A PHENOMENOGRAPHIC STUDY OF BEGINNER ACUPUNCTURE CLINICIANS' CONCEPTIONS OF PRACTICE AND LEARNING

THESIS

Submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy

School of Education
Faculty of Human Development
Victoria University

by

J. Damien Ryan

2003

ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

DECLARATION

I declare that this thesis titled 'A phenomenographic study of beginner acupuncture clinicians' conceptions of practice and learning' has be undertaken by me and to the best of my knowledge contains no material previously published or written by another person except where due reference is made in the thesis itself.

I also declare that this study has not been submitted, in part or full, for any other degree or diploma in any university.

....

J. Damien Ryan
20th June 2003

ABSTRACT

The research presented in this thesis reports upon an investigation of beginner acupuncture clinicians' experience of practice and learning. Acupuncture, along with a range of other complementary therapies, is a growing health care option for many Australians and over the past decade acupuncture education has been formalised within four Australian universities. Interest in how people learn and practice this peculiarly oriental therapy in a contemporary Western context, in conjunction with a broader interest in developing Chinese medical education discourse, underscores this study.

The research represents a departure from the dominant clinical trial focus of Chinese medicine research and signals the need for qualitative studies to explore what practitioners actually do in practice as distinct from what the theories assert they are supposed to do. Even though phenomenography has not been previously utilised in acupuncture research, the decision to undertake the study from a phenomenographic perspective was based on 'goodness of fit', appropriateness to the nature of acupuncture practice and the successful use of phenomenography in similar Health Science studies.

In this study, 42 interviews were conducted with beginner acupuncturists in a two-phase interview approach, and the data analysed to identify and explore the range of qualitatively different experiences of practice and of learning within the group. The analysis was distilled into two conceptual maps that represented the collective awareness of participants with respect to the phenomena of practice and of learning in practice.

The study found that although all the participants were recent graduates of a program in traditional acupuncture, they held a range of significantly different conceptions about clinical practice and learning that supported practice. While it was argued that the higher order conceptions of practice and deep approaches to learning were more appropriate in providing ways of handling complex culture-bound knowledge in clinical practice, the study found that the most frequently reported conceptions were lower order practice conceptions and surface learning approaches. This finding signalled the need for acupuncture teachers to focus more upon facilitating the development of students' awareness in order to adequately prepare them to enter the community of Chinese medical practice and to handle the complexities that accompany the practice of this Eastern form of health care in a Western context.

In addition to identifying beginner acupuncturists' conceptions of practice and of learning in practice, the study found that there was a strong relationship between specific conceptions of acupuncture practice and approaches to learning – a finding that strongly supported the phenomenographic proposition on the relationship between conceptions and actions.

The study found that there was an unexpected level of dissonance between beliefs and practice, which was probably related to the different ways individual practitioners viewed the role of traditional knowledge in practice. In studying and practising Chinese medicine, these beginner practitioners struggled with the tension between Eastern and Western priorities as well as the use of complex culture-bound knowledge in contemporary practice. The findings of this study drew into question a range of current pedagogical practices in the Chinese medicine curriculum and concluded that it was necessary to develop a theory of acupuncture education that was student-focussed, learning-centred and oriented to culturally and contextually situated practice.

TABLE OF CONTENTS

Chapter 3   Design of the study: Methodology

Chapter 4   Conceptions of practice: Findings of the study

Chapter 5   Conceptions of learning: Findings of the study

Chapter 6   Discussion and Conclusions

LIST OF TABLES

LIST OF FIGURES

GLOSSARY OF TERMS

Ba Gang (bian Zheng)	The 8 principles or categories of arranging clinical information into patterns of disharmony.
b.c.e.	'before common era' known in the Christian world as the era before Christ (b.c.).
c.e.	'common era' known in the Christian world as the era after Christ (a.d. or *Anno Domini* – the year of the Lord).
Channel	see 'Meridian'.
Chi	see 'Qi'.
Cupping	The placement of vacuum cups onto a specific area of the body surface for therapeutic purposes.
Eight Extraordinary Meridians	The eight extraordinary vessels or 'Qi Jing ba mai Kao', considered by many authors as the foundation of the meridian system.
Eight Principles	see 'Ba Gang Bian Zheng'.
Fang Shi	Traditional acupuncturists who employed a 'formula style' approach to treatment.
Feng Shui	The practice of discerning energy flows in relation to geographical and physical phenomena.
Five Phases	See 'Wu Xing'. Five Phase acupuncture is a style of practice in which diagnosis and treatment are based upon the Wu Xing.
Four Methods	see 'Si Zhen'.
Fu	The 'yang' hollow organs which transform and move Qi.
Gua Sha	The use of a spoon-like instrument to scrape the skin.
Huang Ti Nei Jing	The Yellow Emperor's classic of Internal medicine, usually known simply as 'Nei Jing', comprised of two sections – the Su Wen and the Ling Shu.
I Ching	An ancient Chinese text used for prediction and divination.
Jing	Essence or essential Qi comprised of both hereditary Qi and Qi acquired from food, air and drink.
Jing Luo	A generic term for the entire meridian system.
Ke Cycle	The governing or regulating cycle within the Wu Xing.
Ling Shu	See 'Huang Ti Nei Jing'.
Liu Jing bian Zheng	The six divisions. The categorisation of the organs and meridians into six groupings as a way of understanding the progression of disease.

Meridian	The channel or pathway through which Qi flows in the body.
Moxa	See moxibustion.
Moxibustion	The burning of dried mugwort herb on or near the skin for therapeutic purposes.
Nan Jing	The 'Classic of Difficulties' – a study of eighty-one difficult areas in the Nei Jing.
Nei Jing	See 'Huang Ti Nei Jing'.
Qi (or Chi)	The life force and substratum of being which manifests as both energy and matter.
Qi Gong	A traditional Chinese method of breathing exercises used in meditation.
Ru Yi	The scholarly traditional acupuncturists.
San Jiao	The division of the internal organs into three specific groupings based on location and function.
Shen	The person's ruling inner spirit similar to the notion of the higher self.
Sheng Cycle	The nurturing or feeding cycle within the Wu Xing.
Si Zhen	The 4 methods of diagnosis, namely observation, asking, tasting / touching and smelling.
Six Divisions	see 'Liu jing bian Zheng'.
Su Wen	See 'Huang Ti Nei Jing'.
Tai Chi symbol	The symbolic representation of the Yin - Yang balance and interplay.
Tai Qi	A traditional Chinese movement exercise.
Tui Na	Traditional Chinese massage therapy.
Vessels	Another term for meridians or channels.
Wu Wei	The principle of effecting change by exerting little effort - 'Action by Non-Action'.
Wu Xing	The five primary movements, phases or elements in nature - namely: water, wood, fire, earth, metal.
Yang	The active, moving and transforming principle or dimension.
Yin	The receptive, storing and nourishing principle or dimension.
Zang	The 'yin' solid organs which store and nourish.
Zang Fu	The entire organ system of the body.

Chapter 1

Introduction

1.1   The subject of the study

Over the past twenty years, acupuncture has become widely accepted and broadly practiced by both medical and non-medical 'traditional' acupuncturists in Australia (Bensoussan & Myers, 1996). During the same period, acupuncture education has evolved from unaccredited diploma programs, offered by private colleges, to undergraduate degrees at four Australian universities.

This study focuses on 'traditional acupuncturists' as all four undergraduate university programs are oriented to this type of training rather than providing acupuncture education as a secondary training for medical practitioners or other health care professionals. Within the group of acupuncturists who practice according to traditional principles of diagnosis and treatment, there are considerable variations in styles of practice (Birch, 1998a; Scheid & Bensky, 2000). Such variations are perhaps due, in part, to the diversity within the theoretical constructs and practice styles throughout the history of Chinese medicine (Unschuld, 1985). Yet it would seem that acupuncture undergraduate education in Australia is not as diverse, with education focussed primarily upon instructing students in a particular model of diagnosis and treatment. In tandem, acupuncture educational discourse is often concerned with the correctness of content, teaching as the effective transfer of information/skills and learning as the acquisition of these for replication in clinical practice.

However, various authors have called for the rethinking of acupuncture education and professional development so that it is more oriented towards developing critical reflection, reflective practice and problem solving abilities for contemporary practice in the West (Fish, 1995; Moir, 1995; Zaslawski, 1995c). Underlying this call for a rethinking of acupuncture education is the expressed view that acupuncture 'best practice' in the West requires more of the practitioner than just a proficiency in technical knowledge and skills (Ryan, 1995b).

In exploring the relationship between conceptions of acupuncture practice and of learning in relation to practice the researcher has chosen to focus on acupuncturists who ascribe to the traditional Chinese medical approach to acupuncture practice as this represents the dominant non-medical model of acupuncture practice in Australia (NASC, 2001). The Chinese medical approach is also the dominant framework that informs acupuncture education in universities and private colleges throughout Australia.

The study intentionally focuses on acupuncturists rather than other health practitioners within the broad umbrella of Chinese medicine. Practitioners who define themselves primarily as Chinese Herbalists, Tai Qi and Qi Gong specialists or Tui Na (Chinese Massage) therapists, while also practitioners of Chinese medicine, have not been included in this study. Traditional acupuncturists are the largest single body of Chinese medical practitioners in Australia, with formal education and annual student intakes in university programs reflecting this preference.

It was considered that if participants from the entire range of diverse Chinese medical specialities had been included in the study, the analysis of the qualitative data would not have achieved the high degree of focus necessary for providing informed comment about acupuncture education. Furthermore, as the majority of non-medical acupuncturists in Australia have been trained in and continue to ascribe to a Chinese medical framework, and since this perspective is also the referential framework of regulatory bodies and professional associations in Australia, it was decided that traditional Chinese acupuncture would be the focus of this study.

This study explores the phenomena of acupuncture practice and of learning from the perspective of beginner practitioners. In exploring these phenomena the study adopted a phenomenographic orientation because such an approach enabled the researcher to explore the phenomena of practice and of learning as well as the relationship between these from a second order perspective (Marton & Booth, 1997b).

In designing this study it was anticipated that by exploring these issues from the perspective of beginner practitioners, the findings of the study would inform undergraduate acupuncture education in Australia. The study does not explore the issues of learning and practice with the intent that the findings would be objectified or broadly generalised. The study has been undertaken with the qualitative intent of providing insight and understanding in a rapidly expanding area of complementary health care in Australia.

1.2   Historical context: Background to the study

Acupuncture was first introduced to Australia by Chinese settlers during the 'gold rush era' of the mid 1850s, with later influences from other South East Asian nations as well as Europe and the United States. The variations in acupuncture theory and practice that had occurred before reaching Australia, and the subsequent reformulation of acupuncture by practitioners in Australia, underscores the diversity of views amongst acupuncturists in this country (Ryan, 1995b).

Chinese medicine had begun to spread throughout South East Asia from the third century (Hsu, 1989) and by 692 c.e. a College of Oriental Medicine had been established in Korea with a program that incorporated subjects in acupuncture. The information exchange between China and Korea flowed both ways, as herbal compositions from Korea were incorporated into Chinese medicine especially in Northern China. Knowledge of acupuncture reached Japan through Korea, but Japan also sent out missions to the mainland to learn more of this modality. From 630 c.e. to 838 c.e. at least thirteen official envoys were sent to China from the Japanese court (Needham & Lu, 1986).

Even though acupuncture became aligned with traditional folk medicines in Vietnam, Korea and Japan, the practice of the therapy in these countries still maintained a high level of theoretical consistency with its Chinese heritage. Arguably, this development was aided by a degree of intellectual and philosophical consistency between China and its neighbours as commonly held Buddhist and Taoist beliefs provided a framework by which acupuncture theory could be understood and practised. Throughout its subsequent development in South East Asia, the ancient texts of Chinese medicine continued to be the major reference for acupuncture knowledge and practice (Wang, 1973).

In reporting the history of Chinese medicine, simplified accounts that often preface Chinese medical textbooks (Tai, 1987) imply that Chinese medicine is a coherent construct of theories and practices rather than an umbrella construct that encompasses a variety of different folk medicine beliefs and practices developed throughout a two thousand year history. With its early foundations in cultural beliefs, religious perspectives and ritual practices, the Chinese medical tradition provides current adherents with a diversity of perspectives on health, illness and healing (Sivin, 1995).

Unschuld (1987) identifies three distinct health practice orientations within the tradition. The first, an ostensibly pragmatic approach, is one in which the practitioner utilises ingestible substances (mainly herbs) or other techniques such as acupuncture for the treatment of illness. In this approach, the major emphasis is upon the cure rather than the origins of the illness with successful treatment outcomes dependent primarily upon the

skill and knowledge of the practitioner. The second perspective views illness as a malfunction or imbalance of the body's normal functioning units, with diagnosis and treatment individualised by the practitioner to assist the client in restoring balance. Responsibility for lifestyle changes to achieve balance and wellbeing rests primarily with the client. The third perspective views illness as a pathology resulting from pathogens, with the practitioner applying standard treatment procedures derived from the body of Chinese medical knowledge to eradicate the pathogen. In this approach the client is required to follow the advice of the practitioner in achieving a cure and preventing recurrence.

These three quite different perspectives on illness, health and medical practice have coexisted in Chinese medicine throughout its history (Unschuld, 1987). However, following the 1949 Maoist revolution, Chinese medicine underwent a period of theoretical streamlining, standardisation and centralisation in China (Needham & Lu, 1986; Sivin, 1990; Unschuld, 1985). In the process of restructuring, driven largely by national health needs (Wadlow, 1995), Chinese medicine became part of a centrally funded health program that promoted culturally familiar practices.

> As policy makers used Chinese medicine they reshaped it. They expanded formal medical education on a more uniform standard and required knowledge of modern medicine on the part of graduates.
>
> (Sivin, 1990 p.326)

Further government restructuring of Chinese medicine occurred during the Cultural Revolution of the 1960s under the government edict to modernise traditional medicine and make it more scientific (Andrews, 1996). The result was a proliferation of new techniques such as acupuncture analgesia and point injection therapy, in addition to the incorporation of biomedical diagnostic procedures such as x-rays, scans and pathology tests in the practice of Chinese medicine in hospitals in China (Scheid, 2002). It is of historical note that the new techniques did not supersede ancient ones; instead they were incorporated within the broad umbrella of Chinese medicine.

The early history of acupuncture in the West was one of fragmented and incoherent ideas (Needham & Lu, 1986). Early European knowledge about acupuncture was derived from information gained through missionaries and doctors previously assigned to China or Japan. In 1683 c.e. W. T. Rhyne, a doctor with the Dutch East-India Company, published a treatise on acupuncture which became the foundation for acupuncture practice in Europe. This work, and others published in Europe in the seventeenth and eighteenth centuries, conceptualised acupuncture as a therapeutic technique, failing to situate it within the philosophy, theories, practice principles and protocols of Chinese medicine.

One reason why acupuncture in Europe was not presented in its entirety was because the seemingly simplistic notions of Chinese medicine were exactly what seventeenth century European medicine was trying to overcome in its effort to be scientific (Hsu, 1989).

During the nineteenth century, acupuncture began to gain a level of social and medical acceptance in France and was adopted as a clinical procedure by some medical practitioners in the United Kingdom (Needham & Lu, 1986). In this period, medical practitioners who utilised acupuncture techniques did so within a biomedical conceptual framework and consequently treatments were often inappropriate or contradictory according to the principles of Chinese medicine (Hsu, 1989).

The reformulation of acupuncture theory and practice in Europe was due in part to an ignorance of the Chinese medicine theoretical framework as well as difficulty in comprehending the philosophical and cultural values in which Chinese medicine was grounded. A large part of the history of acupuncture in the West is seen by Unschuld (1987) as one in which practitioners and authors have unwittingly selected from the conglomerate of Chinese medical views, on the basis of cultural values deeply ingrained in the Westerner's psyche. An example in point is Soulie de Morant, a former provincial consul in China, who had a substantial influence on the translation of Chinese medical classics into French. Commenting on Soulie de Morant, Hsu (1989) notes that his translations and lectures contained a good deal of biomedical and personal comment that led to the growth of idiosyncratic acupuncture theory.

As a medical construct based substantially upon philosophical and cultural perspectives rather than empirical science, acupuncture is extremely vulnerable to subjective reinterpretation by practitioners. Moreover, as a body of knowledge that contains multiple and contradictory truths, Chinese medicine is oriented to diversity (Macan, 2001), even though post 1949 attempts to standardise education and practice in China give the illusion of coherence (Sivin, 1990).

Although Chinese medicine has been practiced in Australia for a substantial period of European settlement, it remained on the fringe of health care services until recent times. For a large part of its history in Australia, acupuncture and Chinese herbalism have been the preserve of the Chinese community with successive State and Federal governments allowing the practice of Chinese medicine to continue as unregulated or self regulated up to the last decade.

The 1961 Guthrie Report commissioned by the Western Australia State government and the 1974 Webb Report commissioned by the Federal Government were both scathing about the practice and value of 'alternative medicines', yet these reports did not lead to the passage of legislation that would restrict the practice of alternative medicines (Evans, 2000). The 1974 National Health and Medical Research Council (NHMRC) report on the practice of acupuncture in Australia concluded that acupuncture might have a value in pain control and analgesia, but did not acknowledge the other traditional uses of acupuncture. The report, compiled by three eminent medical practitioners who were not acupuncture specialists, viewed acupuncture as a therapeutic technique rather than locating it within the Chinese medical perspective. The NHMRC report recommended that the practice of acupuncture in Australia should be restricted to medical practitioners because of their superior diagnostic skills and expertise (NHMRC, 1974). However this report, like previous government commissioned reports, did not lead to any government sanctioned restriction of acupuncture practice.

In 1975 a report commissioned by the State Government of Victoria into the practice of alternative medicines raised questions about the adequacy of practitioner training and recommended that in the interest of public health and safety, practitioners be registered. The 1986 Dixon Report commissioned by the State Government of Victoria, initiated in recognition of the increasing popularity of alternative medicines as a form of health care, found that seventy-five percent of medical practitioners surveyed favoured the registration of Chinese medicine practitioners and proposed a range of recommendations concerning practitioner training (Dixon, 1986).

A second NHMRC review of acupuncture was undertaken in 1988 with terms of reference similar to the 1974 study (NHMRC, 1988). As previously, the committee that undertook the review consisted entirely of medical practitioners and was highly critical of acupuncture being administered by non-medical personnel. However, the report was not critical of the minimal acupuncture training undertaken by the majority of medical practitioners who practised acupuncture, reasoning that medical practitioners required little additional training to acquire acupuncture skills. The 1974 and 1988 NHMRC reports both concluded that there was little therapeutic value in acupuncture beyond 'pain relief' and neither report provided convincing evidence for the stated view that a considerable client placebo effect was involved with acupuncture.

The dominance of the biomedical paradigm and the history of antagonism between the medical profession and alternative therapists have contributed to the ongoing tendency to define alternative medicine in contradistinction to biomedicine. However, defining Chinese medicine in terms of how it may differ to biomedicine, fails to acknowledge that there is also an area of 'common ground' between the two medicines.

> From an initial assumption of black and white contradistinction of Western versus Chinese medicine, we now slowly come to appreciate the fact that no such clear-cut contrast exists. It is true that the last one hundred years of Western medicine have been marked by an extremely one-sided emphasis on concepts of foreign pathogenic agents and pathological morphology, resulting in a temporal primacy of bacteriology/chemotherapy and surgery/anaesthesiology. But it should be noted that all these concepts and practices have their roots not only in traditional European medical thought but in traditional Chinese medicine as well.
>
> (Unschuld, 1987, p. 1029)

Historical and current diversity within both Eastern and Western medicine casts doubt on definitions of Chinese medicine based largely upon unquestioned polarisation. From a practitioner perspective the polarisation argument is also questionable, with a recent survey of medical practitioners in Victoria indicating a high acceptance of acupuncture and other complementary therapies amongst biomedical doctors (Pirotta, Cohen, Kotsirilos & Farish, 2000).

The rise in the popularity of acupuncture amongst the wider Australian population during the seventies was due in part to the promotion of Chinese medicine by the Chinese government. The novelty of using acupuncture for surgical analgesia or to assist in quitting smoking gained media attention in Australia. The application of acupuncture in the treatment of sporting injuries and musculo-skeletal disorders by physiotherapists, chiropractors and acupuncturists has also influenced the way acupuncture is seen and practised in Australia.

Before the formalisation of acupuncture training programs in Australia, prospective practitioners undertook short training courses in China or Hong Kong, or correspondence courses offered by colleges of acupuncture in Europe or the United States. With no legislative requirement pertaining to the standard of training, there were consequent variations in levels of expertise amongst acupuncturists in Australia. From the mid 1970s standards of training and practice were defined by self-regulation via the professional associations that had been established to promote acupuncture practitioners' interests, yet variations in association standards were considerable until the establishment of Australian Guidelines for Traditional Chinese Medicine Education in 2001 (NASC, 2001).

In 1969 Russel Jewel, a chiropractor with some knowledge of acupuncture, founded Acupuncture Colleges Australia (ACA) in Sydney which instigated a two-year part time acupuncture training program that included a minimal component of biomedical science.

In 1975 links were established between ACA and the International College of Oriental Medicine based in the United Kingdom; a relationship that provided for the issuing of a Bachelor of Acupuncture to Australian graduates. As the popularity of acupuncture increased, ACA offered external courses in Adelaide, Melbourne, Canberra and Brisbane, so that by the late 1970s colleges of acupuncture had been established in most capital cities of Australia.

By the early 1980s the variety of acupuncture courses on offer in Australia differed in length, content and theoretical perspective. The major colleges structured their acupuncture curriculum upon that of the colleges and universities of Chinese medicine in China. However, short training programs designed for other health professionals offered truncated versions of acupuncture reconceptualised within a biomedical framework.

In an effort to establish standards of acupuncture education in Australia, ACA in Sydney and the Australian Acupuncture College in Melbourne began negotiations with a number of universities in 1988 for the transfer of acupuncture education into the tertiary education system. A number of other colleges sought accreditation for their programs at diploma or advanced diploma levels through respective State government bodies.

In 1992 the Australian Acupuncture College was phased into the Victoria University of Technology and a four-year undergraduate program in acupuncture initiated. In the years following, the Royal Melbourne Institute of Technology, the University of Technology Sydney and the University of Western Sydney introduced undergraduate programs in acupuncture modelled on the curriculum of colleges and universities of Chinese medicine in China (Ryan, 1995a). Nonetheless the establishment of acupuncture and other complementary medicines within the university sector has not occurred without opposition from some quarters of the medical profession (Evans, 2000).

