	60
	Strategic Marketing 310	1	5	22	16	44
Total		3	26	60	47	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.059	.092	.686	.494 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.042	.090	.490	.625 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me means seeing things in a different and more meaningful way**

**Crosstab**

Count

		Learning to me means seeing things in a different and more meaningful way				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	6	8	17	32
	Marketing 100	2	7	24	27	60
	Strategic Marketing 310	0	6	12	26	44
Total		3	19	44	70	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.088	.086	1.017	.311 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.077	.087	.898	.371 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* Learning to me is when I know I have made sense of information**

**Crosstab**

Count

		Learning to me is when I know I have made sense of information				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	5	16	10	32
	Marketing 100	1	11	34	14	60
	Strategic Marketing 310	0	5	23	16	44
Total		2	21	73	40	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	.094	.085	1.093	.276 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.087	.087	1.012	.313 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them**

**Crosstab**

Count

		After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	4	14	12	2	32
	Marketing 100	6	28	19	7	60
	Strategic Marketing 310	9	16	14	5	44
Total		19	58	45	14	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\chi^2$	Approx. Sig.
Interval by Interval Pearson's R	-.021	.086	-.238	.812 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.025	.087	-.289	.773 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

## Crosstab-Levels of learning Outcomes and Units

### Unit \* On the whole, this unit helps me to learn how to learn

Crosstab

Count		On the whole, this unit helps me to learn how to learn				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	2	14	16	32
	Marketing 100	0	17	34	9	60
	Strategic Marketing 310	1	3	20	20	44
Total		1	22	68	45	136

Symmetric Measures

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$ <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	-.012	.085	-.139	.890 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.013	.091	.155	.877 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

### Unit \* This unit helps to acquire knowledge from the strategy and international business discipline

Crosstab

Count		This unit helps to acquire knowledge from the strategy and international business discipline				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	0	12	20	32
	Marketing 100	1	13	29	17	60
	Strategic Marketing 310	0	2	26	16	44
Total		1	15	67	53	136

Symmetric Measures

	Value	Asymp. Std. Error <sup>a</sup>	Approx. $\chi^2$ <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	-.134	.072	-1.567	.120 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.139	.081	-1.630	.106 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* The unit helps me to obtain an understanding of selected models that underlie the field**

**Crosstab**

Count		The unit helps me to obtain an understanding of selected models that underlie the field				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	1	22	9	32
	Marketing 100	1	13	38	8	60
	Strategic Marketing 310	0	4	22	18	44
Total		1	18	82	35	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.073	.080	.843	.401 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.093	.087	1.086	.279 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis**

**Crosstab**

Count		This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	4	16	12	32
	Marketing 100	2	14	28	16	60
	Strategic Marketing 310	0	7	21	16	44
Total		2	25	65	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	-.004	.079	-.050	.960 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.001	.084	.014	.989 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* This unit helps me to think more critically**

**Crosstab**

Count		This unit helps me to think more critically				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	4	9	19	32
	Marketing 100	1	6	33	20	60
	Strategic Marketing 310	0	2	17	25	44
Total		1	12	59	64	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\uparrow$ <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	.053	.084	.612	.542 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	.047	.088	.542	.589 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking**

**Crosstab**

Count		This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	4	12	16	32
	Marketing 100	0	12	35	13	60
	Strategic Marketing 310	3	3	23	15	44
Total		3	19	70	44	136

**Symmetric Measures**

	Value	Asy mp. Std. Error <sup>a</sup>	Approx. $\uparrow$ <sup>b</sup>	Approx. Sig. <sup>c</sup>
Interval by Interval Pearson's R	-.104	.088	-1.213	.227 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.078	.090	-.908	.366 <sup>c</sup>
N of Valid Cases	136			

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

**Unit \* This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work**

**Crosstab**

Count		This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	1	14	17	32
	Marketing 100	12	40	8	60
	Strategic Marketing 310	5	19	20	44
Total		18	73	45	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. <sup>†</sup>	Approx. Sig.
Interval by Interval Pearson's R	-.051	.086	-.597	.552 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.032	.093	-.365	.715 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* This unit helps me to think and apply the theories and concepts to work**

**Crosstab**

Count		This unit helps me to think and apply the theories and concepts to work			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	3	16	13	32
	Marketing 100	14	29	17	60
	Strategic Marketing 310	6	21	17	44
Total		23	66	47	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. <sup>†</sup>	Approx. Sig.
Interval by Interval Pearson's R	-.016	.082	-.184	.854 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.008	.084	-.089	.929 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* This unit helps me to apply appropriate problem solving processes**

**Crosstab**

Count		This unit helps me to apply appropriate problem solving processes			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	4	16	12	32
	Marketing 100	15	37	8	60
	Strategic Marketing 310	5	27	12	44
Total		24	80	32	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	-.026	.087	-.306	.760 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.018	.090	-.214	.831 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

**Unit \* This unit improves my written and oral communication skills**

**Crosstab**

Count		This unit improves my written and oral communication skills				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Unit	Business Policy 320	0	5	15	12	32
	Marketing 100	2	15	29	14	60
	Strategic Marketing 310	2	11	20	11	44
Total		4	31	64	37	136

**Symmetric Measures**

	Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Interval by Interval Pearson's R	-.136	.082	-1.594	.113 <sup>c</sup>
Ordinal by Ordinal Spearman Correlation	-.126	.085	-1.467	.145 <sup>c</sup>
N of Valid Cases	136			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

# APPENDIX G

## Statistical data report Crosstab by Semester

### Crosstabs by Semester-conceptions of learning

#### Semester \* Learning to me is when I can relate what I have been taught to the outside world Crosstabulation

Count

		Learning to me is when I can relate what I have been taught to the outside world				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	9	38	18	65
	Semester 2	1	17	29	24	71
Total		1	26	67	42	136

#### Semester \* Learning is when I can repeat something I have learnt Crosstabulation

Count

		Learning is when I can repeat something I have learnt				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	3	21	32	9	65
	Semester 2	3	17	41	10	71
Total		6	38	73	19	136

#### Semester \* Learning to me means making sure I remember things well, so I can recall Crosstabulation

Count

		Learning to me means making sure I remember things well, so I can recall				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	4	22	23	16	65
	Semester 2	2	26	33	10	71
Total		6	48	56	26	136

**Semester \* Learning to me means building up knowledge by acquiring facts and information like data banks Crosstabulation**

Count

		Learning to me means building up knowledge by acquiring facts and information, like data banks				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	18	17	30	65
	Semester 2	3	12	22	34	71
Total		3	30	39	64	136

**Semester \* Learning to me means building up knowledge by blending new facts and information with what I already know Crosstabulation**

Count

		Learning to me means building up knowledge by blending new facts and information with what I already know				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	11	30	24	65
	Semester 2	4	10	36	21	71
Total		4	21	66	45	136

**Semester \* Learning to me means being able to use the information I have acquired Crosstabulation**

Count

		Learning to me means being able to use the information I have acquired				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	6	28	30	65
	Semester 2	0	9	24	38	71
Total		1	15	52	68	136

**Semester \* Learning to me means being able to apply the knowledge to an unfamiliar context or situation Crosstabulation**

Count

		Learning to me means being able to apply the knowledge to an unfamiliar context or situation				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	2	12	26	25	65
	Semester 2	1	14	36	20	71
Total		3	26	62	45	136

**Semester \* Learning to me means understanding new ideas and information by myself  
Crosstabulation**

Count

		Learning to me means understanding new ideas and information by myself				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	2	13	25	25	65
	Semester 2	1	13	35	22	71
Total		3	26	60	47	136

**Semester \* Learning to me means seeing things in a different and more meaningful way  
Crosstabulation**

Count

		Learning to me means seeing things in a different and more meaningful way				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	9	22	33	65
	Semester 2	2	10	22	37	71
Total		3	19	44	70	136

**Semester \* Learning to me is when I know I have made sense of information  
Crosstabulation**

Count

		Learning to me is when I know I have made sense of information				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	7	32	25	65
	Semester 2	1	14	41	15	71
Total		2	21	73	40	136

## Crosstab by semester – Approaches to learning

Semester \* I learn by rote, going over and over the information until I know this by heart  
Crosstabulation

Count

		I learn by rote, going over and over the information until I know this by heart				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	9	21	24	11	65
	Semester 2	5	29	30	7	71
Total		14	50	54	18	136

Semester \* I use different ways to learn depending on what it is I have learned  
Crosstabulation

Count

		I use different ways to learn depending on what it is I have learned				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	15	27	22	65
	Semester 2	1	18	36	16	71
Total		2	33	63	38	136

Semester \* I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra  
Crosstabulation

Count

		I generally restrict my studies to what is specifically set as I think it is unnecessary to do anything extra				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	15	25	21	4	65
	Semester 2	7	32	31	1	71
Total		22	57	52	5	136