In formalising acupuncture education within the university system, educators structured curriculum upon that in China, unwittingly promoting a certain version of acupuncture that emphasised a Zang Fu syndrome based approach and de-emphasised the meridian based approach (Pirog, 1996) and the five-phase approach (Worsley, 1982). It is also notable that debate about the most appropriate theoretical model for contemporary acupuncture practice in Australia has been largely absent within Chinese medical discourse.

While the formal acupuncture curriculum in Australia has followed the Chinese model, practitioners in the field have shown interest in many different perspectives expressed in books, articles and seminars conducted by acupuncture theorists in the English-speaking world. The ongoing professional development of practitioners through weekend seminars,

reading and informal practitioner exchanges appears to be characterised by a diversity of views, supporting the case for plurality of practice advanced by Ryan (1995b), Scheid and Bensky (2000) and Seem (1992).

A recurring theme throughout the history of Chinese medicine in Australia has been the importance that non-Chinese practitioners place on being seen as 'traditional'. Professional associations of acupuncturists as well as colleges or universities that offer courses in Chinese medicine, have adopted the nomenclature of 'Traditional Chinese Medicine' (TCM), although the precise meaning of the term 'traditional' and the role of traditional knowledge in clinical practice is unclear.

The 1996 report on the practice of Chinese medicine in Australia commissioned by the Victoria Department of Human Services (Bensoussan & Myers, 1996), identified Traditional Chinese Medicine (TCM) as the broad umbrella term to encompass the variety of practices (including acupuncture) based upon the theories of Chinese medicine. The report follows the established practice of utilising the abbreviation TCM as a means of distinguishing traditional practice from the use of Chinese medical skills within a biomedical framework.

This brief overview of the historical development of acupuncture, with particular reference to Australia, sets the context for this doctoral research. While these issues will be explored further in the literature review, they are introduced at this stage to establish the context of the study.

1.3   Historical issues that underpin the study

Maintaining adherence to the tradition while accommodating knowledge in practice
From a historical perspective, Chinese medicine has shown an ability to adapt to different health issues and cultural contexts. The development of acupuncture in Japan has been characterised by the accommodation of theory to the local context while maintaining continuity with the Chinese medical tradition. The development of acupuncture in the West has also been characterised by adaptations of theory and practice, however the extent to which these adaptations accurately respond to cultural specific health needs or are congruent with the overall orientation of Chinese medicine, is open to debate. Such plurality of practice has developed in Australia in spite of the lack of plurality within the formal curriculum of Chinese medicine education.

Handling contradictions within the accepted body of knowledge

The 'Cultural Revolution' agenda of modernising Chinese medicine has engendered a proliferation of new techniques and the acceptance of these into mainstream acupuncture education and practice in both China and Australia. These practices include the use of laser light, electrical current and magnets to stimulate acupuncture points, the injection of acupuncture points with vitamins and herbs, and the utilisation of biomedically defined acupuncture points on the ear, hand and foot. These modern developments, influenced largely by biomedical perspectives, have been accepted into the broad body of Chinese medical practice with little critique about the resulting theoretical contradictions this creates. The successful application of these techniques in the practice of Chinese medicine is dependent upon the integration of biomedical and Chinese medical notions of pathophysiology, diagnostic approaches and treatment principles. While this development has created theoretical contradictions within the body of Chinese medical knowledge, it would appear that Chinese medicine has no procedure, and possibly no desire, to resolve such cognitive dissonance.

The tension between diversity and standardisation of theory and practice

From a historical perspective, Chinese medicine is characterised by diversity of theory and practice. Varied conceptions of illness and health underpin the multitude of traditional theories that have coexisted in the body of Chinese medicine to the present day. Post 1949 measures by successive Chinese governments to streamline Chinese medical theory and practice, have seen the development of a formal national curriculum in which the Zang Fu, Ba Gang and Si Zhen Fa theories have primacy, and the equally traditional Wu Xing and Jing Luo theories accorded a secondary place. The standardised China based curriculum has been adopted by and large by educationalists and regulatory bodies in Australia as the benchmark of 'best practice'. However, the extent to which such a culture-bound curriculum prepares students for the complexities of clinical practice in Australia is worthy of investigation.

The apparent dissonance between beliefs and practices

In spite of the dominance of biomedicine in health care services in Australia and a history of antagonism between certain sections within biomedicine and complementary medicines, the difference between the two at the level of clinical practice appears less polarised. This observation signals caution about the validity of defining acupuncture and other complementary therapies as at the opposite end of the spectrum to biomedicine. With a multitude of conceptual views within both Chinese medicine and biomedicine, the actual divide between the two is more apparent than real (Unschuld, 1987). There would appear to be a shared 'middle ground' to clinical practice in which practitioners from both ends of the spectrum adopt similar views about health, illness and healing. However,

knowledge about what practitioners actually do in clinical practice as opposed to what they are supposed to do is worthy of investigation.

These issues are noted at this stage of the thesis as areas of interest that underpin this study. Chapter two of this study further explores the discourse on these issues with respect to acupuncture practice and learning in the West.

1.4   Central research question and specific aims

The contemporary practice of acupuncture in the West, and the practice of acupuncture in China in former times, has been characterised by diversity of theory, practice, knowledge and skills. However, the formalisation of acupuncture education and the regulation of standards of practice in Australia appears to advance a restricted view of education, practice and professional development that has questionable value in assisting practitioners in handling the complexities of practice in the Australian socio-cultural health context.

In investigating acupuncture practice and learning, this study has chosen to adopt a phenomenographic approach because such an approach enables the researcher to identify the qualitatively different conceptions of acupuncture practice and learning held by clinicians. Phenomenography was also selected because its relational and situated perspective was seen to be appropriate in exploring the context specific nature of acupuncture clinical practice. The phenomenographic perspective proposes that the way in which individuals conceptualise phenomena profoundly influences how they interact with and relate to those phenomena (Säljö, 1988). With regard to learning, phenomenography asserts that what people learn and how they learn is dependent upon their conception of the topic being studied (Booth, 1997).

In the practice of Chinese medicine there is demonstrable variation in the way clinicians practice and conceptualise the clinical encounter. It would appear that there are also differences in the way clinicians engage in learning in regard to supporting and improving practice, although this phenomenon has not yet been researched.

The central research focus or question in this study is:

> What are the qualitatively different ways beginner acupuncturists conceptualise practice and learning that supports practice?

In this study, the group's conceptions of practice and of learning are seen as separate yet related dimensions of clinical practice. The study explores and analyses each of the phenomena in its own right, before exploring possible relationships across the two conceptual maps of practice and learning. The central focus of the study and the research orientation give rise to the subsidiary questions:

- If there is a hierarchy of relationships between the respective conceptual positions of acupuncture practice and of learning, what is the precise nature of these relationships?

- To what extent do more complex ways of practising and of learning assume proficiency in the more basic modes?

- If conceptions underpin actions, what is the precise nature of the relationships between clinicians' conceptions of practice and the way they go about learning to support their view of practice?

Specific aims of the research

The central focus of this research and the subsidiary questions that it encompasses, give rise to the following specific aims:

- To explore whether or not there are specific conceptual categories of practice and learning amongst beginner acupuncture practitioners.

- To identify the specific characteristics of each of these conceptions.

- To investigate whether these conceptions sit within a structured order (e.g. simple ones subsumed within the more complex).

- To explore whether the specific conceptions of learning are indicative of deep/surface approaches to learning and/or atomistic/holistic learning processes.

- To explore the relationships between the respective conceptions in the two areas – practice and learning.

- To explore and identify the level of agreement or dissonance between participants' conceptions of practice and the stated theory of acupuncture practice.

- To explore the prevalence of each conception and conceptual grouping within the group of participants.

- To explore whether the occurrence of conceptions within the group varies in accord with participants' gender or age/experience.

- To discuss the implications of the research findings for acupuncture education and practice.

In consideration of the meanings associated with particular words, the researcher in this thesis has deliberately chosen to use the term 'participant' in preference to 'subject' when referring to interviewees and the term 'client' in preference to 'patient' when referring to

those receiving therapeutic treatment. However, it will be evident to the reader that in the excerpts from interview transcripts and quotations from Chinese medical discourse the terms 'client' and 'patient' are both used with no apparent recognition for the differing meanings that each term holds.

1.5   Research Design

The design of this study and the choice of research methodology were determined by the central focus of the research, the specific aims of the study and the guiding orientation of the research. The study is concerned with identifying and understanding the conceptions of clinical practice and of learning amongst beginner acupuncture practitioners. As a second order study that seeks understanding of phenomena from the standpoint of others and their experiences, phenomenography was selected as the preferred research method (Marton & Ramsden, 1988a; Svensson, 1997b). The study was not undertaken with any *a priori* set of conceptual categories that would be applied and tested; instead the research accorded with the phenomenographic orientation of seeking understanding through a process of discovery.

A pilot study undertaken in 2000 enabled the researcher to fine-tune aspects of the interview process and at the same time provided experience in the phenomenographic interview procedure. For the purposes of this study it was particularly important to gather data that revealed the participants' experience of clinical practice and of learning in practice, as distinct from what the participants or experts believed 'should' occur in the clinical encounter.

The study employed a two-phase interview process to gather data from twenty-four recent graduates of the Bachelor of Health Science – Acupuncture course at Victoria University. The composite data pool was used to identify and describe categories of description held by the group. As the orientation of phenomenography is one of uncovering group conceptions, rather than attributing conceptual positions to specific individuals, it was acknowledged from the outset that any one practitioner might hold a range of different conceptual positions that would vary in relation to the specific nature of each clinical encounter.

All interviews were transcribed in order to undertake the phenomenographic analysis of the data. An iterative process of careful reading and re-reading of the transcripts was employed in analysing the data as a means of identifying the categories that described the participants' conceptions of clinical practice and of learning. This well established technique was used to delimit the range of different conceptions with regard to the

particular phenomena and to explore the relationships between the varied conceptions. The categories were defined in terms of their differences with respect to referential and structural parameters (Tempone, 2001), with the sum total of these forming the conceptual map of the group. The detailed design of this study is presented in chapter three of this thesis.

The interview process that engaged practitioners in describing and reflecting upon their clinical experience also gave rise to a number of additional frequently reported themes concerning participants' experience of clinical practice. These additional themes, while not specific to any one conceptual category or group of categories, were considered pertinent to the central focus of the research. Therefore these themes were retained, presented and analysed as part of the study's findings about the nature of acupuncture clinical practice (Chapter 4).

1.6   Appropriateness of the approach

In the arena of Chinese medicine, research has focussed almost exclusively upon measuring the clinical efficacy of therapeutic interventions. This positivist agenda, while perhaps inconsistent with the non-empirical foundation of Chinese medical theory, emanates from a perceived need to prove the efficacy of Chinese medicine in a world in which biomedicine dominates health care (Sivin, 1987). This research is not set within the positivist agenda of 'proving' the therapeutical efficacy of Chinese medicine, but instead seeks understanding through exploring practitioners' experience of clinical practice. The need for an alternative discourse based in the realities of Chinese medical practice, rather than a discourse of justification based upon biomedical values, underpins the qualitative orientation of this study.

In consideration of the general orientation and specific aims of this study, the phenomenographic research approach was selected because phenomenography focuses upon:

- Understanding a phenomenon from the perspective of those who experience it, rather than that of the researcher exploring the phenomenon.
- Identifying the conceptual positions held by the group, rather than the specific orientations of particular individuals.
- Investigating what people actually do, rather than their espoused theory of what should happen.   (Marton & Booth, 1997b)

Phenomenography was also selected because it provided the researcher with a structured approach to analysing and mapping the qualitatively different ways in which people conceptualise phenomena.

While phenomenography has been used extensively in educational research, its usefulness in health science research is evidenced in other studies (Bendz, 1995; Dall'Alba, 1995 & 2002; Eklund-Myrskog, 1997; Forbes, Duke & Prosser, 2001; Ramritu & Barnard, 2001; Takman & Severinsson, 1999; Taylor, 1993). The appropriateness of the phenomenographic orientation and method as a means of exploring understanding in health care is provided by Barnard, McCosker and Gerber (1999) and discussed in greater detail in chapter three of this thesis.

1.7   Delimitations of the study

Phenomenography, by virtue of its orientation, provides both benefits and limitations as a research approach in this study. The phenomenographic orientation contends that knowledge of phenomena is relational because the basis for understanding phenomena is one's experience. The orientation rejects any attempt to objectify phenomena, to treat one's relational experience as the basis for generalised facts, or to apply the findings of phenomenographic research to other contexts as generalised conclusions.

In this study, the focus upon understanding acupuncturists' conceptions from the 'second order perspective' of individual's experience of phenomena is intentional as this stance accords with the aims of the research and the selected phenomenographic method. The focus upon understanding both clinical practice and learning in the context of practice from the practitioner's experience is purposeful because the apparent dissonance between espoused theory and practice, and the lack of research in this area of Chinese medicine, are worthy of investigation.

The scope of the investigation is also limited by the defined cohort of participants interviewed in exploring the issues under study. The study chose to focus on the experiences of beginner practitioners because the study has a secondary interest in exploring the implications of the research findings for acupuncture education. The study could have focussed upon more experienced practitioners if the research aims had been different. Additionally, if the research had been undertaken with a different cohort of acupuncturists in Australia, or indeed in China, a different set of descriptive categories and maps of variations in practitioner conceptions may have resulted.

1.8   Significance of the study

In his Master of Education thesis, Ryan (1995a) explored the notion of paradigm as a way of understanding acupuncture. In that study, student questionnaires and selective interviews were used to identify factors which students and staff believed facilitated their learning of and induction into the broad paradigm of acupuncture practice. The outcomes of that study, the educational questions it raised, and the current discourse on acupuncture education and practice in the West are the backdrop for this doctoral research into beginner practitioners' conceptions of acupuncture practice and learning.

This qualitative study is situated in the context of Chinese medical education and practice, and sits in contrast to the dominant Chinese medicine research agenda of measuring the clinical efficacy of therapeutic interventions. The study departs from the positivist agenda and is significant in that it promotes discourse about acupuncture practice and learning from a practitioner perspective. Apart from some English language serials, the majority of Chinese medicine journals focus upon reporting clinical trial research. There is no Chinese medicine journal that specialises in issues of education and practice even though Chinese.medicine is offered as an undergraduate program in universities across several countries and practised extensively throughout the world.

This study is informed by and contributes to the discourse on Chinese medical education and practice. The research explores issues in this discourse by utilising a methodology not previously applied in acupuncture research. The appropriateness of this methodology and approach are based in the success of phenomenography in educational and health science research. In adopting this orientation, the study ascribes to the phenomenographic perspective that the way in which we conceptualise phenomena influences how we act in relation to those phenomena (Marton & Booth, 1997b).

The specific focus of the research signals a development in the researcher's understanding of effective learning beyond the issues of teacher skills and student learning strategies, to the role of conceptions in learning and in practice. The lack of research in the area of acupuncture education and practice in either oriental or western contexts, the desire to ground educational discourse in the realities of clinical practice rather than espoused theory, and the appropriateness of the phenomenographic method in this undertaking, situate this research as a significant contribution to the body of knowledge.

1.9   Structure of the thesis

This chapter has presented the central research question and specific aims that guide this exploration of beginner acupuncturists' conceptions of practice and of learning. The historical background to this study was presented in order to contextualise the study. A brief overview of the research approach was also presented by way of situating the research and orientating the reader.

Chapter Two explores the various bodies of literature that inform the study. The areas covered are: (i) the espoused theory of Chinese medicine and its apparent role in clinical practice (ii) the discourse on professional practice with particular reference to acupuncture practice; (iii) the discourse on teaching and learning with particular reference to acupuncture education. The literature review places particular importance upon findings arising from phenomenographic studies that inform this study.

Chapter Three outlines the research method chosen for this study and the rationale underpinning the detail of the research design. The phenomenographic orientation and the use of phenomenography in this study are detailed. Procedures governing the selection of participants, interview process, data analysis and validation of outcomes are explained. The findings resulting from the application of this methodology in the study are presented in chapters four and five.

Chapter Four presents the qualitatively different ways in which participants experienced acupuncture practice. The different perspectives across the group are presented as phenomenographic categories defined by structural and referential parameters. The analysis of the interrelationships between the different perspectives in 'Outcome Space Table' format is seen as representative of the collective conceptual map of the group in relation to the phenomenon of acupuncture practice. The conceptions of practice are also analysed in terms of levels of complexity, frequency of occurrence, and the extent to which gender, age and experience are significant influences upon conceptual preference. Practice related themes, not specific to any particular conceptual category, are also included and analysed in relation to the conceptions of acupuncture practice held by the group.

Chapter Five follows a similar approach to chapter four in identifying and analysing the qualitatively different ways in which the participants conceptualised learning in the context of clinical practice. The categories of learning are defined in terms of structural and referential parameters, and the analysis is displayed in 'Outcome Space Table' format.

The approaches to learning are analysed on the basis of the surface/deep and atomistic/holistic distinctions. In addition, the conceptions of learning are analysed in terms of their frequency of occurrence and the extent to which gender, age and experience are significant influences upon conceptual preference.

Chapter Six discusses the implications of the findings of the study for Chinese medicine education and practice in Australia. This chapter is divided into three parts with the first exploring the relationship between particular conceptions of practice and the respective 'conceptions of and approaches to' learning. The second part explores the implications of the findings for practice and learning. The third part reflects on the research method and design of the study as well as detailing future research suggested by this study.

Chapter 2

Literature review

2.1   Introduction

With respect to the aims of the study, this review examines literature related to professional practice and to learning particularly as it pertains to acupuncture. In situating this study, four areas of discourse are explored:

- The espoused theory of Chinese medicine
- The discourse on acupuncture education and practice
- The literature pertaining to conceptions of and notions about practice
- The literature pertaining to conceptions of and approaches to learning

The broad scope of this review was considered necessary as a way of contextualizing the study in the arena of Chinese medicine where little qualitative research exists. The review aims to provide an appropriate path through the literature by relating the discourse and findings in various studies to the context of acupuncture practice and learning.

The first section of this chapter explores the beliefs and views that constitute the commonly advanced perspective or espoused theory of Chinese medicine. The espoused theory is explored because it is asserted that theory guides practice (Garvey, 1996; Nester, 1997) and acupuncture literature places considerable emphasis upon adherence to the perspectives and theories that ostensibly are the foundation for practice. Clarification of the espoused theory was considered to be important in situating the analysis and discussion of beginner practitioners' conceptions of acupuncture practice and of learning in practice, particularly the investigation of whether the participants' conceptions of acupuncture practice accord with the espoused theory or are dissimilar to it.

The second section explores the different ways in which styles of acupuncture practice have been discussed and understood. The section also discusses the literature on professional practice with particular reference to the work of Argyris and Schön (Argyris & Schön, 1974; Schön, 1983; 1988). The section provides a perspective on professional practice by way of situating this study's exploration of participants' conceptions of acupuncture practice.

The third section of this chapter explores the discourse concerning acupuncture education in the West. In view of the orientation and methodology employed in this study, this section draws primarily upon phenomenographic discourse in preference to other bodies of educational literature on teaching and learning. In this and the previous section there is a particular interest in literature that explores the relationship between conceptions and actions, as this study investigates not only conceptions of practice and learning but also their relationship to each other.

2.2   The espoused theory of Chinese medicine

2.2.1   Holism and health

The term 'holism' was originally designated by Smuts in 1926 to describe the tendency in the natural environment for units of phenomena to exist in ordered relationships that form functional wholes. The concept has been used broadly in the West to describe one of the key metaphysical positions of complementary medicine (Baum, 1998). The term has also been adopted by Chinese medicine to explain certain conceptual assumptions inherent in its philosophical base from the earliest records.

From a conceptual stance, holism is a belief in the unity of body, mind, spirit, environment and cosmos which, in the context of health, implies that all such phenomena interact to influence health (Beinfield & Korngold, 1991; Kaptchuk, 1986; Resnick, 1990). In Chinese medicine textbooks, justification for this belief is predicated upon selective references to the ancient texts within the tradition.

The *Nei Jing*, the earliest Chinese medicine text compiled around 100 b.c.e., presents a view of the cosmos in which all of reality is interrelated. Health and illness are seen to be influenced by the weather, the planets, diet, physical activity, age, hereditary predispositions and so on (Veith, 1972; Wang, 1997; Zhou & Han, 1997; Zhu, 2001). From this perspective, health is seen to result from the interrelationship and interdependence of all things; in other words health is seen as holistic.

> The ideal of health in the Nei Jing is the perfect health of a saint – health in the holism of mind, body and spirit.
>
> (Churchill, 2000, p.43)

Subsequent texts throughout the historical development of Chinese medicine have continued to reiterate this perspective with respect to specific theoretical or technical foci. Modern Chinese medical texts show continued adherence to this conceptual assumption

with reference to the classics and ancient Chinese philosophies as justification for the belief.

> The ancient Chinese perceived human beings as a microcosm of the universe that surrounded them, suffused with the same primeval forces that motivated the macrocosm. They imagined themselves as part of an unbroken wholeness.
>
> (Beinfield & Korngold, 1991, p.5)

Chinese notions of spirit and spiritual dimension, rooted in ancient animistic and demonic beliefs, continue as difficult concepts in Chinese medicine (Larre & Rochat de la Valle, 1995). While discourse about the spiritual dimension is lacking in the post 1949 revision of Chinese medicine in China, this dimension of holistic health continues to be emphasised by authors of Chinese medicine in the West who assert that spiritual beliefs have a significant influence upon one's health (Desser et al., 1998; Nanke & Canter, 1991; Ogden, 1997).

In addition to providing a perspective from which health and illness could be understood, the notion of holism is also dominant in discussions about the application of espoused theory in acupuncture clinical practice. Diagnosis through use of the Si Zhen is seen as comprehensive and therefore holistic.

> Each part is examined in relation to the whole – its very existence is given meaning only in terms of its interconnections.
>
> (Milburn, 1994, p.151)

Treatment is also perceived as being holistic with both symptoms (the stem) and underlying causes (the root) receiving attention in the course of acupuncture treatments. In asserting the superior place of the holistic perspective in diagnosis and treatment, the Chinese physician Wang Fu stated in 150 c.e.

> Superior physicians treat the body as a whole; inferior physicians simply treat the disease.
>
> (Needham & Lu, 1986, p.116)

Throughout its development, Chinese medicine has accumulated a substantial body of knowledge about diet and exercise, and to a lesser extent the psycho-emotional dimension, which inform holistic health practices. However, the application of this knowledge in a cross-cultural setting can be problematic.

Diet, more than any other therapy, is strongly tied to a society's particular customs and habits. No Chinese book could tell Westerners what to eat for breakfast – Westerners would probably not be able to find the ingredients or prepare them, nor would many of them want to eat the result. And the Chinese could never give a reasoned opinion, based on empirical experience, on precisely when to eat or not to eat lasagne.

(Kaptchuk, 1986, p.132)

In justification of the holistic perspective, Chinese medical authors turn to the philosophies that have shaped its world-view, particularly the philosophy of Taoism that affirms the oneness in creation (Lau, 1988). 'The web that has no weaver' (Kaptchuk, 1986) draws upon Taoist philosophy in justification of the conceptual assumptions of holism, interdependence and interconnectedness in the espoused theory of Chinese medicine. For Kaptchuk and others it is assumed that there is a close connection between ancient beliefs and what constitutes 'best practice' in today's world, as well as an uncritical acceptance of the Taoist metaphysical stance which elevates Chinese medicine to an almost 'religious' level (Kaptchuk, 1986; Larre et al., 1986).

The resort to ancient philosophical beliefs as a justification for current practice is not uncommon in Chinese medical discourse (Rossi, 2000; Scheid & Bensky, 1998) although such reasoning fails to consider:

- the likelihood that one's interpretation of the classics may not be an accurate account of an ancient reality;
- that selective references to ancient texts may present a view of reality that is more indicative of one's personal values than ancient beliefs; and
- the likelihood that ancient views may be historically atavistic and not relevant to modern socio-cultural contexts.

It is the contention of this thesis that while ancient writings may be interesting, discourse concerning current practice must be contextually situated if it is to provide informed comment. According to Ryan (1995b), discourse concerning contemporary acupuncture practice in the West should be based in:

- an understanding of the specific socio-cultural health context relevant to the discussion;
- in situ research concerning practitioner-client roles; and
- the realities of contemporary practice rather than purported beliefs from ancient times.

Similarly problematic is the reasoning which asserts that Chinese medicine is holistic in contradistinction to biomedicine that is reductionist. Beinfield and Korngold (1991) and Kaptchuk (1986) portray biomedicine as mechanistic and reductionist in contrast to Chinese medicine as holistic and integrative. Yet Baum (1998) is highly critical of the simplistic juxtaposition of alternative medicine as holistic and biomedicine as reductionist because a multiplicity of styles are evident at the coalface of clinical practice whether the practitioners be traditional acupuncturists or medical practitioners. Campbell (1998), in a similar vein, critiques the mantras of 'holism' and 'natural' as inaccurate descriptions of complementary therapies. With respect to acupuncture Birch comments:

> The term 'holistic' is rarely defined clearly in Western acupuncture literature. A holistic model can be one in which the whole person is taken into account. A holistic model can also be one where the theoretical nature of the body posits a total interaction of all parts with each other so that none exists or functions independently of the rest.
>
> (Birch, 1998a, p.53)

From an examination of a broad range of complementary therapies, Peters (1998) concludes that some natural medicine practices are highly reductionist either in theoretical perspectives or specific treatment practices. Parker (1998) questions the usefulness and precise meaning of the 'holistic' label, asserting that the concept provides a veneer of unity that disguises the actual diversity of styles and views in clinical practice.

In developing a qualitative tool to measure 'holism' in the practice of alternative medicine, Long, Mercer and Hughes (2000) suggest the need for 'in situ' studies in order to explore whether or not what is claimed to occur under the banner of holism diverges from what actually happens in clinical practice. Their concern points to the likelihood of dissonance between espoused theory and theory-in-practice that is an apparent a phenomenon in professional practice (Argyris & Schön, 1974; Schön, 1983; 1988).

In a qualitative study of 132 acupuncture clients' perceptions of treatment outcomes, Gould and MacPherson (2001) found that clients reported a broad range of treatment outcomes from physical and emotional benefits through to improvements in lifestyle and general health. The results suggest that with regard to treatment outcomes, acupuncture is seen to have a holistic or multidimensional effect. These findings concurred with those from a prior study by Cassidy that explored clients' perceptions of Chinese medical treatment outcomes (Cassidy, 1998a; 1998b). Cassidy found that clients reported a wide spectrum of benefits ranging from physical to psychosocial, providing evidence to support the assertion that acupuncture is holistic with respect to treatment outcomes.

In a comparative year-long study of randomly selected clients receiving treatment from biomedical practitioners or complementary medicine practitioners, it was found that the mean change in wellbeing scores for clients receiving complementary medicine was significantly greater than for clients receiving biomedical treatment (Paterson, 1997). While apparent variations between clients in this study indicates difficulty in being conclusive about the results, the studies by Paterson, Gould and Cassidy appear to indicate that clients receiving complementary therapies experience a significant increase in wellbeing.

These studies provide the clearest evidence in support of the holistic claim of Chinese medicine. Nonetheless, caution in overextending the results is important as the reported holistic outcomes of therapy may not be due to the therapy *per se* but the personalised milieu of the acupuncture therapeutic encounter.

While holism is a key feature of Chinese medical theory, the extent to which the holistic perspective actually influences therapeutic outcomes or informs clinical practice remains unclear.

> While it is true that there are models, concepts and theories within the traditional explanatory models of acupuncture that are 'holistic', it is also true that there are many important and not insignificant examples of models, concepts and theories that are clearly not 'holistic'.
>
> (Birch, 1998a, p.54)

2.2.2   Order and Interdependence

Taoism and Confucianism stand as the two Chinese belief systems that have influenced and shaped the Chinese medical world-view. Both philosophies advance an organic worldview wherein all phenomena are seen to be interrelated and interdependent, yet the Taoist and Confucian perspectives differ substantially in their understandings (Sivin, 1995; Unschuld, 1985; Wang, 1973; Wang, 1999). While both Taoism and Confucianism have shaped the conceptual framework of Chinese medicine, the cognitive tension between the two is a source of contradiction in the theory and practice that guides Chinese medicine.

> Confucianism was the philosophy of social organisation, of common sense and practical knowledge. It provided Chinese society with a system of education and strict conventions of social etiquette. One of its main purposes was to form an ethical basis for the traditional Chinese family

system with its complex structure and its rituals of ancestor worship. Taoism, on the other hand, was concerned primarily with the observation of nature and the discovery of its Way, or Tao. Human happiness, according to the Taoists, is achieved when one follows the natural order, acting spontaneously and trusting one's intuitive knowledge.

(Capra, 1991, p.102)

With regard to Chinese medical practice, Taoist beliefs place primacy upon acting in accord with one's personal experience and understanding of the natural world. From a Taoist perspective, the experience and wisdom of the practitioner is seen to be more important than his or her level of technical knowledge or degree of adherence to theory and practice principles. This view is evident in Hsu's findings concerning Chinese Medical practice in China.

Traditional Chinese medical theory was, unlike the theories of the natural sciences, meant to be related to medical practice not with rigour but with flexibility (linghuo).....doctors called it a dialectical relationship between theory and practice.

(Hsu, 1999, p.162)

In contrast, Confucianism advances an ordered view of the natural world. For Confucians, even the ethereal force of Qi is seen in terms of clearly defined cycles and observed principles, and distinguished in terms of function and location. In consequence, contemporary textbooks discuss Wei Qi (protective Qi), Ying Qi (nourishing Qi) and Zhen Qi (meridian Qi) as entities which the acupuncturist can manipulate through adherence to set procedures to achieve defined clinical outcomes. From this philosophical standpoint, the practitioner's role is one of understanding the client's condition in terms of the preordained order and rectifying any imbalances through the application of prescribed principles and techniques.

The *Nei Jing* understanding of organ physiology is an example of the adaptation of feudal Confucian beliefs to medical theory. The heart is analogous to the emperor, the liver is the military leader, the stomach is the official in charge of the public granaries and so on. Good health is seen to exist when all the 'officials' (i.e. organs) carry out their duties in accord with their assigned hierarchy of roles. Good health results from compliance to a predetermined order that embraces physiological, social and family precepts (Fairbank & Reischauer, 1986; Veith, 1972; Wang, 1997; Zhou & Han, 1997; Zhu, 2001).

Reference to Confucian perspectives and feudally based social analogies are no longer a part of post-Maoist modern Chinese medicine, however the notions of order and structure

remain. The taxonomy has changed but basic physiological and anatomical concepts, and the belief that good health is the result of adherence to a predetermined order, have been maintained. The modern textbooks of Chinese medicine make no attempt to provide an evidential base for the functions ascribed to specific Zang Fu organs, the prescribed relationships between specific Zang and Fu, or the belief that health results from compliance to a preordained order (Long, 1998; Maciocia, 1989; McDonald, 1994; Wiseman & Ellis, 1995).

Students of acupuncture in both China and the West are rarely asked to critique or analyse the basis of such theoretical propositions, but rather to appreciate and memorise the Chinese medical view of anatomy, physiology, pathology and pathogenesis, in order to apply the knowledge correctly in clinical practice. As such the successful study of Chinese medicine in the West is predicated on understanding the philosophies, values and cultural perspectives that have informed Chinese medical theory and practice over the centuries (Ryan, 1995a).

Diagnosis and treatment based on an understanding of pre-assigned patterns of relationship designated by specific signs and symptoms, presents significant difficulties when applied in quite different socio-cultural contexts (Hammer, 2002; Seem, 1992). In Australia, practitioners of Chinese medicine, confronted with a multitude of symptoms and conditions beyond the boundaries of traditional Chinese medical knowledge, can either disregard extraneous information as irrelevant or attempt to interpret it within a Chinese medical perspective (Ryan, 1995b).

The Confucian and Neo-Confucian emphasis on order and systematisation, has served to structure and preserve Chinese medicine in a semi-unified fashion, but it has not been effective in resolving the numerous contradictions between or even within certain theories. The continuing and growing number of contradictions within the body of Chinese medical knowledge, and the lack of any appropriate strategy to resolve these, has created a medical system that lacks internal coherence (Birch, 1998a).

2.2.3   Patterns and Interrelationships

The view that phenomena exist in patterns of interrelationships is found in the early texts of Lao Tzu (500 b.c.e.), Chuang Tzu (300 b.c.e.) and Lieh Tzu (300 c.e.). This cultural perspective is based on an organic view of the world as a living interacting reality (Needham, 1969). The view about interrelationships, evident in Chinese medical literature from the earliest known texts, asserts that all phenomena exist in relationship to each other in identifiable patterns (Veith, 1972; Wang, 1997; Zhou & Han, 1997; Zhu, 2001).

> The phenomena of the visible and invisible world stand in mutual dependence through their association with certain lines of correspondence. The paradigm of correspondences concludes that manipulation of one element in a specific line of correspondence can influence other elements of the same line.
>
> (Unschuld, 1985, p.52)

The framework of correspondences, broader in scope than its application in medical theory, is based on a view of reality in which macrocosmic and microcosmic levels resonate with similar intensities and effects (Porkert & Ullman, 1982). In Chinese medical theory, this perspective underscores the epistemology of the *Wu Xing Xue* system of correspondences. This system, a cornerstone of Chinese medical theory, holds that climate, lifestyle, diet, cosmic cycles and other phenomena have identifiable influences upon an individual's state of health (Kaptchuk, 1986). By understanding the true natural order of things and the patterns of relationship in which phenomena exist, it is asserted that the acupuncturist can effectively diagnose and treat in order to restore balance and health (Watson, 1991)

> This medicine does not separate the gross physical manifestations from those on the mental level. It observes, holds and ponders them together.
>
> (Larre et al., 1986. p.21)

The nature of specific relationships and patterns of interrelationship are specified in the classical texts of Chinese medicine, but no causal argument is advanced to justify the designated relationships between phenomena. The relationships are based on observation and cultural experience, underscored by a type of quasi-synthetic logic of 'likeness' (Ross, 1987). This logic advances the view that phenomena are related if they possess similar qualities or produce similar effects (Larre et al., 1986). Lists of the relationships in tables of 'correspondences' are found in current textbooks for memorisation and application as seen in Maciocia (1989, p.21).

Clients reveal themselves, not in labelled illnesses, but in the context of their whole environment and the array of related phenomena (Ellis & Wiseman, 1985; Larre et al., 1986). As such, the practitioner of Chinese medicine does not undertake diagnosis in order to isolate disease causes, but rather for the purpose of identifying and understanding interrelationships and patterns of disharmony (Long, 1998; Maciocia, 1989; Shima, 1992).

While there are arguable parallels between this diagnostic process and that in Western medicine, they differ to the extent that the Western medical physician endeavours to pinpoint the specific cause of the client's condition through understanding symptoms and indications within a biomedical framework. The biomedical approach, in comparison to Chinese medicine, is perhaps more analytical and reductionist, with a major emphasis on identifying the aetiology of disease. Chinese medicine is less concerned with causative factors and more concerned with identifying and rectifying the imbalance in the patterns of disharmony as they exist within the totality of things (Ross, 1985; Wiseman & Boss, 1990).

The biomedical model, heavily influenced by the dominant contemporary scientific paradigm and Cartesian dualism, achieves understanding through rational deduction, separation, classification, individualisation and quantification.

> In modern science, precision of measurement and conceptualisation is the
> ideal. Traditional Chinese thought, however, has an affinity for vagueness.
> This is due to an appreciation that in nature things are rarely cut and dried,
> but instead are rather blurred.
>
> (O'Connor & Bensky, 1987, p.3)

Acupuncture seeks to understand health issues by viewing trends, patterns and probabilities. Acupuncture contains a knowledge interest of understanding and working with reality, in order to effect change. At the core of Chinese medicine is the belief that one cannot 'control' reality, but only partially influence the outcomes of events (Beinfield & Korngold, 1991). A consequence of Chinese medical logic is that diagnosis made on the basis of associations, relationships and patterns, is clearly less precise than the biomedical rational deductive approach.

In Chinese medicine, the variations in diagnosis and treatment are justified on the basis that treatment is 'individualised' or 'personalised', yet it would appear that the delivery of medical care in the hospitals of China is anything but 'personalised' (Shao, 1999). The importance of individualised treatment appears to be a greater priority in the West, in possible reaction to a substantially institutionalised and depersonalised health care system.

The Chinese medical system of correspondences and the related Wu Xing theory have been discussed as examples of theoretical constructs that view phenomena though patterns and relationships. Other major medical theories such as the *Qi jing ba mai kao* and *Liu jing bian zheng* also rely upon the logic of pattern identification.

2.2.4 Balance and movement

The notion of balance through movement is encapsulated in the concept of Yin-Yang that predates early acupuncture texts as well as Taoist and Confucian philosophies. The concept was first recorded in 1000 b.c.e. in ancient folk songs *(Shih-ching)*. Yin represents the energy associated with cold, night and winter, while Yang represents the energy of heat, day and summer (Larre et al., 1986). In the *I Ching* (Book of Changes) from 700 b.c.e., Yin was symbolically represented as a broken line and Yang as an unbroken line with the various combinations of Yin and Yang lines being the basis for the sixty-four trigrams used in divination and prediction.

In the Chinese lexicon, the Yin-Yang idiograms represent the shady *(Yin)* and bright *(Yang)* sides of the hill (Liu & Liu, 1980). As the sun moves from east to west the yin/shady side of the hill becomes the yang/bright side and the yang/bright side becomes the yin/shady side. This analogy depicts Yin and Yang as opposites in constant interplay, evolving from one into the other (Wilhelm, 1990). The concept is similar to the notion of opposites proposed by the ancient Greek philosopher Heraclitus, but differs to the Heraclitian view in which opposites are depicted as static entities that do not exist in dynamic inter-evolution.

The Yin-Yang concept proposes that the interplay between the dialectically opposed forces in all phenomena is at the same time the basis for balance as well as change. This position is different to the Cartesian view which proposes that different entities exist in some state of static division. For Descartes, the emphasis was upon the division between spirit and matter or mind and body, rather than the relationship that might exist between separate entities. The Yin-Yang concept proposes that Yin and Yang are simply varied manifestations of the one same complex reality that exist in a dynamic of change and interplay. The process is always dynamic; the opposites are always interdependent (Kaptchuk, 1986).

The Yin-Yang concept advances a view of health that is essentially based on the notions of balance and movement. Balance is not seen as a static state, nor is movement seen as chaos. Health is seen to exist in and result from the movement of Yin and Yang, with peaks and falls throughout the day. The degree to which one parameter can rise or fall is dependent upon the force of the other to provide balance. For example, in a state of good health, body temperature, blood pressure, heart rate, speed of respiration and so on will rise and fall within certain parameters in accord with one's physical activity. The boundaries of the variations are set by the respective strength of Yin and Yang as they regulate each other. From this perspective illness is defined as imbalance resulting from the relative strength or weakness of Yin or Yang (Watson, 1991)

Movement in phenomena is attributed to the all embracing force of Qi, often translated as 'energy' although the notion of energy does not capture the full meaning of the term (Zipf, 2002). In Chinese medicine, Qi is said to flow through the organs and meridians in cycles which resonate with seasonal and daily cycles (Sivin, 1987). While Qi is seen as the vital force of movement and change, and in this sense is similar to the notion of energy, Qi is also the purported substratum of matter (Kaptchuk, 1986).

By perceiving phenomena as 'in process' due to the constant movement of Qi and interaction of Yin and Yang at the macrocosmic and microcosmic levels, Chinese medicine views health as something one can influence but never totally control (Watson, 1995). Chinese medicine does not perceive good health as a static state that one maintains, but rather as balance that results from continuous interactions, variations and movements. The theory proposes that good health is not a stable state, but a state of change within a holistic reality. This view stands in contrast to a view of health as a state of perfection or the minimalist view of health as the absence of disease.

The notion of health as balance is a commonly stated view in Chinese medicine textbooks (Kaptchuk, 1986; Maciocia, 1989; Ross, 1987; Wiseman & Ellis, 1995). This notion of health has also been adopted by Vincent and Richardson (1986) as a referent for defining traditional acupuncture practice in clinical trial research.

2.2.5   Summary – Espoused Theory

This section has provided an overview of the key conceptual positions that underlie Chinese medical theory. It was shown that Chinese medical perspectives are grounded in philosophical and cultural beliefs, rather than empirical evidence-based knowledge. This section has focussed upon identifying the beliefs that purportedly shape acupuncture practice while at the same time acknowledging that there may be a difference between espoused beliefs and the realities of clinical practice.

In essence the Chinese medical perspective asserts that:
- all phenomena exist in a holistic reality of interrelationship and interdependence;
- the particular patterns of relationship within and between phenomena produce states of order/balance or disorder/imbalance;
- the espoused theory informs, shapes and guides clinical practice;
- health is situated within a holistic perspective, seen as the unity of body, mind and spirit;
- health is the result of balance between forces, rather than a static state that is achieved and maintained;

- in the diagnostic process, the practitioner takes into account all factors that influence health and illness in clinical decision-making and treatment; and

- treatment is individualised and personalised because it is tailored to the unique characteristics of the client's condition.

However the degree to which espoused theory actually influences clinical practice is unclear. It is arguable that in countries such as Australia where the espoused theory is not supported within a broader Chinese socio-cultural belief system, practitioners might modify their style of practice in accord with their own socio-cultural beliefs, client expectations or other factors. It was also shown that there were variations and apparent contradictions within the body of Chinese medical beliefs that possibly contribute to variations in clinical practice. In the latter part of this chapter it is argued that variations in styles of practice will also lead to variations in learning needs.

2.2.6   The role of espoused theory in practice

Chinese medicine has developed on the premise that the early medical writings were valid and authoritative, and as such there was no need to re-examine the concepts, theories and assumptions they advanced. To this day these classical texts continue as the foundation for Chinese medicine in formal curriculum, textbooks and discourse about theory and practice.

> They act as beacons, representing high points of knowledge and so guide understanding. They thereby chart the history of traditional Chinese medicine's growth and development as a medicine.
>
> (Davis, 1991, p.26)

Throughout the two thousand years of recorded Chinese medical history, the concepts and theories advanced in the ancient texts of the tradition have rarely been questioned or critiqued by the proponents of Chinese medicine. Arguably, some of the early advice about health and disease prevention can be seen simply as a matter of common sense. However, the major focus in these texts is that of providing theoretical constructs for diagnosis and treatment. The meridian system, the location of acupuncture points and the functional relationships assigned to Zang Fu organs are all examples of fundamental concepts based in views about reality that are unproven and possibly unprovable. Yet within Chinese medicine the lack of conclusive empirical evidence as a basis for theory does not appear to be problematic, because returning to the past is seen as the point of departure for moving forward (Larre et al., 1986).

The body of Chinese medical knowledge has grown, not by refining and rationalising theory within a singular perspective but by incorporating new insights both from inside and outside of the tradition (Kaptchuk, 1987). Debate within the tradition is evident between the four great schools in Chinese medical history, but such debate is concerned with differing views about 'best practice' rather than theoretical refinement.

> Debates in Chinese medicine therefore are not concerned with the truth of a
> method but its efficacy.
>
> (Scheid & Bensky, 1998, p.37)

In the scientific paradigm of the West, the most recent publications are considered to be the most accurate and reliable. However in Chinese medicine, while new developments continue to be incorporated into the tradition, the ancient knowledge of the classics is accorded primacy in guiding theory and practice. Thus it can be said that each new development in Chinese medicine has:

> Stepped off not from the last before it, but from the canons that, in the
> charter of the myths of medicine, must be the source of every innovation.
>
> (Sivin, 1987, p.24)

Chinese medical education and practice in China continues to utilise the classical texts as the primary referents for theoretical validity (Farquhar, 1986; Hsu, 1999). Similarly, Western authors of acupuncture textbooks and journal articles selectively quote from the classics to support and justify the positions they advance (Maciocia, 1989; Rossi, 2000; Scheid & Bensky, 1998). A serious concern with such reliance upon tradition for authentication is that traditional knowledge is elevated to a level of belief and placed beyond the realm of critique (Vickers, 1998).

Perhaps as a reaction to modern technological medicine, many forms of complementary medicine claim to be ancient or traditional (Campbell, 1998). While it is clear that acupuncture, with its roots in classical theories and ancient texts, should be classified as a form of traditional medicine, some of its practices that have originated from biomedical and scientific sources which are far from traditional (Andrews, 1996; Scheid & Bensky, 1998).

By defining practice as the application of ancient traditional beliefs, Chinese medicine is likened to a cultural artefact that can be simply transported and practised without being reconstituted within the socio-cultural setting of the client and practitioner. The reliance upon tradition assumes the validity of all knowledge that lies within the tradition and

fosters the belief that effective treatment outcomes are dependent entirely upon the precise understanding and replication of the tradition.