Semester \* I relate what I have learned in one subject to that in another  
Crosstabulation

Count

		I relate what I have learned in one subject to that in another				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	4	14	30	17	65
	Semester 2	3	21	35	12	71
Total		7	35	65	29	136

**Semester \* While I am studying, I often think of real life situations to which the material that I am learning would be useful Crosstabulation**

Count

		While I am studying, I often think of real life situations to which the material that I am learning would be useful				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	3	13	29	20	65
	Semester 2	4	5	25	37	71
Total		7	18	54	57	136

**Semester \* I find most new topics interesting and often spend extra time trying to obtain more information about them Crosstabulation**

Count

		I find most new topics interesting and often spend extra time trying to obtain more information about them				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	32	23	9	65
	Semester 2	4	27	32	8	71
Total		5	59	55	17	136

**Semester \* I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances Crosstabulation**

Count

		I find it best to accept the statements and ideas of my lecturers and question them only under special circumstances				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	2	21	33	9	65
	Semester 2	6	20	37	8	71
Total		8	41	70	17	136

**Semester \* I like to think about how the new information I am learning might be applied in the future Crosstabulation**

Count

		I like to think about how the new information I am learning might be applied in the future				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	6	8	30	21	65
	Semester 2	3	12	33	23	71
Total		9	20	63	44	136

**Semester \* As I read information, I think of what I already know about it Crosstabulation**

Count

		As I read information, I think of what I already know about it				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	3	16	29	17	65
	Semester 2	4	16	39	12	71
Total		7	32	68	29	136

**Semester \* After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them Crosstabulation**

Count

		After a lecture or tutorial, I reread my notes to make sure they are legible (clear enough to be used) and that I understand them				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	10	25	21	9	65
	Semester 2	9	33	24	5	71
Total		19	58	45	14	136

**Crosstab by semester – Levels of learning outcomes**

**Semester \* On the whole, this unit helps me to learn how to learn Crosstabulation**

Count

		On the whole, this unit helps me to learn how to learn				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	1	4	37	23	65
	Semester 2	0	18	31	22	71
Total		1	22	68	45	136

**Semester \* This unit helps to acquire knowledge from the strategy and international business discipline Crosstabulation**

Count

		This unit helps to acquire knowledge from the strategy and international business discipline				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	3	35	27	65
	Semester 2	1	12	32	26	71
Total		1	15	67	53	136

**Semester \* The unit helps me to obtain an understanding of selected models that underlie the field Crosstabulation**

Count

		The unit helps me to obtain an understanding of selected models that underlie the field				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	3	42	20	65
	Semester 2	1	15	40	15	71
Total		1	18	82	35	136

**Semester \* This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis Crosstabulation**

Count

		This unit helps me to integrate different perspective of business such as marketing, economics, finance, and management in my business analysis				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	10	31	24	65
	Semester 2	2	15	34	20	71
Total		2	25	65	44	136

**Semester \* This unit helps me to think more critically Crosstabulation**

Count

		This unit helps me to think more critically				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	0	7	23	35	65
	Semester 2	1	5	36	29	71
Total		1	12	59	64	136

**Semester \* This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking Crosstabulation**

Count

		This unit helps me to evaluate when to use problem solving processes, arguments, critical and creative thinking				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	2	7	33	23	65
	Semester 2	1	12	37	21	71
Total		3	19	70	44	136

**Semester \* This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work Crosstabulation**

Count

		This unit helps me to manage projects effectively, which involves the organization and co-ordination of group work			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	7	37	21	65
	Semester 2	11	36	24	71
Total		18	73	45	136

**Semester \* This unit helps me to think and apply the theories and concepts to work Crosstabulation**

Count

		This unit helps me to think and apply the theories and concepts to work			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	11	27	27	65
	Semester 2	12	39	20	71
Total		23	66	47	136

**Semester \* This unit helps me to apply appropriate problem solving processes  
Crosstabulation**

Count

		This unit helps me to apply appropriate problem solving processes			Total
		This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	7	41	17	65
	Semester 2	17	39	15	71
Total		24	80	32	136

**Semester \* This unit improves my written and oral communication skills Crosstabulation**

Count

		This unit improves my written and oral communication skills				Total
		This item is never or only rarely true of me	This item is sometimes true of me	This item is frequently true of me	This item is always or almost always true of me	
Semester	Semester 1	2	16	31	16	65
	Semester 2	2	15	33	21	71
Total		4	31	64	37	136