A quite different conception of knowledge in the tradition is advanced by Macan (2001), Romano (1992), Ryan (1995b) and Seem (1992) who argue the need to situate knowledge within the socio-cultural context of practice. Instead of viewing the tradition as a source of factual knowledge, these authors view the body of knowledge as essentially culture-bound. In support of this perspective, these authors point to the diversity of theory and practice within the history of acupuncture and the lack of theoretical coherence (Birch, 1998a; Unschuld, 1985). They point to the successful adaptation of Chinese medicine in other Asian cultures and the need for contextual relevance in the delivery of health care services. They also argue that a refusal to adapt the tradition to local health needs will marginalise Chinese medicine in the West to being a quaint cultural icon.

Clearly, within Chinese medical discourse there is no one agreed view concerning the role of the traditional body of medical knowledge in clinical practice. For some it appears that traditional knowledge or espoused theory is viewed as a source of factual information that is applied in traditional designated ways in order to achieve desired therapeutic outcomes. For others, the espoused theory and traditional knowledge is seen as informing practice but not determining it. At this end of the spectrum, Chinese medical knowledge is seen as culture-bound and needing to be situated in clinical practice to achieve relevance, meaning and therapeutical efficacy.

2.3   Acupuncture practice

2.3.1   Conceptions of acupuncture practice

Differences based on traditional modes of practice in China

In the debate between Flaws (1991) and Deadman (1992) concerning acupuncture education in the West both authors advance the view that education must be tailored to the nature of practice. The propositional link between one's conception of practice and what one needs to learn is supported in phenomenographic literature that posits a link between conceptions and actions (Crawford et al., 1994; Prosser et al., 1994a; Marton & Booth, 1997b).

With regard to the history of acupuncture in China, there are clearly two major models of practice, with the majority of practitioners adopting a formula style of acupuncture known as *zhou fang yi* (Needham & Lu, 1986). The formula approach, referred to in current literature as *Fang Shi,* utilised the four methods of diagnosis (*Si Zhen*) and eight

principles (*Ba Gang*), but not the more convoluted theories of Chinese medicine. The *Ru Yi* practitioners, on the other hand, drew upon a wider spectrum of knowledge and skills, and belonged to the small literate section of society (Flaws, 1991). Influenced by the Confucian concern for detail, logic and principles, the *Ru Yi* became the scholars and master practitioners of Chinese medicine (Unschuld, 1985).

In post 1949 China a similar two-tier system of practice has developed. The 'Barefoot Doctors Program', introduced by Mao as a means of providing health care in an under-resourced country, created a group of acupuncturists who, with limited skills in *Si Zhen* and *Ba Gang*, relied substantially upon formula prescriptions for the treatment of disease (Porket & Ullman, 1982). The Barefoot Doctors style of practice stands in clear contrast to the *modus operandi* of graduates from universities and colleges of Chinese medicine in modern times.

While Flaws (1991) argues that acupuncture education and practice in the West should be limited to a *Fang Shi* formula approach, and Deadman (1992) argues for a more comprehensive *Ru Yi* model, the debate is quite restrictive as both assume that ancient models of acupuncture practice are relevant options for current practice in contemporary western contexts and the only options worthy of discussion.

Differences based on theories of diagnosis and treatment

In the West, acupuncture practice is often defined and categorised with respect to the major theory or school of thought that individual practitioners adopt (Eckman, 1997). Practice is defined as Japanese as opposed to Chinese (Shima, 1992), Wu Xing in distinction to Zang Fu (Worsley, 1982), meridian acupuncture in distinction to Zang Fu acupuncture (Pirog, 1996). Defining practice in terms of the major theories utilised for diagnosis and treatment, provides some insight into how different practitioners conceptualise aetiology, pathology and health, but does not provide insight into the differences in practitioners' experience of practice which is the essential focus of this study and of phenomenographic research more generally (Marton & Ramsden, 1988a; Marton & Booth, 1997b).

Classification of practitioners on the basis of their preferred theories, be those Wu Xing, Zang Fu or some other perspective, does not in itself shed light upon practitioners' beliefs about the nature of the therapeutic encounter or the strategies they employ in achieving intended therapeutic outcomes. It is similarly limiting to attempt to understand variations in acupuncture practice on the basis of distinctions found in the four major schools of practice as these schools differentiate practice on the basis of Chinese medical theories that relate to diagnosis and treatment, not practitioners' experience of clinical practice.

Differences based on espoused theory generated analogies

Beinfield and Korngold (1991) and Kaptchuk (1986) draw upon the espoused theory of Chinese medicine to provide analogous perspectives about clinical practice. Beinfield and Korngold assert that biomedical practitioners, influenced by Cartesian dualism and Newtonian mechanism, are akin to mechanics in their approach to diagnosis and the treatment of disease. By characterising the body as a machine and illness as a dysfunction of the machine, the role of the biomedical practitioner is seen as one of understanding what is wrong with the client and fixing it. While this conception may represent the practice style of some doctors or some situations, it disregards the diversity of practice in biomedicine. Moreover, labelling the 'mechanic model' as representative of biomedical practice in contrast to Chinese medicine, implies that Chinese medical practitioners are never reductionist, symptomatic or mechanistic.

For Beinfield and Korngold (1991), the ideal of Chinese medical practice is analogous to that of a gardener. The practitioner is described as one who nurtures, supports and works together with the client to effect change. Such an idealised perspective overlooks the fact that in the treatment of acute disorders and many musculo-skeletal conditions, acupuncture treatment is quite reductionist and focussed more on symptom relief than the client as a whole.

Similarly problematic is the 'artist' analogy of Chinese medical practice advanced by Beinfield, Korngold and Kaptchuk. Drawing again upon concepts in the espoused theory, practitioners are depicted as artists who work with Qi to creatively re-establish balance and restore health. As with the gardener analogy, this view is an idealised position descriptive only of a practice style in certain clinical encounters.

Differences based on notions about the tradition of Chinese medicine

In section 2.2.6 it was shown that in Chinese medical discourse there is no one agreed view concerning the role of the traditional body of medical knowledge in clinical practice. For some practitioners it appears that traditional knowledge or espoused theory is viewed as a compilation of factual information, applied in practice in traditionally designated ways in order to achieve positive therapeutic outcomes. For other practitioners, the espoused theory and traditional knowledge is seen as important to informing practice but not determining it.

These different conceptions about knowledge in contemporary clinical practice give rise to qualitatively different models of practice and provide some insight into practitioners' experience and beliefs about clinical practice. It is also significant that from this perspective there is a proposed link between conceptions of knowledge and styles of practice. If traditional knowledge is seen as factual then good practice is the correct application of the knowledge and learning is concerned with the acquisition of factual knowledge. On the other hand, if traditional knowledge is seen as valuable information that informs practice but does not determine it, then good practice is concerned with the thoughtful accommodation of knowledge and learning is focussed on understanding culture-bound knowledge.

In exploring the nature of acupuncture clinical practice in the United Kingdom, Desser et al. (1998), point to the importance of understanding practice from practitioners' experience. A similar view is advanced by Yoshida (1998) in exploring medical practitioners' experience of using acupuncture in clinical practice. These studies, while different to this PhD undertaking, signal the importance of investigating and understanding practice from practitioners' experience rather than through analogies, historical models of practice, or the Chinese medical theories which practitioners employ in practice.

2.3.2   Conceptions of professional practice

Beginning in the 1980s, practitioners in various disciplines moved to defining themselves as 'professionals' in terms of their identity and area of expertise. In Australia, associations representing acupuncturists were quick to define acupuncture as a profession and to establish codes of professional ethics, frameworks of self-regulation and standards of training. In this regard the professionalisation of acupuncture in Australia has paralleled trends in the United States (Baer, Jen & Tanassi, 1998). Through establishing their professional identity, acupuncturists also enhanced their social standing and the acceptance of their services as rebate items by private health insurers. Further social acceptance has resulted from the establishment of acupuncture education in universities, reinforcing the view of acupuncture as a profession rather than a technical trade.

To this researcher's knowledge no study has been previously undertaken into the nature of acupuncture practice in Australia or elsewhere in the West. In view of the lack of research in this area this study draws upon the work of Argyris and Schön (1974) to inform the discussion of acupuncture professional practice. In Schön's discourse (Schön, 1983, 1988) three distinct models of professional practice are identified - the craft person, the technical expert and the reflective practitioner.

The notion of the professional 'craft person' is one in which primacy is accorded to knowledge and skills that arise from practice experience. Theory is seen as secondary to practical knowledge and the experience of those who have mastered the craft is highly valued (Higgs & Edwards, 1999b). In achieving mastery, apprenticeship or mentorship are the preferred approaches to learning, yet such approaches to learning in health sciences are not without limitations.

> At its best, this model offered individual tuition, direct demonstration and supervision at the hands of an expert role model. At worst, this process incorporated poor role models, limited quality control, limited knowledge of the field and lack of foundation in relevant biomedical, clinical and human sciences.
>
> (Higgs & Edwards, 1999b, p.11)

With regard to Chinese medicine, the 'craft' model of learning and practice was the educational norm in China up to recent times and is still evident in discourse that places a higher value on personal insight derived from master acupuncturists than the broadly accepted body of knowledge recorded in textbooks. Hsu (1999) describes knowledge that arises from this approach as 'secret knowing', which may contain valuable insights but by definition places itself beyond the bounds of critique and evaluation. The traditional apprenticeship approach to training with its priority upon subjective knowledge and its tendency to foster diverse or contradictory views is problematic for most disciplines (Kailin, 1983).

In Australia, where acupuncture education has been formalised for the past decade either within the university system or government accredited private college programs, the craft model with its apprenticeship approach to training has become more or less obsolete. However, the craft model belief in the primacy of knowledge gained from expert masters or personal experience is still evident in Chinese medical discourse (Freeland, 2002; Zipf, 2002).

A quite different view of practice, and the type of knowledge that supports practice, is advanced in the 'technical expert' notion of professional practice (Fish, 1995). In this perspective, technical knowledge and skills are accorded primacy in practice above practical craft knowledge. Knowledge is viewed as a body of theories and facts that can be rationally applied in practice to produce effective therapeutic outcomes. Learning that supports this notion of practice focuses on the acquisition of knowledge/skills for application in practice. Moreover, this view of professional practice lends itself to competency-based education in which knowledge and skills are measurable milestones in a structured curriculum.

For the 'technical expert', practice is a matter of applying knowledge and solving problems in accord with prescribed principles and procedures. Practice is problem-focussed rather than client-centred, with the power and responsibility for solving problems resting squarely in the hands of the expert practitioner. This general view of practice can be problematic when it overemphasises certain knowledge to the exclusion of other possibilities or when practitioners are confronted with new challenges that lie beyond the bounds of the defined body of knowledge (Whelan, 1988).

Evidence of the 'technical expert' notion of practice was found in practitioner responses to a survey of perceived professional development needs that ranked 'knowledge/skill acquisition' as a priority (Ryan, 1996c). This model of practice has been critiqued as problematic for Chinese medical practice as it tends to overlook or disregard the beliefs that underpin Chinese medicine (Fish, 1995; Moir, 1995). However, the reconstructed version of Chinese medicine dominant in contemporary China seems to promote a technical-rational view of practice as does the textbook approach to syndrome identification and treatment (Long, 1998; Maciocia, 1989; McDonald, 1994; Ross, 1987; Wiseman & Ellis, 1995).

A third conception of practice, advanced by Schön (1983) as the ideal of professional practice, is the reflective practitioner model. This model arose out of concern about the gap between research based knowledge, theoretical knowledge and practical work-based knowledge in professional practice. The reflective practitioner is seen as one who can draw upon all forms of knowledge in workplace problem solving, to reach appropriate solutions to context dependent problems. For the reflective practitioner, there is no one right answer to a problem, however within a specific context certain solutions are seen to be more appropriate than others.

Drawing upon a systems theory perspective, Schön describes the reflective practitioner as acting in a double feedback loop of action, reflection and learning. In this notion of practice, defined theories and systematic knowledge are seen as informing practice but not determining the actions of the professional. In a rapidly changing world, the reflective practitioner recognises that the body of theory and systematised knowledge pertaining to a discipline area is likely to be incomplete or not totally relevant to the situation at hand. As such it is incumbent on the practitioner to create solutions rather than transplant solutions from different contexts in the hope that these are effective.

The professional development of the reflective practitioner emphasises learning from reflection on experience (reflective knowledge) rather than simply learning from doing (practical knowledge). Learning from experience involves observing, reflecting and testing in a cyclical dynamic that enhances the quality of practice. Client perspectives and the

practitioner-client interaction are seen as important in the ongoing learning of the reflective practitioner.

In the area of Chinese medicine, aspects of the reflective practice model are evident amongst those acupuncturists who emphasise the need to adapt and accommodate acupuncture in the West (Ryan, 1995b; Scheid & Bensky, 2000). In contrast to the technical-rational perspective, knowledge in the reflective practitioner model is not seen as factual, but as temporary, context-bound and dynamic. As such the reflective-practice model would appear to be the most appropriate model for handling the complexities of acupuncture practice in the West (Fish, 1995; Moir, 1995), although because Schön's reflective-practice model is grounded in Western values of professional practice it may need to be adapted to accommodate the peculiarly Eastern perspective of acupuncture.

In discussing models of acupuncture education, Fish (1995) and Zaslawski (1995c) propose that Schön's model of reflective practice is most suited to clinical problem solving because unlike the technical-rational approach this perspective provides the professional with a way of handling knowledge in situations that are new and unfamiliar. However, the extent to which the reflective practice model exists in acupuncture practice or the extent to which formalised clinical training promotes such a model amongst beginner practitioners remains un-researched until now.

2.3.3   Phenomenographic perspectives on professional practice

The phenomenographic orientation has been chosen for this study on the basis of 'goodness of fit' with the research topic, focus and specific aims as detailed in chapters one and three of this study. The orientation was also selected on the basis of its congruence with the orientation of Chinese medicine which adopts an anti-positivist and interpretative view of phenomena. In the first section of this chapter it was shown that the espoused theory of Chinese medicine adopted a view of reality that was situational and relational rather than factual.

With regard to professional practice, Thompson's (1998) phenomenographic study of professional competence in teaching provides insight into a phenomenographic view of professional practice and showed that notions of competence are related to views about professional practice. Similarly, a phenomenographic study of new nurse graduates' understanding of competence, found that a close relationship existed between nurse conceptions of competence and their notions of practice (Ramritu & Barnard, 2001). In both studies the researcher's concern was not primarily with the phenomenon being investigated, nor the individuals involved, but the range of experiences or relationships to

the phenomenon across a group of people. These studies reassert that the focus of phenomenographic research is not upon positing facts, nor defining objects of study, but exploring the relationships people have with certain phenomena (Svensson, 1997b).

The link between conceptions of competence and the type of learning that supports the different notions of competence has also been explored by Sandberg (1991). In Sandberg's study of competence amongst engine optimisers in a car manufacturing plant, he reasoned that conceptions precede actions because:

> If we have not made a phenomenon intelligible, then we are not able either
> to know anything about it or skilfully master it.
>
> (Sandberg, 1991, p.4)

Of particular import to this study of beginner acupuncture clinicians' conceptions of practice and learning, is Sandberg's finding that different conceptions of competence were supported by different notions of problem solving and ways of handling knowledge in practice.

In a study of medical students' conceptions of professional practice Dall'Alba (1995) identified six conceptions of medical practice differentiated on the basis of beliefs about the purpose of clinical practice. These conceptions, with possible parallels to acupuncturists' conceptions of practice, were identified as:

- helping or saving someone who is sick or injured;
- diagnosing or treating patients using the required sequence of procedures;
- locating the problem and informing the patient;
- while diagnosing and treating, interacting with the patient in a supportive way;
- seeking a way forward together with the patient; and
- enabling the patient to better deal with his or her life situation.

(Dall'Alba, 1995)

The Dall'Alba study also illustrated that differences in conceptions of medical practice were based on variations in intentions and beliefs, not variations in biomedical theory. A more recent study by the same author concluded that medical education needed to pay more attention to exploring and expanding students' understanding of medical practice (Dall'Alba, 2002).

In a study of teachers' experiences in undergraduate teaching across three Australian universities Dall'Alba (1992) observed that variations in conceptual views about the nature of professional practice existed not only between disciplines but also within disciplines. Dall'Alba concluded that there is a need for teachers to understand the range

of student conceptions about a discipline area because of the dynamic relationship between student conceptions of a discipline, student prioritisation of course content and student approaches to learning.

In a study of business students' conceptions of business law and their approaches to learning, Murphy (1998) showed that variations in student conceptions about their discipline were accompanied by varied approaches to learning business law. Similarly, Tempone (2001) found that variations in accounting students' conceptions of financial statements led students to seek different types of knowledge.

Defining conceptions of practice on the basis of intentionality (Sandberg, 1991), these studies across different fields of professional practice affirm the phenomenographic assertion of a relationship between conceptions of a discipline and the 'how' and 'what' of learning (Lybeck, 1988; Marton & Booth, 1997b). These studies assert that from a phenomenographic perspective, conceptions of professional practice are always context dependent and open to variation. Across many areas of learning, phenomenographic studies have shown the importance of understanding the relationship between conceptions and actions (Dall'Alba, 1995; Dall'Alba, 2002; Murphy, 1998; Prosser & Martin, 2002; Ramritu & Barnard, 2001; Samuelowicz, 1999; Sandberg, 1991; Tempone, 2001; Thompson, 1998). With regard to acupuncture the phenomenographic perspective signals the need to explore practitioners' conceptions of practice/learning and the relationships between these as a step in re-thinking acupuncture education with respect to practice.

2.4   Acupuncture learning

2.4.1   Conceptions of learning

The main focus of phenomenographic research has been upon identifying and mapping student and teacher conceptions of learning (Beaty, 1990; Bowden, 2000b; Crawford et al., 1994; Gerber et al., 1994; Keogh et al., 1994; Marton & Booth, 1997b; Prosser et al., 1994a). The early work of Marton and Säljö established that there were variations in students' conceptions of learning tasks and that these conceptions resided in a hierarchical relationship from simple to complex (Säljö, 1975). Simple conceptions of learning and simple learning tasks were not seen as divorced from more complex ones, but subsumed within complex ones. The basic learning task of memorisation was seen as necessary for undertaking the more complex task of abstracting meaning, yet within the hierarchy of learning conceptions, simple tasks were seen as fragmented and complex ones as more cohesive (Marton, 1981).

From an early study on group conceptions of learning, Säljö (1975) identified five qualitatively different positions:

1.   Learning as acquiring information.

2.   Learning as memorising information.

3.   Learning as acquiring skills and knowledge for application or use.

4.   Learning as making sense of and giving meaning to the subject being studied.

5.   Learning as understanding phenomena in a different way.

Subsequent phenomenographic studies in various discipline areas have identified similar, although not totally identical, conceptions of learning (Beaty et al., 1990; Bruce et al., 1994b; Eizenberg, 1988; Ekulnd-Myrskog, 1997; Keogh et al., 1994; Marton & Booth, 1997b; Pietroni, 1995). These studies agree upon the lower order range of conceptions wherein learning is seen as acquiring, reproducing and utilising knowledge/skills, but differ in their findings about higher order conceptions.

In a study of the combined learning conceptions across a group of students and teachers, Keogh (1994) identified 'personal development' and 'reality re-construction' as higher order conceptions of learning, not included in Säljö's list. Similarly, another study identified 'changing as a person' as a discernable higher order conception (Beaty, Dall'Alba & Marton, 1990) and other studies have identified 'changing personal attitudes, beliefs, or behaviour' as a higher order conception of student learning (Bruce & Gerber, 1994b).

Phenomenography takes the epistemological position that the world is multifaceted and open to various interpretations that are dependent upon one's conceptual filter (Säljö, 1988; Marton & Booth, 1997b). In identifying conceptions of learning, the aim of phenomenography is not to classify individuals as expressing particular conceptions, because it is understood that individuals function within different conceptions in different contexts (Svensson, 1994). People's conceptions of phenomena are not seen as objectified statements about phenomena, but rather as descriptions of people's relationship to phenomena (Marton, 1988b).

In parallel with the perspective of Piaget (1973), phenomenography is oriented towards understanding how people construe significant phenomena, but phenomenography diverges from Piaget's position in that it does not view the meaning people attribute to their experience of reality as necessarily linked to stages of personal development. Phenomenography is not psychological in focus, but educational and relational (Marton, 1994b).

The value in phenomenography lies in its ability to identify, in a structured way, the range of conceptions within a group and the relationships between these conceptions (Trigwell, 2000). In an educational context, such understanding enables teachers and students to examine the implications and appropriateness of specific approaches to learning with respect to personal and curriculum aims. Therefore, phenomenography is a tool for educational development and pedagogical change, rather than simply an approach to educational analysis (Bowden, 1990a; Marton & Booth, 1997b).

By identifying students' conceptions of the learning process, phenomenography provides a base from which teachers can reflect upon and change their practices to ones which are more 'student centred' and 'student aware'. Phenomenography acknowledges that an individual's conceptions are always open to change (Dall'Alba, 1992) and provides teachers with a way of identifying student conceptions of learning in order to move beyond superficial perspectives to ones that focus upon developing meaning and understanding (Booth, 1997).

Phenomenographers believe that improving student learning is not primarily a matter of better student learning skills or improved teaching abilities, but one of challenging the beliefs which students and teachers hold about their discipline and approaches to learning it (Marton & Ramsden, 1988a; Marton & Booth, 1997b). In other words, simply changing learning tasks or improving teaching skills do not necessarily lead students to develop greater understanding or provide students with a process for effective lifelong learning.

2.4.2   Approaches to learning

Students' conceptions of learning give rise to different approaches to learning (Marton et al., 1997a). In phenomenography, the approach to learning is seen in terms of 'how learners go about learning' consequential to their conception of the learning task or discipline being studied. In a study of mathematics students' approaches to learning, Crawford et al. (1994) identified different approaches to learning based upon conceptions of the subject. Crawford et al. subsequently classified the five approaches to learning mathematics as either 'surface' or 'deep' in accord with Marton and Säljö's distinction (Marton et al., 1997a). Surface approaches were seen to be focussed upon content acquisition for the purpose of reproduction and use, while deep approaches focussed upon meaning and understanding.

An additional distinction of 'atomistic – holistic' is also made in relation to how students go about their learning task (Eisenberg, 1988; Ramsden et al., 1989; Svensson et al., 1988).

An atomistic perspective is one in which the learner segments the whole and focuses on the individual parts of a specific problem, separate to the whole, in a somewhat reductionist approach to learning. A holistic perspective is one in which the learner focuses on the whole and individual parts in relation to the whole, in a somewhat global approach to learning.

Crawford et al. (1994) found parallels between respective surface – deep approaches and atomistic - holistic perspectives. In their study, surface approaches to learning were seen to be accompanied by an atomistic view of the phenomenon because students approached learning in a fragmented manner, separating the phenomenon into clear departments for memorisation, acquisition and application. On the other hand, in deep approaches to learning where the learning intent was that of understanding, students generated meaning in relation to the whole body of knowledge. Phenomenographic studies have also confirmed that lower order learning conceptions satisfied external demands (e.g. task completion) and higher order conceptions of learning satisfied internal demands (e.g. the development of personal meaning) (Entwistle & Ramsden, 1983; Prosser et al., 1994a).

In applying the surface-deep distinction to Chinese medicine, Rogers (1998) and Zaslawski (1996a) have argued the necessity for acupuncture students in the West to develop deep approaches to learning in order to understand and practice acupuncture. With reference to the work of Higgs (1992), Rogers provides the following summary characteristics and distinctions between surface and deep approaches to learning, suggesting the latter as best suited to acupuncture learning.

Surface Approach	Deep Approach
• Intention to complete task requirements	• Intention to understand
• Treating tasks as external impositions	• Vigorous interaction with content
• Unreflective about purpose or strategies	• Relating new ideas to previous knowledge
• Focus on discrete elements without integration	• Relating concepts to everyday experience
• Failure to distinguish principles from examples	• Relating evidence to conclusions
• Memorising information needed for assessments	• Examining the logic of the argument

(Rogers, 1998)

With regard to approaches to learning, Entwistle and Ramsden (1983) have also observed that beginner students who had minimal prior knowledge of the subject being studied tended to adopt more surface approaches to learning, while those with prior knowledge were more likely to adopt deeper approaches. While this finding indicates the need for basic knowledge as a foundation for understanding, it also raises questions about the role of the formal curriculum with respect to:

- whether students' conceptions of learning a product of the formal curriculum;
- whether the formal curriculum challenges students in their conceptions of the discipline and ways of learning it; and
- whether the formal curriculum assists students in developing ways of learning that will support lifelong professional learning.

These questions are of particular importance to acupuncture education in Australia where a content focussed curriculum apparently reinforces content focussed conceptions of knowledge and surface approaches to learning. It is also likely that the priorities in the external curriculum demands such as passing exams and other assessment tasks have a significant influence upon shaping student approaches to learning (Entwistle & Ramsden, 1983; Prosser et al., 1994a).

The complexity of educational change, from a phenomenographic perspective, is not simply a matter of changing curriculum or imploring students to adopt deep approaches to learning, but firstly a matter of identifying student and teacher conceptions about the discipline area, about learning and about the accompanying approaches to learning implied in these conceptions (Marton & Booth, 1997b; Marton & Ramsden, 1988a; Trigwell & Prosser, 1997). Therefore, phenomenographers view the educator's role in higher education as one of enabling students to enter a field of practice by enriching their experience and understanding of practice in that field (Dall'Alba & Sandberg, 1996).

2.4.3 The relationship between conceptions of practice and learning

In focussing upon the interrelationship between conceptions and learning, the phenomenographic perspective asserts that what one learns and how one applies what is learnt is premised both upon how one conceptualises the discipline or learning task and how one goes about learning (Lybeck, 1988; Marton & Booth, 1997b). In exploring this relationship between conceptions and actions, early phenomenographic studies focussed almost entirely upon variations in students' conceptions of particular tasks and their actions/learning in relation to those specified tasks, while more recent studies have also explored variations in conceptions of whole subjects or discipline areas and the relationship between these and actions/learning (Waterhouse & Prosser, 2000).

Entwistle and Ramsden (1983) concur with the findings of Perry (1970) that students develop deeper ways of understanding and thinking about a subject as they become more familiar with it. As such, 'good teaching' should focus on extending students' conceptions of a task or discipline and their approaches to learning it (Entwistle et al., 2000; Marton & Ramsden, 1988a; Marton & Booth, 1997b). Entwistle et al. (2000) assert that if teachers conceptualise their role as one of conveying information and subscribe to a course structure that is content laden with assessment focussed upon the reproduction of memorised information, then students are likely to subscribe to surface approaches to learning.

Eizenberg (1988), in a phenomenographic investigation of preclinical medical students' experience of anatomy studies, found that there was a tendency for surface approaches to learning in the group due to the large volume of factual information which students' were expected to learn. Furthermore, teaching which is orientated toward content memorisation tends to be teacher-centred and student directing, while pedagogies that focus students upon thinking about the subject are learning orientated and student centred (Entwistle et al., 2000; Samuelowicz, 1999). It appears that the pedagogy of the latter approach is more appropriate in developing understanding and supporting the reflective practice model of professional work advanced by Schön (1983; 1988).

However, the curriculum guidelines of the Chinese Medicine Registration Board of Victoria present a view of education focussed upon the acquisition of knowledge and skills as the basis of practitioner competence (CMRB, 2002). A similar, yet less prescriptive educational perspective, appears in the content/skills focus in the 'Australian guidelines for traditional Chinese medicine education' (NASC, 2001). Both documents promote the view, albeit unintentionally, that 'best practice' is largely synonymous with a high level of technical expertise.

Yet the content focussed technical expert model of professional practice, which does little to equip practitioners with processes for coping with practice situations that lie outside the realm of the defined body of knowledge/skills, is problematic in a world characterised by change (Jones & Joss, 1995). In training students for contemporary practice and change, professional entry programs in universities must go beyond the scope of professional competencies required for clinical practice today and provide students with processes for handling unexpected clinical complexities (Higgs & Edwards, 1999b).

2.4.4   Learning acupuncture in the West

In Ryan's (1995a) study of acupuncture education, it was found that the curriculum at the UTS College of Acupuncture was content focussed with similarities to the Tyler (1949) and Schwab (1983) notions of curriculum that emphasise instructional outcomes rather than instructional processes. Students viewed the formal curriculum as stilted and narrow in focus with an inordinate emphasis on memorising detailed information, especially biomedical in biomedical subjects, to pass exams. The study found that students often resorted to other activities not specified in the formal curriculum to develop their understanding of the acupuncture paradigm. These extra curricular activities included the practices of Tai Chi and Qi Gong, familiarisation with Chinese culture, reflective reading and informal interactions with practitioners of Chinese medicine. In contrast to the formal curriculum, which placed a high emphasis upon learning as the acquisition of knowledge to pass exams, participants placed high importance upon learning through observation, practice and reflection.

Discourse concerning acupuncture education in the West (Deadman, 1992; Flaws, 1991; Shima, 1992) has focussed primarily upon issues of curriculum content rather than student learning. Flaws (1992a) has proposed the re-introduction of the apprenticeship model for acupuncture education in the United States because he believes it would provide a more gradual approach to learning and practice in a domain which is arguably difficult for non-Chinese learners. In contrast, Wadlow (1995) asserts that a traditional apprenticeship model would be detrimental to the development of student participation and understanding, because in the apprenticeship model the teacher-practitioner is traditionally positioned as the source of knowledge rather than the facilitator of learning. It is also likely that by isolating learners in a narrow master-disciple relationship, the apprenticeship model could lead students to develop un-critiqued idiosyncratic practice. For Wadlow, difficulties in student learning lie not with the curriculum structure *per se*, but with the way in which Chinese medicine education is delivered. In contrast to this perspective phenomenography asserts that the key to improved student learning is not primarily an issue of educational delivery, curriculum structure or teaching/learning skills, but the extent to which teaching facilitates conceptual development (Marton, Hounsell & Entwistle, 1997a; Marton & Booth, 1997b).

Concerns about acupuncture student learning and the inadequacy of the technical-rational model of acupuncture practice in the West, have led Karsten (1995) and Moir (1995) to experiment with problem-based learning in Chinese medical education. Reflecting upon the experience at the Seattle Institute of Oriental medicine, Karsten asserts that there are advantages with the problem-based approach in that it shifts the responsibility for learning onto students and ensures that students gain practical-experiential knowledge more quickly.

Concerns about improving acupuncture education in the West have led Rogers (1998) and Zaslawski (1995c) to propose that acupuncture educational discourse needs to look at the quality of student learning in clinical training. Separate studies by Dowie (2000) and Ryan (1995a) have concurred with Schön's (1983) perspective that the development of reflective practice skills is important for experienced based clinical learning. However, this emphasis is not evident in the Australian Acupuncture and Chinese Medicine Association's (AACMA) professional development program nor has it been evident in acupuncture practitioner professional development in the United Kingdom where the major focus of professional development has been upon the achievement and maintenance of standards of professional competence (MacPherson, 1995).

MacPherson proposes that it is necessary to move away from teacher-centred learning to learning-centred and learner-initiated learning. Harris (2001) is similarly critical of acupuncture professional development that places undue emphasis upon knowledge acquisition and to counter this trend proposes that practitioner professional development should be individually structured upon what practitioners need to know and want to learn.

In acupuncture learning in the West, whether at the undergraduate or professional development level, learners are continually challenged to understand and accommodate the body of culture-bound medical knowledge within different and varied practice contexts (Hopwood, 1997; Macan, 2001). In rejecting a fundamentalist view of traditional Chinese medical knowledge in favour of situated knowledge and enculturated practice, acupuncturists will need to develop learning processes that support such goals (Ryan, 1995b).

This thesis asserts that phenomenography is a useful orientation for developing student approaches to learning and for furthering insight and understanding. Phenomenography adopts the view that students' conceptions about their discipline and their associated approaches to learning are situated and context dependent (Barnard, McCosker & Gerber, 1999; Eklund-Myrskog, 1997; Takman & Severinsson, 1999; Whelan, 1988). Phenomenography provides learners with an orientation to understanding variations in awareness, and through the development of conceptual awareness assists learners in developing ways of handling complex phenomena in different and more meaningful ways.

2.5   Chapter summary

This chapter explored areas of discourse related to acupuncture practice and learning. In structuring this undertaking and providing a pathway through the relevant bodies of literature, the chapter was organised into three major sections - the espoused theory of Chinese medicine, acupuncture practice and acupuncture learning.

The first section explored the beliefs and views that constitute the espoused theory of Chinese medicine, and through this contextualised the study and provided a point of reference for the analysis and discussion of the findings of this study. In detailing the precepts of the espoused theory, the literature revealed that the espoused theory was culture-bound and grounded in philosophical beliefs more than empirical evidence. The review revealed that the body of Chinese medical knowledge and practice had grown though a process of knowledge accumulation, rather than one of theoretical refinement and rational critique. The espoused theory, which provided practitioners with a practice identity, was in essence a compilation of views and practices from varying historical periods.

The literature revealed that while acupuncture discourse placed a high level of importance upon the place of espoused theory in practice, there was no clear consensus amongst practitioners concerning the actual role of espoused theory in clinical practice. It was argued that inconsistencies within the body of Chinese medical knowledge and the lack of any clear procedure for resolving internal theoretical dissonance, have contributed to ongoing diversity of practice.

The second section explored differing notions about acupuncture practice in Chinese medical discourse and also drew upon the work of Schön in discussing varying styles of professional practice and their implications. The literature review revealed a major lack of quality research into acupuncture practice and argued that phenomenography provided a useful orientation for exploring and understanding practitioners' experience of acupuncture clinical practice.

In the third section that explored acupuncture learning it was shown that formalised acupuncture training and structured ongoing professional development in Australia tended to focus learners upon knowledge/skill acquisition for use in clinical practice. The review showed that while there was a lack of acupuncture education research, phenomenography was an appropriate perspective for a structured exploration of the phenomenon of acupuncture practice and learning. The following chapter outlines the phenomenographic approach to research and details the design of this study.

Chapter 3

Design of the study: Methodology

3.1   Introduction

The design of this study has been determined by the central research question, the particular aims of the study and the guiding orientation of the research. As the study sought to understand phenomena from the standpoint of others and how they experienced it, phenomenography was selected as the preferred research method. The study was not designed for the purpose of testing any *a priori* set of conceptual categories; rather it is exploratory research that has sought to uncover conceptions about clinical practice and learning across a particular group of clinicians. This chapter details the nature of the research design and procedures employed in the study.

Apart from the introduction and summary, the chapter comprises four major sections.

- Section 1 situates the present study within the phenomenographic tradition.

- Section 2 outlines the theoretical foundations of the study with specific reference to the phenomenographic orientation, the phenomenographic methodology and the assumptions inherent in such an approach.

- Section 3 deals with the structure of the study. It details the processes employed in the collection of data, phases in the data collection process and the specific procedures employed in analysing the interview transcripts.

- Section 4 describes the procedures used in the verification of the analysis and details the cojudge role and criteria used for selecting the cojudge.

3.2   The use of phenomenography for this study

The broadened use of phenomenography beyond the traditional boundaries of educational research and the appropriateness of the method in studies of health practitioners and health science students is demonstrated in the works of Dall'Alba (1995; 2002); Barnard, McCosker and Gerber (1999); Bendz (1995); Eklund-Myrskog (1997);

Forbes, Duke and Prosser (2001); Ramritu and Barnard (2001); Takman and Severinsson (1999) and Taylor (1993). Parallels between the orientations of these studies and the particular focus of this study of beginner acupuncture practitioners' conceptions of clinical practice and of learning in the context of practice signalled the apparent appropriateness of the phenomenographic method in this study.

The situated nature of Chinese medical practice, in which diagnosis and treatment are dependent upon the detail that unfolds in each clinical presentation, further strengthened the case for choosing the phenomenographic research methodology as both emphasise the context dependent nature of phenomena (Marton & Booth, 1997b). This aspect and the accompanying phenomenographic view that one's experience of phenomena gives rise to knowledge that is relational rather than factual were perspectives that could be maintained in a phenomenographic orientated study of Chinese medical practice.

In contrast to this proposed phenomenographic study, Chinese medical research reveals a predominance of clinical trial research with very few qualitative studies (Scheid, 1994). It would appear that such research bias stems from the perceived need to 'prove' the efficacy of Chinese medicine in a world in which the biomedical paradigm dominates and traditional medicines probably face extinction (Sivin, 1990).

The long history of Chinese medicine points to a form of popular medicine in which there are extensive variations in theory, styles of practice and beliefs (Birch, 1998a; Unschuld, 1987; Willmont, 1998). The theoretical differences within the core body of Chinese medical literature are arguably contributing factors in the ongoing variations in practice styles amongst acupuncturists in Australia and elsewhere (Ryan, 1995a). The interest in identifying the fundamentally different modes of Chinese medical practice, the underpinning assumptions that support the varied styles of practice and the manner in which the tradition is learnt, are significant interests in this study which adopts the phenomenographic view that conceptions and beliefs underpin actions (Marton & Booth, 1997b).

In essence, this study is situated within an anti-positivist and interpretative view of knowledge. The study rejects any attempt to 'objectify' reality, because it is undertaken in the belief that people have varying conceptions and experiences of reality. Phenomenography has been chosen for this study because it provides the researcher with an approach to understanding and mapping variations in experience from the participants' perspective (Dunkin, 2000). The choice of phenomenography above other qualitative methodologies was based upon a 'goodness of fit' with respect to the aims of the study and the nature of the phenomenon being studied.

With regard to the specific aims of the study, phenomenography was seen to be appropriate on the basis of the following points of synergy between the phenomenographic perspective and the nature of the clinical encounter in Chinese medical practice:

- the focus upon understanding phenomenon from the perspective of those who experience it, rather than the perspective of the researcher undertaking the study;

- the focus on knowledge as situational and relational rather than factual;

- the focus upon identifying the conceptual positions held by the group, rather than the specific orientations of particular individuals in the group; and

- the focus upon what clinicians do in clinical practice, rather than their espoused theory of what should happen.

The researcher was also drawn to the phenomenographic method of analysis as it provided a structured approach to identifying and mapping the group conceptual variations about practice and learning, and in so doing could significantly enhance the body of knowledge pertaining to this domain.

3.3   Theoretical foundations for this study

3.3.1   The phenomenographic perspective

The study is situated within the phenomenographic research tradition attributed to the Gothenburg school of researchers (Marton, Säljö, Svensson et al.), which over the past two decades has become one of the key orientations in research into teaching and learning in higher education (Entwistle, 1997b). As a result of studies into student learning, the Gothenburg researchers concluded that what students learnt was related to how they conceptualised the object of study as well as how they undertook their learning (Booth, 1997; Marton & Booth, 1997a). Repeated studies on student learning and ongoing phenomenographic discourse have seen the educational debate move away from a focus upon teacher skills towards one of understanding the experiences, conceptions and learning approaches of the learners themselves (HERDSA, 1997).

While the term 'phenomenography' was first coined by Marton, the origins of this research approach are to be found in the earlier works of the Gothenburg school (Svensson, 1997b). Phenomenography is a research method for mapping the qualitatively different ways in which people experience, conceptualise, perceive and understand various aspects of phenomena in the world around them (Marton, 1981).

While phenomenography is similar to phenomenology in that it is relational, experiential, contextual and qualitative, Marton (1988b) identifies three characteristic differences which are explored in greater detail by Richardson (1999). The first distinction is that in studying a phenomenon from the perspective of the person experiencing it rather than the researcher studying it, phenomenography is a 'second order' rather than 'first order' approach to research. Secondly, phenomenography attempts to go beyond people's experience of a phenomenon to their conceptions of the phenomenon. Thirdly, phenomenography does not limit its focus to understanding people's experience of phenomena, but also the relationships between these qualitatively different experiences of the same reality.

Marton's distinctions about the differences between phenomenography and phenomenology are based on comparisons with the work of Husserl, the founder of phenomenology, and may not stand as solid differences with some phenomenologists (Richardson, 1999). In this study, the researcher acknowledges the similarity of orientation between phenomenology and phenomenography, choosing the latter for this study because it provided a structured approach to identifying and understanding qualitative differences in conceptions of a phenomenon from the perspective of those who had experienced it.

Phenomenography rejects the positivist-scientific paradigm that aims to understand things as they are in favour of an approach that seeks to identify and understand people's experience of phenomena (Marton, 1988b; Marton & Booth, 1997b). From this standpoint the knowledge perspective in phenomenographic research is clearly subjective and relational because it is concerned with individual and group relationships to phenomena, rather than individuals, groups or phenomena *per se* (Svensson, 1997b).

The approach is distinct from a traditional phenomenological approach which focuses on uncovering individuals' understanding and experience of phenomenon, because it seeks instead to identify and understand the 'collective experience' of the group. Because the research focus is primarily upon perceptions of a phenomenon, rather than the person experiencing the phenomenon (subject) or the phenomenon itself (object), phenomenography is arguably 'non-dualistic' (Booth, 1997).

This study of acupuncturists' conceptions of practice and learning has adopted the phenomenographic perspective that views knowledge as essentially 'relational' and 'experiential'. Knowledge and the meaning individuals attribute to phenomena are seen as based in experience rather than abstract ideals of proposed objectivity. The perspective adopts the stance that individuals develop varying understandings and conceptual positions in relation to a particular phenomenon on the basis of their

experience and interaction with the phenomenon. Therefore, for phenomenographers the research task is one of identifying and understanding the range of qualitatively different conceptions people have of a phenomenon, rather than attempting to generalise or objectify group experience into principles for broad application (Marton, 2000).

The phenomenographic approach differs from traditional phenomenology in that phenomenography draws no distinction between the participants' descriptions of the experience and their reflection upon the experience. In analysing the interview data, interviewee descriptions and reflections are considered to be of equal importance in uncovering the range of conceptions across the group. The resulting conceptual map draws upon all the dimensions of the interview data for purposes of uncovering the qualitatively different conceptual positions within the group.

Phenomenography, as a research method that has its roots in education, carries a particular orientation to learning. The approach explores the relationship between the 'how' and 'what' of learning, and concludes that approaches to learning are 'surface' or 'deep', depending upon the level of inherent complexity (Booth, 1997). Moreover, the phenomenographic orientation asserts that what people learn is underpinned both by their conception of the phenomenon under study as well as their specific approaches to learning (Lybeck, 1988; Marton & Booth, 1997b). This also means that how teachers view student learning is premised upon teachers' conceptions of the subject being taught (Prosser & Martin, 2000). Phenomenography places primary emphasis upon the relationship between learning and the conception of what is being studied, with minimal interest in the cumulative amount of learnt information (Dall'Alba, 1994).

In applying this perspective to the area of acupuncture practice and learning, this thesis proposes that the way in which a practitioner directs the clinical encounter is dependent upon the practitioner's conception of acupuncture in that situation and the skills or strategies the practitioner employs to achieve the priorities inherent in the conception. Secondly, the thesis proposes that the way the practitioner undertakes learning in the context of practice is dependent upon his or her view of clinical practice and the knowledge or skills perceived to be important for effective clinical practice. Thirdly, the thesis proposes that there are a defined number of practice styles and learning conceptions ranging from basic to complex modes across a defined group of individuals and situations.

In parallel with the perspective of Piaget (1973), phenomenography is oriented towards understanding how people construe significant phenomena, but phenomenography diverges from Piaget's position in that it views the meaning people attribute to reality as not necessarily linked to stages of personal development. In essence, phenomenography

is not about 'the person' because it is essentially 'non-psychological' (Marton, 1994a). It is concerned with people's experience and reflections upon the phenomenon, rather than the phenomenon or individuals in themselves.

Phenomenography adopts the broad epistemological position that the world is multifaceted and open to various interpretations that are dependent upon one's conceptual filter (Säljö, 1988). In rephrasing Marton's view, Hasselgren and Beach (1997) describe the phenomenographic orientation as one in which conceptions of a phenomenon are 'layered', with complex conceptions subsuming those that are fundamental or basic.

Phenomenography also concludes that there are a limited number of coherent conceptual perspectives of a specific group's experience of a phenomenon. As such the task of the phenomenographer is not one of objectively identifying the essence of a particular phenomenon, but that of discovering and describing the range of conceptual variations within the group (Marton, 2000). Through a process of iteration, the researcher works with the data to map the conceptual distinctions and relationships into an 'outcome space' table (Bowden, 2000b).

Phenomenographic research is viewed as a process of discovery in which conceptions are uncovered, rather than one in which the researcher begins with predetermined categories that are tested against the research data. Phenomenography asserts that any one individual can hold a range of differing conceptual positions with regard to a particular phenomenon with the sum total of conceptual positions seen as belonging to the group rather than to specific individuals. In this way, conceptions are neither common to everyone nor unique to any one individual in the group (Booth, 1997). Because the focus in such research is on uncovering the 'collective understanding' (Marton, 2000) or 'collective anatomy of awareness' (Marton & Booth, 1997b), it is neither relevant nor important to assign particular conceptions, or ranges of conceptions, to specific individuals.

While phenomenography has been utilised predominantly in educational research as a methodology for exploring students' experience of learning, it is arguable that phenomenography is suitable in many areas of research (Bowden, 2000a). In relation to this study, Barnard et al. (1999) present a coherent case for the applicability of phenomenography in Health Science research.

They propose that:

> Central to improving health care and developing any discipline is identifying
> the ways in which phenomena are understood and experienced by
> practitioners, patients, institutions and society.
>
> (Barnard et al., 1999 p.212)

Of particular note is the study by Takman & Severinsson (1999) that used a phenomenographic method to explore health care professionals' experience of clients in acute medical care. This study, which illustrated the value of the approach in identifying and analysing health care practitioners' clinical experience, signalled the appropriateness of phenomenography in this doctoral research. The appropriateness of the method was also seen in studies by Dall'Alba (1995; 2002); Bendz (1995); Eklund-Myrskog (1997); Forbes et al. (2001) and Taylor (1993) that utilised the phenomenographic approach to explore medical or health science students' conceptions of clinical practice. It is the view of this researcher that, although phenomenography has not been previously employed to explore the clinical experiences of Chinese medicine practitioners, on the basis of its prior application in similar studies in related health care professions and the specific nature of this study, there is a strong argument for its appropriateness in this setting.

3.3.2   The phenomenographic method

Conceptions of phenomena

At the centre of phenomenographic analysis is the focus on mapping the qualitatively different conceptions of phenomena held by a particular group (Brew, 1998; Trigwell, 2000). Phenomenography is not concerned with attributing particular conceptions to particular individuals, because it acknowledges that conceptions are context dependent and as such individuals can adopt varying stances at different points in time (Ramsden, 1997). Phenomenography is concerned with identifying and understanding the collective experience of the group (Marton & Booth, 1997b), a research interest which clearly accords with the focus of this study.

Problematic to the tradition is the lack of consistency about the exact nature of the notion 'conception' (Bowden, 1994). Within phenomenographic discourse, conceptions are at times referred to as one's experience of the phenomenon and at other times as one's understanding of the phenomenon. The working definition of the term 'conception' adopted in this thesis is based upon the earlier view of Marton (1994b) wherein conceptions are seen as 'ways of experiencing' phenomena, with each conception defined in terms of a 'what' (referential) and 'how' (structural) parameter. While Marton

and Booth have subsequently proposed that each parameter be subdivided into structural and referential axes (Marton and Booth, 1997b), this study follows the more common position of defining conceptions in terms of two basic parameters - 'what' and 'how'.

The tendency in some phenomenographic studies to present participants' experiences in purely rational terms is strongly critiqued by Hazel, Conrad and Martin (1997). They maintain that the 'cognitive emphasis' in the categories of description may indeed be due to the fact that most phenomenographic studies have been conducted in fields in which women are poorly represented. They argue that feeling and thinking are intimately related, and on this basis they reject any attempt to treat these dimensions as separate in describing categories of meaning or in identifying conceptual maps.

Phenomenography explores the world as 'experienced' and provides a methodology by which the experience can be mapped and analysed. By rejecting the positivistic intent of describing things 'as they are' in favour of characterising 'how things appear', phenomenography assumes an essentially relational view of knowledge (Bowden, 1994; Svensson, 1997b).

Categories of description

Beginning with the identification of 'pools of meaning' in the data the researcher moves to exploring the varying ways in which people experience the phenomenon under study (Bowden, 2000a). These variations are termed 'categories of description' and stand as the researcher's understanding of the varying ways the group experiences the phenomenon. The categories of description point to the conceptions, but are not the conceptions. The conceptions of reality denote how the group experiences and inter-relates with the reality.

> The term 'conception' and other terms used more or less synonymously have been used in phenomenographic research to refer to the meaning-aspect of dynamic human engagement with phenomena in the world.
>
> (Ekeblad, 1994 p.150)

The conceptions are held by the group, not the researcher, and the sum total of these comprise the conceptual map of the group. The outcome space table is the distilled essence of the categories of description. It encapsulates the complexity of meaning the group attributes to each category and the relationship between different categories of description. In phenomenography, the conceptual map that represents the totality of positions or collective intellect of the group and the relationship between these conceptions forms the conceptual map of the group (Marton, 1981; Marton & Booth, 1997b).

From the interview data, the 'pools of meaning' are grouped into categories of description through an iterative process (Walsh, 2000). Individual categories are seen to be 'stable' when they achieve a high level of internal logic and accord with the following phenomenographic features:

- they are relational in that they result from and describe the relationship of the person to the phenomenon;

- they are experiential in that they are descriptions of the person's experience of the phenomenon;

- they are descriptive in that they describe experience rather than posit theory; and

- they are ontological in that they focus on the meaning individuals ascribe to the phenomenon.

The specific characteristics of any group of descriptive categories are also dependent upon parameters provided by the research focus and aims. With respect to this study, which explores beginner acupuncturists' conceptions of clinical practice and of learning in the context of practice, there are two primary sets of categories. The first set denotes the researcher's understanding of the varying ways in which participants understand clinical practice. The second set of categories denotes the researcher's understanding of the varying ways in which participants understand learning in the context of clinical practice.

In accord with the phenomenographic approach, the categories of description in this study have been defined in terms of structural and referential parameters. Problematic in applying these parameters is the lack of agreed definition of the terms 'structural' and 'referential', evidenced in a review of their varied usage in the research of Crawford et al., (1994); Murphy (1998); Prosser, Trigwell & Taylor (1994a); Tempone (2001) and Trigwell (2000).

This study has adopted the definition of structural and referential employed by Tempone (2001) on the basis of clarity of definition and applicability to the nature of this research undertaking. The referential axis is defined as the intention or aim of the participant with regard to the specified phenomenon. The structural axis is defined as the strategy employed by the participant in achieving the intention or aim.

In this study of acupuncture clinical practice, the referential axis identifies the acupuncturists' intention in clinical practice and the structural axis identifies the strategies employed by the clinician in achieving the aim or intended clinical outcome. Accordingly, with respect to the clinicians' experience of learning in practice, the referential axis identifies the acupuncturists' intention in learning and the structural axis identifies the

strategies employed by the clinician in achieving the learning intent or desired learning outcome.

The relationship between categories

Categories of description are defined as distinct perspectives that differ from each other on the basis of the structural and referential dimensions. Because the categories of description are defined in terms of how they differ from each other, the descriptive account which identifies a category may appear 'washed out' and devoid of the richness of detail present in the interview data. Arguably, this effect is a consequence of the research approach that places more emphasis on differences than on similarities as the basis for determining specific conceptual positions and the group conceptual map.

Another essential characteristic of the phenomenographic method is the hypothesis that the relationship between the categories depicts a progression from simple to complex ways of perceiving and acting (Marton & Booth, 1997b). Simple categories of description depict basic ways of understanding and interacting with a particular phenomenon. For example, in the study by Prosser et al. (1994a) of academics' conceptions of science learning and teaching, the conception of learning as 'information accumulation' was seen as simple or basic, and the conception of learning as 'conceptual development' was seen to be more complex. Nonetheless, the ability to act within the latter conception assumed the prior ability of information accumulation. Since more complex ways of acting and interacting assume knowledge of the more fundamental positions, phenomenography holds that the categories of description stand in a progression from simple to complex (Marton, 1981).

Outcome space table

The final phase in phenomenographic analysis is to represent the relationship between the categories in a logical diagrammatic form known as an 'outcome space table'. The outcome space table represents the qualitatively different ways the group experiences the phenomenon and the different meanings they attribute to their experience of the phenomenon (Dahlgren, 1997). In this sense the outcome space table can be viewed as an integrated representation of the group's experience of the phenomenon (Marton, 1994b; Thompson, 1998).

While not all phenomenographic studies report the outcome space table in precise diagrammatic form, clear examples can be found in the works of Crawford et al., (1994); Prosser et al. (1994a); Tempone (2001) and Trigwell (2000). Secondary or subsidiary tables are provided in some studies as a means of extending the primary analysis. For example in educational studies, the analysis of participants' approaches to learning are often designated as 'surface' or 'deep' in a secondary table.

In this study of acupuncture clinicians' conceptions of clinical practice and of learning in the context of practice, two primary outcome space tables are displayed. The first represents the group's conceptions of clinical practice and the second the group's conceptions of learning in practice. Subsets of these two primary tables are also presented to extend the analysis with particular reference to levels of complexity in each conceptual grouping.

In addition, the frequency of occurrence of each conception of practice and of learning identified in the study is analysed to show the prevalence of each conceptual position within the group. This study also analyses the frequency of occurrence of each conception in terms of gender and age/experience to examine whether these indicators are significant factors in the distribution of conceptual positions across the group.

Relationships between conceptions of acupuncture practice and conceptions of learning in practice are also explored in this study subsequent to the analysis of the interview data with respect to participants' experience of acupuncture practice (Chapter 4) and learning that supports practice (Chapter 5). The rationale for exploring the relationships between conceptions of practice and of learning is premised upon the phenomenographic view that conceptions underpin actions (Marton & Booth, 1997b).

3.3.3   Assumptions in the orientation and method

From its inception, phenomenography has positioned itself as a research orientation that seeks to understand phenomena from the stance of peoples' experience of and relationship to phenomena. Unlike dualist-based doctrines, phenomenography views people and the world as being integrally related in a situation of mutual inclusion and definition (Franz, 1994) and as such the approach is not based on an ontological assumption about the nature of particular phenomenon or an *a priori* stance concerning the nature of reality.

The phenomenographic perspective is grounded in the belief that individuals' actions are influenced by how they perceive themselves in particular contexts (Säljö, 1988). The most fundamental assumption is that individuals' knowledge and conceptions of reality have a relational nature (Svensson, 1997b).

Phenomenographic conceptions are grounded in people's experience and describe the essential character of that experience. This orientation to research is in clear contrast to the empiricist and positivistic assumption about knowledge that views observations as facts (Barnard et al., 1999).

As a 'second order approach' phenomenography seeks to identify conceptual positions, beliefs and orientations within a group (Marton, 1981). Phenomenographic investigation is focussed on understanding the 'pre-reflective' level of 'how reality is experienced', rather than the theories people draw from their experience (Marton & Booth, 1997b). The categories of description provide a conceptual map of the ways in which a group of individuals relates to and interacts with a particular reality, rather than any absolute description of reality.

A major assumption in the phenomenographic orientation is that conceptions are not considered to reside in individuals; instead they are seen as pertaining to the group. Conceptions are seen as the collective totality of qualitatively different ways people in a group act and respond, and as such the same person may act differently and adopt different conceptions of the same reality, in different situations (Säljö, 1988).

As a research approach that employs semi-structured focussed interviews to identify and analyse conceptual positions, the methodology assumes:
- that the group's conceptual positions can be identified and analysed;
- that the interview process is a valid way of uncovering individuals' conceptions about a particular phenomenon;
- that there are a definable number of 'shared' conceptions across any particular group; and
- that these conceptual positions exist in relation to each other from 'basic' to 'complex' in a progression in which basic conceptions are subsumed within complex ones.

(Prosser et al., 1994a; Säljö, 1997; Svensson, 1997b)

On the basis of previous phenomenographic studies, these methodological assumptions are sustainable positions that are assumed in this study of acupuncturists' conceptions of practice and learning.

3.4   Structure of the study

3.4.1   Researcher's stance

As with many PhD undertakings, the researcher in this study conducted both the interviews and the data analysis. Appropriate 'checks and balances' were incorporated in the design of the study to limit the influence of researcher bias upon the process and results. Phenomenographic literature that pertained specifically to the issue of researcher bias (Bowden, 1994; Burns, 1994; Prosser, 1994b; Sandberg, 1997; Walsh, 2000) informed the research design and designation of procedures for verification of the analysis (Section 3.5).

From the outset it was acknowledged that the researcher had extensive experience as an acupuncture practitioner and acupuncture educator. In regard to such prior knowledge and experience, the researcher adopted the position of Burns (1994) that this background provided an invaluable point of reference for the issues being explored. In the conduct of this study the researcher asserts that by maintaining an open mind, following accepted procedures and subjecting the outcomes to critique, the effect of researcher bias on the results is contained.

With respect to this study, it is important to state that the researcher is employed as the Coordinator of Traditional and Complementary Medicine at Victoria University, has taught acupuncture in both private colleges and universities, practiced in both metropolitan and rural settings, and had a major role in Chinese Medicine curriculum development in Australia. His Masters by research degree, undertaken when he was Director of Studies at the College of Acupuncture (University of Technology Sydney), explored the educational imperatives in teaching an oriental heath discipline in post-modern Australian society. In view of this study and subsequent publications on the issue of acupuncture education in Australia, it is clear that the researcher undertook the present study with some prior beliefs and views concerning acupuncture practice and learning in Australia.

The study was undertaken in the belief that the practice of acupuncture in Australia needed to accord with local health and socio-cultural imperatives in order to be a relevant health therapy (Ryan, 1995b). This position is in contrast to the view that acupuncture education and practice should be modelled substantially upon that in China. The researcher believes that because conceptions of practice and learning will vary according to contextual demands, there is a need for acupuncture practice and learning in Australia to be contextualised (Ryan, 1995b).

With regard to the central research question, the researcher believes that there are identifiable variations in models of practice and learning amongst practitioners, with concomitant benefits and limitations associated with each approach. The researcher acknowledges his preference for a holistic and inclusive approach to acupuncture practice, while still recognising that practice styles that are characteristically reductionist are nonetheless appropriate in responding to certain health demands.

Throughout the study the researcher's assumptions, views and conclusions were open to critique in discussions with his supervisors. The use of a second round of interviews provided a mechanism for double-checking the tentative analysis to assure stability in the categories of description and limit bias in the conclusions. An independent 'co-judge' was engaged to crosscheck the analysis and ensure the accuracy of the results.

3.4.2   The pilot study

Three pilot interviews of recently graduated acupuncture students were conducted in the early part of 2000 with the approval of the Victoria University Ethics Committee. Each interview lasted around one hour, with the interviews conducted in locations amenable to the interviewee and interviewer. The purpose of the pilot interviews was to test and refine the interview questions, and ensure that the interview approach provided data necessary for the purposes of the proposed study.

The interviews focused on the nature of clinical encounters in three distinct scenarios. The interview tapes were transcribed by a third person experienced in transcription. The transcribed accounts of the interviews were subsequently reviewed and analysed to assess whether the process undertaken and the questions employed produced the necessary range of detailed information pertaining to the research question.

The preliminary study revealed a range of conceptual positions with regard to how practitioners acted and learnt in the clinical context. It was therefore concluded that the interview approach, and the specific questions tested in the pilot study, should be retained for the substantive study. The nuances of meaning and insights about clinical practice that arose from the pilot study provided additional avenues for exploration in the substantive study.

With regard to the interview process it was noted that during the interviewees the discussion at times moved away from exploring participants' clinical experiences onto topics that were not focal to the study. This provided a valuable lesson for the researcher

in the use of semi-structured interviews and reiterated the need for attentiveness in keeping the interviews focused within the domain of the study.

Participants were asked to describe specific clinical experiences they had encountered as clinicians, rather than comment upon or theorise about situations beyond their experience. In accord with the phenomenographic orientation and 'second order' research approach, the interviews maintained a participant centred focus (Ferris, 1994). The pilot interviews produced clear data on how the interviewees conducted themselves in practice and their conceptions of their role in the clinical encounter.

The transcripts contained detailed accounts of how clients acted, their expectations of the therapy and the nature of the practitioner-client interaction. The transcripts also contained detailed information on the ways in which the practitioners undertook learning in practice and their insights about the nature and purpose of learning that supported practice. Therefore, it was concluded that the interview questions, which asked interviewees to recount specific clinical experiences, enabled the researcher to enter into the clinician's experience of the phenomena as required in phenomenographic studies (Bowden, 2000a).

A third phenomenon, clinicians' conceptions of Chinese medical knowledge as it pertained to clinical practice, was originally included in the study but later dropped. This third phenomenon was dropped because the interview transcripts revealed only limited data on participants' experiences of this dimension. The lack of precise information pertaining to participants' conceptions of knowledge in practice was considered to be due, in part at least, to the interview focus upon practitioners' experience rather than their views about the theory of Chinese medicine. In view of this finding, the apparent burgeoning size of the study, and the fact that most phenomenographic studies focus upon mapping conceptions in only one or two areas, the scope of the study was reassessed to focus upon two phenomena – acupuncturists' conceptions of practice and of learning in practice.

As a result of the pilot study, adjustments were also made to the audiotape transcription procedure. It was found from the pilot study that engaging a third person to transcribe the audiotapes, while efficient in some respects, actually shielded the researcher from the full nuance of meaning conveyed in audio form. While the pilot study transcriptions, transcribed by a third person, were seen to be accurate records, they did not convey the full emphasis participants placed on certain views.

Therefore, it was decided that in the substantive study the researcher would undertake the transcription work himself so that the full extent of the interview exchange would be captured. To enable the researcher to make notes during the audiotape transcription process, voice activated transcription software was utilised.

The pilot interviews provided the researcher with experience in phenomenographic interviews and led him to revisit reports of interview based phenomenographic studies for further clarification. Overall, the pilot study phase provided a procedural 'fine tuning' for the main study.

3.4.3 Selection of participants

The study, situated within the phenomenographic orientation and method, was not undertaken with the aim of being able to generalise the results to a wider population. Therefore, it was not seen as necessary to employ a method of random sampling in participant selection, as the analysis of the data was not premised upon a need for empirical statistical significance. In phenomenographic studies, validation lies in the accurate identification of the range of experiences around the phenomenon that is the object of study, not the frequency of occurrence of those experiences.

The focus of the research was to identify and analyse the range of conceptions of acupuncture practice and of learning that supported practice. In the first round interviews, the participants were intern-practitioners undertaking the final semester of their four-year undergraduate program. In the second round interviews, conducted one year later with participants from the same cohort, the participants were graduates of the university program.

The sampling method employed in studies of this type is best described as 'purposeful sampling' (Maxwell, 1992; Maykut, 1994). Purposeful sampling involves the selection of a group of participants that is broad enough and likely to represent the range of views across the sector under study. Recent phenomenographic doctoral studies by Jamieson (1998), Samuelowicz (1999), Tempone (2001), Thompson (1998) and White (2000) were reviewed in order to estimate the size of the required sample for the substantiative study. Additional discussions with researchers experienced in phenomenography also informed the decision on the number of participants required to achieve a suitable sample.

It was considered that a representative cohort of 15 to 20 interviewees was appropriate for the study. It was argued that at least 15 participants were required for an accurate cross-section of the views within the group of 33 acupuncture graduates. At the same it

was acknowledged that excessively high numbers of participants in interviews that each lasted 40 to 60 minutes could be problematic due to the resulting volume of qualitative data for analysis (Trigwell, 1994).

In this particular study of the graduating class of acupuncture students at Victoria University in 2000 in which there were 33 students, a participant cohort of 15 to 20 represented a substantial proportion of the group. An examination of the gender demographics of the group revealed that there were 23 females and 10 males in the graduating class. In view of this proportional difference it was considered important that the ratio of males to females in the interviewee cohort reflect the overall group gender demographic.

The researcher provided an extensive summation of the study to the entire graduating class of 2000 and an opportunity for questions and clarifications at the end of the presentation. Students who wished to participate in the study completed a consent form (Appendix A) and returned it via the university mail system. The actual number who volunteered to participate in the study was 24 students in which there were 18 females and 6 males. This number was considerably higher than the minimum number required; however the gender representation was appropriate to ensure that female voices were heard (Hazel et al., 1997). It was decided to interview all those willing to participate in the study with the expectation that the substantial number of interviews would strengthen the quality of the total data pool. As participation in the study was entirely voluntary, and in order to avoid any perception of 'coercion', no attempt was made to ascertain students' reasons for participation or non- participation in the study.

In the follow-up interviews, which were conducted one year after the initial round, 18 of the original group of 24 interviewees participated; a number considered significantly representative of the original cohort. Of the six who did not participate in the second round, three were overseas for extended periods, one had relocated to live interstate, one had moved without leaving a forwarding address, and one declined to be interviewed because she had not been practicing acupuncture since graduation.

3.4.4   Interview rationale

The study employed semi-structured interviews to gain data appropriate to the phenomenographic imperative of uncovering the qualitatively different ways in which the phenomenon was experienced (Bowden, 2000a; Marton, 1994b). While the phenomenographic tradition encompasses a range of data collection procedures common to qualitative research that includes questionnaires, focus groups, observation

and interviews, semi-structured interviews are the preferred and most verified method of data collection in phenomenographic studies (Dunkin, 2000).

The semi-structured interviews were seen to provide a means by which the researcher could capture the 'internal person-world relationship' that individuals had with the specific phenomenon. The following steps were undertaken to ensure that the interview data provided an accurate record of the participants' experience of the phenomenon, rather than their reinterpretation of events:

- the interview questions were posed as clinical case scenarios, events in which the participants were highly engaged, because it was the researcher's experience that practitioners tended to recount their clinical experiences with great detail and accuracy;

- the interviews focussed on relatively recent experiences, rather than ones that occurred some years ago, limiting the possibility of historical reinterpretation that could occur over time; and

- the interviews required participants to recall specific experiences of clinical practice, rather than to theorise about clinical practice.

A second round of interviews was conducted one year after the initial round when the participants had progressed from being intern-practitioners to graduated practitioners. The purpose of the second round interviews was to provide a process for confirming and checking the outcomes from the first round interviews and expanding the total database for analysis. By employing two rounds of interviews, both conducted under the same procedures, the researcher was reasonably confident that the resultant data provided an accurate account of beginner acupuncture practitioners' experiences of practice and of learning in practice.

3.4.5   Interview questions

Focus and intent of the interview questions

Phenomenographic interviews, and the questions they employ, are grounded in the qualitative research approach and possess the following characteristics:

- they are qualitative and descriptive;
- they are focussed on specific themes, issues or phenomenon;
- they seek to understand the interviewee's life world;
- they are open to ambiguities and contradictions; and
- they take place in an interpersonal encounter.

(Kvale, 1983)

Within this broad qualitative tradition, phenomenographic interviews have the following additional characteristics:

- they seek to identify and understand the interviewees' experience of the phenomenon;

- they seek to identify and understand variations in peoples' experience of the phenomenon;

- they should be sufficiently open as to allow the interviewees to relate their experiences of the phenomenon within their own framework; and

- they should not primarily focus upon the interviewees or the phenomenon, but the interviewees' experience of, and relationship to, the phenomenon.

(Bruce, 1994)

The extent to which the interview questions focus upon uncovering the person's experience of the phenomenon is critical to the success of phenomenographic studies and as such continues to be one of the challenges in this approach (Dall'Alba, 2000). In commenting upon this aspect, Entwistle states:

It is essential that the questions are posed in a way which allows the students (interviewees) to account for their actions within their own frame of reference, rather than one imposed by the researcher.

(Entwistle, 1997b p.132)

In this substantive study, interview questions were posed as clinical scenarios in order to focus participants upon recounting their actual clinical experiences rather than reporting their views about what 'should' happen in clinical settings. It was considered that such an approach would provide data appropriate to the phenomenographic intent of mapping individual and group conceptions of the specific phenomenon (Marton, 1988b).

The interviewer asked participants to recount their experience of three common acupuncture clinical scenarios. As interviewees reported on their experience with regard to each scenario, the interviewer probed further with non-structured questions in order to elicit the detail of the clinical encounter, the context in which it occurred, the role of the practitioner and client in each case and the way in which 'ongoing learning' occurred in relation to clinical challenges.

During the interviews *per se* the researcher recorded both field notes (descriptive detail about the interview and the process) and reflective notes (personal insights, thoughts, speculations, hunches and impressions). These notes assisted the researcher in keeping

the interviews appropriately 'focussed' and were also invaluable in the latter analytical phase of the study.

Specific questions employed in the substantive study

Q1   **Scenario One:** I would like you to think of a client you have treated where everything went quite smoothly. The diagnosis and treatment were not too difficult and the client's response to your treatment was good. Could you please describe the consultation in detail, commencing with the client's arrival?

Q2   **Scenario Two:** I would like you to think of an instance when you had a client with a presenting condition that was not 'straightforward'. For example she/he may have had symptoms which were not easily classified within a Chinese medical framework; or you had little knowledge/experience of the specific condition from a Chinese medical perspective; or you had to needle points or employ techniques with which you were not comfortable. Could you please describe the consultation in detail, commencing with the client's arrival?

Q3   **Scenario Three:**   I would like you to think of a client you treated where the treatment has not gone as expected. They may have reported an unexpected negative reaction to the treatment, or they may have simply reported no improvement. Could you please describe the consultation in detail, commencing with the client's arrival?

3.4.6   Rationale for the second phase interviews

The initial interviews were undertaken during the students' final semester at university when they had been practising as intern-practitioners for a minimum period of six months. It was not known at the time whether the views expressed by the interviewees at that point in time were more reflective of themselves as beginner acupuncture practitioners or themselves as acupuncture students. On the basis of anecdotal evidence and experience, it was thought that by the final semester of the four-year undergraduate program, acupuncture students would have begun to cross the divide from seeing themselves as students to seeing themselves as practitioners. While there were solid grounds to view these students as beginner acupuncture practitioners, it was not clear whether the conceptions they held pertaining to practice would remain stable or alter substantially once they graduated and began practising as independent practitioners.

In this study which focussed on understanding and exploring the conceptual stance of beginner acupuncture practitioners, it was considered highly appropriate to undertake a second round of interviews after the students had graduated and begun practice in their

own right. Another reason for the second round interviews was the desire to understand the participants' conceptions of situations within a context that was no longer that of 'teacher-student' and more that of 'fellow practitioners' or 'professional colleagues'. It was considered that by visiting the graduates and conducting interviews at their clinical locations, the researcher would gain further insight into the interviewees' experience and conceptual stance with regard to acupuncture.

From a review of phenomenographic research in education, health and the social sciences, it is clear that the majority of phenomenographic studies have utilised 'one off interviews' to provide a 'snap shot' of the held conceptions across a particular group. However, Prosser (1990) found that follow-up interviews were beneficial as a means of collecting additional data to strengthen the final analysis in his study of students' conceptions of knowledge development and approaches to study.

In this substantive study, as in the study by Prosser, the second round of interviews was not seen as a means for measuring or assessing conceptual change within the group over time. Follow-up interviews in this study, and other phenomenographic studies, are used solely for the purpose of clarifying the initial analysis. In new areas of research, where no previous studies exist as a point of reference for cross verification of the analysis, the two-phase interview approach provides an additional procedure for strengthening the data and research conclusions.

In consideration of the above, the original cohort of participants in this study was re-interviewed after a period of one year for the following reasons:

1. To assess whether the conceptual categories identified in the initial study continued to be stable conceptions across the group;

2. To gain additional insight into the specific conceptions identified in the first round of interviews as a way of enhancing the researcher's understanding; and

3. To provide a mechanism for checking the outcome of the initial analysis.

3.4.7   Interview setting

Cognisant of the researcher's standing within the Chinese medicine community in Australia and the former teacher-student relationship which the researcher had with the interviewees, steps were taken to divest the research setting of any real or perceived power relationship between interviewer and interviewee. At the time of the interviews the researcher no longer had any teaching or assessment involvement with the interviewees. In all interviews, the interviewees chose the interview location so that they felt comfortable in the surrounds. The first round interviews were sometimes conducted in a

room in Victoria University's Health Practice Unit, sometimes in a coffee shop and sometimes in the researcher's office. The second round interviews were conducted predominantly in the practitioners' clinics.

Before commencing the interview the researcher took time to ensure that the interviewee was comfortable, restated the purpose of the study and provided time for clarification. During the interview the researcher was cognisant of 'body language', paused the tape when appropriate and made every effort to ensure that the interview was conducted in a manner in which the interviewees were free to express their views openly.

On reflection, the researcher considers that second round of interviews that were conducted primarily in practitioners' clinics, not the university, provided a greater sense of equality between interviewer and interviewee. Moreover, interviewing participants in their own clinical premises provided context and meaning to the content of each interview and was arguably the most appropriate setting for conducting a study of this type.

3.4.8 Data collection, transcription and coding

Permission to conduct the interviews was granted by the Victoria University Ethics Committee subsequent to general university endorsement of the study. In all cases, the pilot and substantive study interviews were conducted with graduates or final year students of the Bachelor of Health Science – Acupuncture with whom the researcher had no current or direct involvement.

Before commencing each interview, the researcher reiterated the purpose of the interview and provided an opportunity for participants to discuss and clarify any concerns they had about the research before signing the consent form. All interviews were audiotaped to allow for a free flowing process focussed around semi-structured questions. In accord with the phenomenographic approach outlined by Neuman (1987), the structured questions were followed up with specific questions that arose from the information provided by the interviewee and as such varied from one interview to the next.

The interviews were conducted as a dialogue around the focal questions. The dialogue approach, commonly employed in phenomenographic interviews, allowed the interviewees to freely describe their experience, their relationship to the experience and their reflections upon it as required in this research orientation (Bowden, 2000a; Marton, 1988b).

During the interview process the researcher recorded some notes relevant to the content and process of the dialogue, although these were kept to a minimum so as not to intrude upon the interview *per se*. Occasionally the tape was paused at the request of the interviewee, either to have a break or to discuss tangential issues not pertaining to the research. Each interview lasted 40 to 60 minutes as this period is considered by phenomenographic researchers to be an optimum time frame for gaining rich interview data (Trigwell, 1994).

To facilitate note taking during the transcription process, voice activated software was utilised by the researcher in the audiotape transcription. Personal 'identifiers' were not included in the written transcripts in order to protect those involved or those mentioned by the interviewee. To ensure privacy and security of the information, the tapes and transcripts were coded and stored securely in a locked filing cabinet.

The transcribed interviews were returned to the individual interviewees with a cover letter and stamped return envelope, for checking and verification. Many participants provided additional comments on their returned transcripts that assisted the researcher in accurately identifying and describing participants' experience of acupuncture practice and of learning in practice.

After the phase one interview transcripts were verified by interviewees and noted clarifications entered in the transcripts, the researcher undertook a provisional analysis of the data to ascertain the major themes and tentative conceptual categories. The emergent categories and themes were discussed with the researcher's supervisors and certain professional colleagues to gain feedback and clarification. The issue of 'practitioner isolation', which emerged from the initial round of interviews, was presented as a conference paper by the researcher at the Acupuncture and Chinese Medicine Association's annual symposium in Melbourne (Ryan, 2001a).

The second phase interviews were conducted one year after the initial round at a time when the participants had entered professional practice. Eighteen of the initial twenty-four interviewees participated in the second round of interviews. The procedure followed in the second phase interviews was identical to that in the first round.

As with the initial round, the phase two interview questions followed the same open-ended 'case scenario' approach. There was also opportunity in the second round of interviews to seek clarification on issues that had arisen from the initial round and from the tentative analysis which had already emerged. The rationale for the second round interviews has been presented in section 3.4.6 of this thesis.

3.4.9 Data analysis

The interview data in this study was analysed in accord with the procedures commonly employed in phenomenographic research. Hasselgren & Beach (1997), Marton and Ramsden (1988a), Säljö (1988) and other phenomenographers point to four substantial phases in data analysis. These phases comprised:

- the selection of relevant statements from the interview transcripts;
- grouping these statements to create 'pools of meaning' as the basis for conceptual categories;
- exploring the relationship between the emergent categories; and
- co-judge crosschecking of the analysis.

These phases were not seen as singular steps in a 'one off' sequential process, but rather as phases in an iterative process in which the researcher engaged, back and forth, with the data and the emerging analysis (Neuman, 1987).

The phases in the analysis were guided by the analytic intent of phenomenographic research, as detailed by Patrick (1998), Sandberg (1997) and White (2000). The analytical intent is summarised as follows:

- to identify the aspects of the phenomenon which the participants focussed upon and how they represented it;
- to accurately describe the specific views of the participants in the research study from their perspective, rather than that of the researcher undertaking the study;
- to identify the range of qualitatively distinct beliefs about the specific phenomenon under study;
- to explore and determine the beliefs that underpinned the nominated behaviour; and
- to explore the relationship between these conceptual positions.

In this study, key perspectives pertaining to the central research question first emerged during the interview transcription phase of the study. The insights gained during the transcription process, along with the researcher's notes taken during the interviews *per se*, provided a valuable backdrop for selecting and grouping statements from the transcripts to create 'pools of meaning'. In phenomenographic research, the iterative process of reading and re-reading the transcripts, complemented by listening and re-listening to the interview transcripts, provides the process for designating and exploring the pools of meaning (Allen, 1995; Prosser, 1990; White, 2000). The phenomenographic approach also demands considerable 'sorting and resorting' of ideas through returning to the transcripts in order to capture the meaning of the phenomenon from the perspective of the person who had experienced it (Dahlgren, 1997; Marton, 1988b; Stein, 1996).

While undertaking the analysis the researcher focussed on uncovering the meaning emerging from the data, rather than his own preconceptions on the topic or the extent to which the views expressed in the data supported or contradicted discourse in this domain. Based on the approach adopted by Allen (1995), the researcher endeavoured to suspend his own perceptions in order to enter into the experience of the beginner acupuncture practitioners. In this 'second order' approach, categories were not predetermined, but rather allowed to emerge through a process of analysis and discovery.

In defining the categories of description, the researcher was guided by the approach of Marton (1988b) and Walsh (2000) in exploring differences and similarities in conceptual perspectives as a way of defining the parameters of each category. Major differences between categories were also denoted on the basis of the structural and referential perspectives within the 'pools of meaning' (Prosser, 1990).

Codes were assigned to identify conceptual categories as well as cross-category themes that emerged in the data. The cross-category themes were defined as those pools of meaning, which pertained to the central research question, but were not specific to any particular conceptual category or defined group of categories. The management of such themes is discussed in section 3.4.11 of this thesis.

As the 'pools of meaning' became clearer and defined, the research focus moved from specific transcripts and interviewee statements, to the general positions expressed throughout the group (Marton, 1994a). The 'pools of meaning' became the basis for identifying the categories of description held by the group. In this process of 'analytical juxtaposition' (Hasselgren & Beach, 1997) the focus of the researcher moved from that of seeing individual statements as the basis for pools of meaning towards that of seeing individual statements in the context of the expanding totality of meaning held by the group.

In identifying and distinguishing categories of description, the study utilised the three criteria provided by Marton and Booth (1997b, p.125).

1. Each category must stand in clear relation to the phenomenon of investigation with each category describing a distinctly different way the participants experienced the phenomenon.

2. The emergent categories must stand in a logical, often hierarchical, relationship to each other.

3. The number of emergent categories must be limited to the number required to capture the critical variations in the data.

The emergent categories of description and inaugural analysis became the focus of discussions between the researcher and his supervisors, with interview transcripts revisited as a means of clarifying the emerging analysis. Aspects of the emerging analysis were presented at national conferences on Chinese medicine in 2001 and 2002 in order to gain additional perspective on the concepts and themes identified in the analysis (Ryan, 2001a; 2002).

The emergent categories were analysed to define the inter-category relationships and explore the possibility of a progression in the categories from simple to complex. In accord with the phenomenographic approach of Crawford et al. (1994), Prosser et al. (1994a), Tempone (2001) and Trigwell (2000), the conceptual categories and the relationship between the categories were mapped as 'outcome space' tables.

Following the second round of interviews and the transcription of those audiotapes, these procedural steps were repeated in analysing the second phase interview data. As noted previously, the second round of interviews was not undertaken as a means for measuring change within the group, but as a way of gathering additional data that would inform and provide significant stability to the conceptual analysis in the study.

The data from both interview rounds formed the basis for the overall analysis of the group's conceptual views of acupuncture practice and of learning in practice. The two conceptual maps, indicating the differences and relationships between conceptual positions are represented in outcome space table format in chapters four and five of this thesis. The conceptions of learning identified in this study were subsequently analysed as either 'surface' or 'deep' approaches to learning, and the conceptions of practice as either lower, middle or higher order styles of practice on the basis of specific criteria outlined in chapters four and five respectively.

In accord with phenomenographic protocols, the analysis that emerged from this process was crosschecked by a co-judge to assure validity and reliability (Johansson, Marton, & Svensson, 1985; Massey, 1995; Neuman, 1987; Prosser, 1990; Säljö, 1988; Stein, 1996). Where possible, the analysis was crosschecked against the findings of related research in parallel fields, as an additional step in assuring clarity of the research findings.

As in the phenomenographic studies of Crawford et al. (1994) and Dall'Alba (1995), this study also analysed the frequency of occurrence of each conception of practice and of learning that emerged in the analysis in order to examine the prevalence of each conceptual position within the collective experience of the group. In such data analysis, frequency was defined as the total number of transcripts in which the conceptual position occurred, rather than the number of times the position was reported by each individual

participant. The study also analysed the frequency of occurrence of each conception in terms of gender and age/experience to examine whether these indicators were significant factors in the occurrence of conceptual positions across the group. Relational trends between conceptions of acupuncture practice and conceptions of learning in practice were also explored. In this study the frequency data is presented in proportional rather than percentage terms as the use of percentages can be misleading when the overall number of participants in a study is low.

3.4.10 Limitations of the method: design considerations

Phenomenography contains inherent assumptions and limitations with regard to sampling, research design and analysis, common to most qualitative research methodologies. Webb's (1997a) critique of the intended observational and interpretative neutrality of the researcher in phenomenographic research is of concern in all qualitative research not just phenomenography. The procedures incorporated into this study to limit the effect of researcher bias have been discussed in the preceding sections of this chapter. Methodological concerns pertaining to issues of gender, second order analysis, de-contextualization and analytical simplification have been identified as specific areas for discussion.

Based on a broad review of phenomenographic studies, Hazel, Conrad and Martin (1997) have noted that women's voices are largely absent in phenomenographic research. In part this may be due to the fact that phenomenography has been utilised, by and large, to investigate male dominated disciplines. A more problematic concern is the apparent gender bias in phenomenographic analysis where the description of the participants' experience is normally conveyed in predominantly rational terms. Hazel et al. (1997) maintain that to arrive at a more 'complete' and accurate account of experiential knowledge in the categories of description, both affective and cognitive descriptions of participants' experiences need be included.

With regard to the issue of possible gender bias in the sample of participants, this study ensured that there was appropriate gender representation. Across the two interview rounds, two thirds of the interviews were with females, a ratio that reflected the gender ratio in the participants' graduating class of 2000.

To capture both affective and cognitive descriptions of the phenomena under study, the interviewer employed interview questions that were experientially focussed rather than ones that engaged participants in abstract or theoretical discussion. Consequently, the

resulting data was not seen to be biased towards producing a 'rationally focussed' analysis.

The second methodological concern relates to the extent to which interviews are an accurate procedure for data collection in second-order research. The use of semi-structured interviews to collect data about individual's experience of former events is arguably the most common form of data collection in phenomenographic research and as such has been employed in this study. However the degree to which this method provides an accurate record of participants' experience of phenomenon, rather than their reflections or reinterpretation of this experience, remains a matter of contention (Webb, 1997a).

In recognition of this issue, this study has been careful to design, trial and modify the research questions so that they focussed the participant on recounting the detail of actual recent events. The study avoided the use of interview questions which would have engaged participants in theorising about their experience. Moreover, the second phase interviews provided the researcher with an opportunity to check any apparent discrepancies found in the first stage interview data and refocus participants in accord with the orientation of the study.

One basic assumption in phenomenography is that conceptions of reality reside in the group not just the individuals who form the group. Because conceptions are the collective understanding of the group, it is understood that individuals in the group were able to adopt different conceptions of the same phenomenon and relate to the phenomenon in varying ways within different contexts. The distillation of group meaning from individual experiences can, in the view of (Säljö, 1997), lead to a de-contextualization of an individual's experience of the phenomenon. Phenomenography starts with description and moves to interpretation (Hasselgren & Beach, 1997). Maintaining 'context' was seen as a particular challenge for the research as the focus during analysis moved away from the experiences of individuals towards the collective experience of the group.

In order to counter 'de-contextualization' and any 'wash-out' effect in the final analysis, this particular study has included the discussion of additional cross-category themes as part of the final analysis. Because phenomenography focuses upon the qualitatively different ways individuals experience a phenomenon, other pertinent comments concerning participants' experience might be overlooked. It is the contention of this researcher that discarding such themes in the 'wash out' process of phenomenographic analysis, results in conclusions that appear sanitised.

Cognisant of the critique by Webb (1997a) that phenomenographic analysis can result in streamlining and apparent simplification, this study has retained the additional cross category themes relating to participants' experience of acupuncture practice. With regard to Webb's critique of Marton's surface/deep distinction concerning approaches to learning, this study accords with Entwistle (1997a) and Ekeblad (1997) and retains the distinction as a secondary analysis of learning in practice. The binary deep/surface distinction was not deemed appropriate in the analysis of practice styles.

3.4.11 Management of cross category themes

In addition to the categories of description, which identified the qualitatively different ways in which the group conceptualised acupuncture practice and learning, some additional themes pertinent to participant understanding of acupuncture practice were apparent. These themes were considered by the researcher as significant to the central research question and a clear consequence of the phenomenographic interview methodology that engaged participants in recounting and reflecting upon their experience. While it appears that such data is often discarded by phenomenographers in the 'wash out' effect of an analysis that focuses substantially upon differences in conceptual positions, this study chose to report the major themes for the following reasons:

- the themes were a result of the phenomenographic research process *per se* and as such required comment;
- the themes provided additional insight into participants' experience of acupuncture practice; and
- the themes provided additional insights in a field of study where there was a significant lack of prior research.

The themes resulted from the defined analytical procedure of identifying pools of meaning in the data. These themes appeared across a range of categories but were not clearly specific to any one practice conception or group of practice conceptions.

As some of these themes were peripheral to the focus of the study or infrequently reported, the following criteria were established to decide which themes should be reported in the study:

- the theme was not specific to any one conception of practice or group of practice conceptions identified in this study;
- the theme was significant with respect to the research question and aims;
- the theme was reported in both first and second round interviews; and
- the theme was reported by a significant number of participants in the study, occurring in at least 10 of the total 42 interview transcripts.

In chapter four of this thesis, cross category themes that meet all these criteria are reported and analysed in relation to the specific conceptions of practice that emerged in the study.

3.5   Verification of the analysis

3.5.1   Validity and reliability

The question of validity is as important for qualitative research as it is for experimental studies, however the precise meaning the researcher attributes to the term 'validity' is dependent upon the specific intent of the study. Phenomenography, as an approach grounded in the qualitative intent of understanding reality, is not concerned with producing a research outcome that can be unequivocally generalised to a wider population. However, phenomenography is concerned with generalising the theory that arises from a particular study as a means of making sense of similar situations.

Extending the discourse on validity in qualitative research, Maxwell (1992) proposes two identifiable dimensions to 'generalizability'. Firstly there is an interest in applying the understanding arising from the research within the same community (internal generalizability) and secondly there is an interest in applying the understanding to other similar groups (external generalizability). In both situations the research interest is that of achieving research outcomes that 'inform understanding', rather than the positivistic interest in results that can be applied in proof like fashion across a broader population.

The extent to which the findings of phenomenographic research can accurately inform understanding either within the group being studied or in other similar groups, is fundamentally dependent upon the 'accurateness' of the research analysis. Consequently, the issue of validity in phenomenographic research is focussed primarily upon the accuracy of the analysis and the use of appropriate procedures to ensure that the analysis is able to be verified (Neuman, 1987; Patrick, 1998; Prosser, 1990; Sandberg, 1997).

With regard to the validity of the research design, the issue for phenomenographers is one of the appropriateness of the design with respect to the research aims. The design of a particular phenomenographic study is seen to be 'correct' when the procedures employed produce data and analysis that accurately inform the central research question. The degree to which the design of this study accords with accepted phenomenographic protocols, and the appropriateness of the design with regard to the research aims, have been discussed in the previous sections of this chapter.

As an orientation that seeks to identify and analyse participants' conceptions of reality, it is pivotal in phenomenographic research that the data contains an accurate account of phenomena from the perspective of those experiencing it (Allen, 1995). The degree to which the research data achieves such accuracy is seen as a measure of the descriptive validity of the study (Maxwell, 1992).

In this seminal study of beginner acupuncture practitioners' conceptions of practice and learning, descriptive validity has been achieved through the following procedures:

1. The interview questions engaged participants in describing and reflecting upon their clinical experience, rather than fostering discussion about what should or could happen in clinical practice. Therefore it was argued that the data collected encapsulated the interviewees' experience of the phenomenon.

2. A second round of interviews focussing again upon clinicians' experiences was conducted one year after the initial interviews as a means of significantly expanding the database and ensuring stability of the final analysis.

In phenomenographic research, the validity of the analysis *per se* is dependent upon adherence to established protocols in undertaking the analysis and crosschecking the analysis. At the same time it is acknowledged that the analysis arising from the study is one finding, but not the only possible analysis that could be drawn from the data (Säljö, 1988).

In this study the procedural steps employed to ensure the validity of the analysis were based in the phenomenographic tradition with particular reference to the research methodologies in the studies of Massey (1995), Murphy (1998), Prosser (1990) and White (2000). The validation procedures were as follows:

1. The establishment of clear and justifiable criteria for the selection of a cojudge, based upon the specific nature of the study.

2. The provision of clear instructions to the cojudge for the purpose of cross checking the analysis (Appendix C)

3. The requirement of a high degree of cojudge agreement with the analysis arising from the study (Marton, 1994b; Säljö, 1988).

4. The requirement of consistency of the analysis with the outcomes of similar studies. (NB. It was acknowledged that limitations existed with regard to this requirement since the study was undertaken in an area where there had not been any previous phenomenographic research).

5. The requirement of a high degree of internal consistency or internal logic within the categories of description. The imperative for internal consistency is based in the phenomenographic hypothesis that there are a limited number of coherent

conceptual perspectives within the group regarding any specific phenomenon. Category stability was achieved through a process of reviewing and revamping the provisional analysis until the categories were 'stable'.

The research was undertaken in clear recognition of the 'uncontrolled' qualitative nature of phenomenographic studies, and with the understanding that it was not reasonable to expect an exact replication of the results and analysis if the study were repeated. Research reliability in this and other phenomenographic studies, pertains not to the issue of replication but instead to the degree of agreement provided by a cojudge or cojudges about the analysis reached (White, 2000). Phenomenographic literature suggests that the level of cojudge agreement should be significantly high with some authors attempting to quantify this as being in the order of 80% (Johansson et al., 1985; Massey, 1995; Neuman, 1987; Säljö, 1988; Stein, 1996). Cognisant of the difficulties associated with quantifying the level of cojudge agreement as a percentage, this study adopted the more general measure of 'a significantly high level' of cojudge agreement.

Critique concerning the use of cojudges as an effective means for ensuring validity of the analysis has been advanced by Jamieson (1998), Patrick (1998) and Sandberg (1997). Their critique focuses primarily upon the role of the cojudge as that of crosschecking a given analysis rather than that of engaging with the data in a phenomenographic process of discovery without prior knowledge of the researcher's provisional analysis.

Inherent in such critique is the assumption that the cojudge, by following the same steps as the researcher, would arrive at a similar analysis. However, the assumption is in contradistinction to the qualitative view that no findings dealing with social/psychological phenomena are probably reproducible (Strauss & Corbin, 1990). Their critique is at odds with the sustainable position that different researchers are quite likely to draw slightly different conclusions from the same data (Marton, 1988b; Massey, 1995; Säljö, 1988).

While cognisant of the critique on this issue, this substantive study followed the phenomenographic tradition of engaging a cojudge to crosscheck the analysis. The study was undertaken with the understanding that phenomenographic analysis is essentially a 'form of discovery' based in the researcher's relationship to the perceived phenomena, with validity assured through adherence to accepted analytical procedures and verification of the outcome by an independent cojudge.

3.5.2   Cojudge role and instructions

In spite of Sandberg's (1997) reservations about the effectiveness of cojudges as a means of ensuring validity in phenomenographic analysis, the lack of an agreed alternative has seen continued use of cojudges in such research. In view of this and in consideration of the arguments in favour of cojudge verification advanced by Marton (1986) and Säljö (1988), it was considered appropriate to engage a cojudge in this study.

The cojudge role in the study was for the customary purpose of analysis crosschecking, as well as providing comment on the additional cross-category themes identified by the researcher. In undertaking the task of crosschecking the analysis the cojudge was provided with the following documents:

- a list of instructional steps outlining a procedure to follow in crosschecking the proposed analysis (Appendix C);
- a summary tentative analysis of the conceptual categories of acupuncture practice and learning. The analysis included an explanation of the meaning ascribed to each descriptive category in terms of practitioners' aims (Referential parameter) and the strategies employed in achieving those aims (Structural parameter). The analysis also included 'Outcome Space Tables' which displayed the categories of description and their inter-relationships;
- the coded interview transcripts with written notation indicating particular conceptual categories or themes;
- a summary of transcript references for each phenomenographic category; and
- a summary of the additional themes relating to acupuncture practice and transcript references for these themes.

Discussions between the researcher and cojudge concerning the focus of the research, the phenomenographic approach and the cojudge role ensured clarity of purpose prior to the commencement of the verification process.

3.5.3   Cojudge selection criteria

In phenomenographic studies where a team undertakes the research, it is common for the cojudge verification to be undertaken jointly by the team of researchers (Prosser et al., 1994a). In some team studies, research protocols require participant researchers to each undertake their own category analysis and then, through an iterative process, arrive at a group consensus on the analysis (Trigwell, 1994). In other studies, the team approach requires that the group collectively uncovers the categories of description and collectively refines these to achieve an agreed analysis (Bowden, 1994). Another

variation is seen in phenomenographic studies that employ research assistants, to assist in both data collection and crosschecking the analysis (Prosser, 1994b).

Takman and Severinsson (1999) in their study of health care professionals' experiences of encounters with clients, engaged a 'second researcher' or 'secondary author' of the research report to crosscheck the analysis. However in most phenomenographic studies undertaken by single researchers, and even in certain phenomenographic studies undertaken by a research team, a standard verification practice is that of cojudge crosschecking.

In this study, the criteria for cojudge selection was based on the observed 'best practice' within the phenomenographic tradition, with the pivotal criteria being:

1. Knowledge of the area being researched.
2. Knowledge of and experience in qualitative research.
3. Knowledge of and experience in phenomenographic research.

In disciplines where phenomenography has been developed as a research methodology, it is possible to identify cojudges who meet all three selection criteria. However, in the field of Chinese medicine, where the dominant research emphasis has been on quantitative studies that measure clinical efficacy and phenomenography has not been previously employed as a research orientation, it was not possible to identify a cojudge who met all the stated selection criteria. A cojudge knowledgeable in the area being researched and experienced in qualitative research (criteria 1 & 2) was selected on the proviso that this person was also willing to gain familiarity with the orientation and methodology of the phenomenographic tradition (criteria 3).

With regard to the latter, the cojudge was provided with a range of pertinent articles and a synopsis of the phenomenographic method. After reading these articles, discussions between the cojudge and researcher ensured clarity of purpose and expectation. In this manner, the study was able to engage a cojudge who would undertake the crosschecking activity in a competent and fruitful manner.

3.5.4 Cojudge report

After completing the crosschecking of the analysis, the cojudge provided both written and verbal feedback reports. The cojudge confirmed the category analysis undertaken by the researcher, stating a high degree of agreement with the designation of each category.

With respect to the analysis of the group's conceptions of learning, the cojudge was in total agreement with the analysis provided by the researcher and assisted in clarifying the respective structural and referential conceptual descriptors. The cojudge also reached a significantly high level of agreement with the researcher's analysis of practice styles, however there was considerable discussion and feedback concerning the exact terms used to describe and distinguish between descriptors in the referential axis. The dialogue on this matter assisted in 'sharpening' the final analysis.

Numerous notes were provided by the cojudge in relation to the 'cross-category themes'. Feedback and clarification was provided by the cojudge regarding the themes, with some additional themes or subsets of major themes identified. The cojudge also noted variations in understanding amongst the participants with regard to their views about 'illness', 'healing' and 'holism'.

Subsequent discussions between the cojudge and researcher proved valuable in exploring the precise meaning of the themes, the variations in the group conceptual positions, and the details of the phenomenographic category analysis. In contrast to the reservations expressed by Sandberg (1997) concerning the value of cojudges in phenomenographic research, this study found that the inclusion of a cojudge in the research procedure provided a process for verifying the analysis and a means by which the analysis could be 'sharpened' through feedback and dialogue.

3.6   Chapter summary

The aim of this study was to identify, explore and analyse beginner acupuncture practitioners' conceptions of clinical practice and of learning in the context of clinical practice. The study was grounded in the phenomenographic belief that the way in which individuals conceptualise a particular phenomenon influences how they act in relation to the phenomenon. As such, the study did not attempt to understand the phenomenon *per se* nor provide an analysis of the individuals in the study. The study rejects attempts to 'objectify reality'.

In accord with the phenomenographic orientation, this study was not based in any ontological assumptions or *a priori* stance about the nature of the phenomena under study. The study was seen by the researcher as a 'discovery' focussed upon identifying and understanding participants' experiences of two particular phenomena – acupuncture practice and acupuncture learning.

While the phenomenographic method has its roots in the field of educational research, particularly in studies of teaching and learning, this chapter has argued the appropriateness of the phenomenographic approach in understanding health practitioner orientations to practice and learning. The chapter has shown that the phenomenographic approach accords with the specific aims of the study and argued the appropriateness of the method based upon the use of phenomenography in similar Health Science research.

The methodology for this peculiarly 'second order' study assumed that semi-focussed interviews provided an accurate account of participants' experience and not just their reflections about former events. To achieve the required 'second order' focus in the data, the interview questions were designed to engage participants in recounting the details of actual events, rather than theorising about events.

The study accords with the phenomenographic orientation concerning the relationship between conceptions and individual actions, and supports the view that conceptions are the collective view of the group rather than the property of any one individual. The study adheres to the phenomenographic view that the range of conceptions within the group are situated in a spectrum from 'basic' to 'complex', with basic conceptions subsumed within complex ones. The role of the researcher in this type of study is understood as that of identifying, analysing and mapping the relationships across the range of conceptual positions.

In assuring the quality of the data and resulting analysis, a second round of interviews was conducted with the group, one year after the initial interviews. The combined interview data from both phases was synthesised to provide the basis for the analysis. The analytical steps, which commenced with identifying pools of meaning and then moved to category identification and conceptual mapping, were defined on the basis of protocols utilised in similar phenomenographic studies. The validity of the analysis was assured through adherence to phenomenographic principles and through a crosschecking process undertaken by a cojudge.

In summary, this chapter has detailed the methodology employed in the study and the way in which the study is consistent with the phenomenographic tradition. The findings from this process in relation to conceptions of clinical practice, conceptions of learning in practice and practice related cross category themes are presented in chapters four and five of this thesis.

Chapter 4

Conceptions of Practice: Findings of the Study

4.1   Introduction

Chapter four describes and analyses beginner acupuncturists' conceptions of clinical practice. In this study, five qualitatively different models of practice were identified from the interviews with the participants. These five orientations form the categories of description of the phenomenon 'acupuncture practice' as participants in the study experienced it. The meaning of each category is detailed in this chapter with representative quotations from the interview data to convey the nuances of meaning as is customary in the presentation of phenomenographic research findings. When viewed together, these categories of description represent the range of conceptual positions within the group.

Each of the five conceptions is designated as a qualitatively distinct orientation to practice on the basis of practitioners' aims and the strategies employed to achieve these aim. The analysis of the relationships between each of the five conceptions of practice is specified in terms of these two referents – the practice aim and strategies. The conceptual analysis is displayed in outcome space table format accompanied by a detailed explanation of the differences and relationships between each of the five categories. Based upon the outcome space table results, the study also analyses the five conceptions of practice in terms of their level of complexity (lower, middle or higher order conceptions), their frequency of occurrence and their occurrence in relation to specific indicators.

This chapter also reports and analyses three major themes, which although not specific to any one particular conceptual category or group of categories, provide insight into the group's experience of the phenomena of clinical practice. These cross-category themes are reported and analysed in relation to the five conceptions of acupuncture practice identified in this study.

The chapter is organised into four sections. The first presents the major findings - the categories of description of beginner acupuncturists' experience of clinical practice. The second analyses the relationship between these different categories as representative of the collective conceptual map of the participants. The third explores the distribution of the five conceptions across the two interview rounds, with respect to gender and age/prior

experience. The fourth presents and explores the major cross-category themes in relation to the five conceptions of clinical practice.

4.2   Categories of description

The categories of description represent the qualitatively different ways in which the group of participants experienced the phenomenon under study (Bowden, 2000a). Based on studies by Crawford et al. (1994), Prosser et al. (1994a) and Tempone (2001), this study distinguishes the qualitative differences between the categories of acupuncture practice on the basis of practitioners' aims in the clinical encounter and the strategies employed in achieving these aims. In accord with phenomenographic principles, the five categories of acupuncture practice identified in this study are not an *a priori* set of categories, but categories that have arisen from the interview data and as such represent the participants' experience of the phenomenon of acupuncture practice.

The five categories of acupuncture practice identified in this study are:

- **Category 1 Practice: Problem centred.** The aim of the practitioner in the Category 1 approach is to resolve the client's presenting condition by applying skills and knowledge in diagnosing and treating the presenting condition.
- **Category 2 Practice: Fixing and advising.** The aim of the practitioner in the Category 2 approach is the same as that in Category 1, but the strategy employed is different to the extent that in addition to treating the condition the practitioner also advises the client to make lifestyle changes that will support the therapeutic effect of the treatment.
- **Category 3 Practice: Channelling change.** The aim of the practitioner in the Category 3 approach is to channel healing energies to the client to effect personal change. The Category 3 model is distinct from the Category 2 approach in that the focus is more holistic and oriented to change at a deep level. However, as the change is dependent upon the actions of an external force, both client and practitioner are secondary agents for change.
- **Category 4 Practice: Empowering the client.** The aim of the practitioner in the Category 4 practice model is to empower the client and facilitate change in a healing process in which power is shared between the practitioner and client.
- **Category 5 Practice: Flexible and negotiated.** The aim of the practitioner in the Category 5 practice model is to strategically adapt the clinical model in accord with the nature of each clinical encounter.

Each of the five categories represent qualitatively different positions on acupuncture practice with respect to the aim, the strategies employed in achieving the aim or both. In the detailed presentation and explanation of each category, transcript excerpts are included to convey the meaning and qualitatively unique perspective of each position. The transcript excerpts have been coded to protect the identity of the participants. The initial letter of the code denotes the specific participant; the second letter indicates whether the participant is female or male (F or M); the following number indicates whether the excerpt was taken from a first or second round interview (1 or 2) and the concluding item specifies the page number of the transcript excerpt.

4.2.1 Category 1 Practice: Problem centred

In the Category 1 view of practice the practitioner focuses on resolving the client's presenting condition by applying acquired knowledge and skill. The therapeutic encounter is concerned with correct diagnosis and the application of appropriate therapeutic interventions. In this approach where the practitioner is concerned with 'getting a good result' by resolving the presenting condition, the practitioner's level of knowledge and skill are critical. The practitioner is the key agent of change with the client having a secondary role of cooperating with the practitioner. While the client does initiate the process by seeking help from the practitioner, the client is dependent upon the practitioner's abilities and is not empowered in the healing process.

> *I recently had one of my father's friends come in for a treatment on his frozen shoulder...And I got good results out of it. He got movement back in his shoulder and I spoke to him recently, and he does not have any pins and needles anymore* (VF1p.4).

> *You have to get some results. And if they are coming for treatment of their back or shoulder, then they are not going to want you to do other things or treat other things. They just want their shoulder better, and you have usually got only three or four treatments to do that in* (VF2p.2).

The following excerpt also illustrates that treatment is 'problem focussed' with the practitioner being the main agent of change.

> *There was one patient who was very tired all the time and had a very sore back...So I needled along the jaiji points of the back, and point injection therapy on the kidney shu points and stomach 36...I did this treatment every day and after that he didn't feel any more tiredness or back pain. And*

people said to him, what did you [the practitioner] *do? You look so well* (PM1p.3).

A similar problem focussed approach is expressed by another practitioner in the following exchange.

> Practitioner: *By the fourth treatment we had the pain on a scale of about 1 out of 10, and she decided that she was contented and happy with the result. I talked to her a week later and she said the knee had been great...*
> Interviewer: *Did you go through a full diagnosis, or just focus on the knee?*
> Practitioner: *I just focussed on the knee* (DM1p.1).

These excerpts and the following indicate that clinical results are credited to the practitioner, not the efforts of the client or any other factors.

> *She has got all these gynaecological problems over the past few years, and I have only just started treating her. So it will be interesting to see whether I get good results with this one because I actually see this as quite a challenge* (JM2p.2).

In the face of poor clinical results, the practitioner tends to search for other treatments that can be applied to resolve the presenting condition.

> *So I started treating him and wasn't getting any sort of real results, nothing more than he was already getting. And I thought there has got to be something I can do. I know that the surgery has done a lot of damage and blocked his Du Mai channel because there is a big scar there, but I thought there has got to be something more I can do* (JM1p.5).

In this approach to treatment, specific client problems are segmented and these problems become the focus of diagnosis and treatment. Overall the approach appears to be reductionist rather than holistic, problem-centred rather than person focussed.

I saw a guy a few days ago at one of the detox centres. He was a poly drug user. He had mainly been using 'ice'. And he had cancer of the oesophagus, and he had a broken hand at the time and a broken foot. He had a lot of neck and back problems, and his whole body structure was out of whack. Lower on one side than the other. So I treated his back (MF1p.2).

Some participants critiqued the Category 1 practice model as unworkable because of the questionable expectations it fosters.

Well. Some patients come in for treatment, and in that hour they expect everything to change. But if they are not changing anything in their daily routine that is going to better their condition, then acupuncture treatment once a week is not going to do anything...And then they think that acupuncture doesn't work, so you get frustrated (CF1p.4).

But it was frustrating because he would come in and we would fix him, and then he would go home and get worse again (TM2p.2).

Another guy I have been treating for about seven months, once a week. He comes in because his wife tells him to come in. And I'm not getting any results with him whatsoever...He doesn't come in with anything major, so I'm battling with the issue of maintaining his health (GF1p.4).

In Australia, where the vast majority of acupuncturists operate as solo practitioners, the Category 1 approach can place considerable pressures upon the practitioner.

I just use what I have already learnt and try my best. That is all I can do, because I do not have somebody behind me like a master telling me 'this you have done right', or 'that is not good enough'...So it comes back to your original question and the fact that we are practising completely on our own (WF2p.6).

The 'problem focussed' approach in the Category 1 model can easily result in a symptom focussed treatment approach, contrary to the espoused theory belief that treatment should be holistic.

Practitioner: *He enjoyed the first treatment and it certainly did have the effect of helping him sleep a bit better, and addressing the night sweats, and perhaps a bit of the anxiety, and stuff like that. But I just didn't get to the core of things.*

Interviewer: *So your frustration was that although you were having an effect, it was only on a surface level?*
Practitioner: *Yes that's right. Just on the detox level* (SF1p.2).

So treatment is often about chasing symptoms and pinpointing what is going to be the worst thing for the next few days and then treating accordingly (FF1p.5).

However, other participants expressed the view that a 'problem focussed' approach can be orientated to resolving underlying causes rather than just symptoms.

I do focus mainly on the problem since this is what is concerning the client. This does not mean however that I only treat symptomatically (MF2p.8).

I do a full diagnosis and after that I concentrate upon the symptom they came with at the same time. I relieve the symptom and at the same time treat the constitutional [underlying constitutional disharmony] (PM2p.1).

If the patient comes and says they have a headache, then maybe I would treat the headache...And maybe I would treat other symptoms and problems causing the headache (NM2p.1).

Because the practitioner is ultimately responsible for effecting change, practitioner frustration arises when change is not forthcoming.

It [pain] *moved into his shoulder and we started working on that, and we haven't seen him for a couple of weeks. But yes, yes it was quite frustrating working on someone who doesn't get better* (TM1p.3).

Another source of frustration with the Category 1 style of practice is that, contrary to the espoused theory of Chinese medicine, the model is not holistic in its diagnostic focus or treatment approach.

But they [clients] *see their sore neck, crook shoulder and aches and pains...and they either don't want to or don't know how to put that in the overall picture of their health. And if we can take the edge off the pain and make it a bit better, then they seem to be happy with that. Whereas we are trained to see it more broadly* (FF1p.1).

Another practitioner comments upon his reluctance to adopt the Category 1 approach even when clients expect it.

> *He just wanted instant relief. He didn't want help, he just wanted relief from the symptoms. So eventually I focussed on that and the interaction* [practitioner-client] *was much better* (HM1p.5).

In the Category 1 model, the practitioner's role is that of a 'problem solver' who provides the client with relief.

> *My role? Basically they are coming for pain relief I guess, while others are coming because they see me as a healer and are looking for a solution to their problems* (DM2p.3).

> *I didn't talk a lot, but I treated her. And then I think I saw her a week later and there had been a major improvement* (BF1p.1).

In summary, the overall aim or intention of the practitioner in the Category 1 style of practice is that of resolving the client's presenting problem. The practitioner achieves this aim by acquiring and applying a body of knowledge and skill that is appropriate for resolving clinical problems. In terms of learning, this approach requires that the practitioners acquire considerable expertise, since they rely upon their own abilities in order to 'fix' or 'resolve' the client's presenting condition. Such high levels of practitioner responsibility can lead to practitioner frustration when expected treatment outcomes are not achieved.

While the Category 1 model can easily lead to a symptom focussed approach in diagnosis and treatment, some who practice in this way also employ a comprehensive approach to diagnosis and treatment in which both symptoms and the causes of the disharmony are treated.

In the Category 1 orientation, the practitioner is seen to be a 'problem focussed master technician'. The approach is characterised as problem focussed as opposed to being person centred. The client takes on the secondary role of attending for treatment as required, but not undertaking lifestyle changes that would support the treatment effect.

While not explicitly stated by participants, this practice orientation implies that illness is an inconvenience that needs to be removed from the client's life, ostensibly by the actions of the practitioner. By implication, good health is seen in terms of the absence of illness

rather than the maximisation of the client's potentials. Ironically such perspectives are often criticised by complementary health practitioners as inadequate and commonly found in biomedical practice.

In the first round interviews, the Category I model of practice was reported by 18 out of 24 participants in discussions about their clinical experiences. In the second round interviews 13 out of the 18 participants reported the Category 1 orientation. The figures do not indicate how often this approach was employed, nor are the figures a basis for concluding that participants who did not report the Category 1 orientation never adopted this perspective.

4.2.2   Category 2 Practice: Fixing and advising

The practitioner's aim in the Category 2 model of practice is similar to that in Category 1 with the focus upon resolving the client's presenting problem. As with Category 1, treatment is either directed towards symptom relief and/or resolving the deeper origins of the presenting condition. The Category 2 model differs from that of Category 1 in that the locus of power in the healing process shifts to involve the client as an active participant in the healing process. While the practitioner is still the primary agent of change, the client is involved in a secondary way in making lifestyle changes as directed by the practitioner. These lifestyle changes, of which dietary change was the most commonly reported, are specified by the practitioner and directly related to the client's presenting condition.

> *The treatment would work for a few days, but because he is a hot type of person he has so much energy. He can't sit down. He has to keep moving and doing things and this doesn't help. So I also advised him on his diet* (XF1p.2).

> *It was the first time the guy had had acupuncture...I encouraged him to cut out the spicy pizza. I told him to cut that out...I saw him again a week later and he said 'It's gone'* (TM1p.1).

> *I give them the information and tell them how important it is, but whether they go by that?...I know how hard it is* [to follow advice] *because I'm like that. There are certain foods I just love, like spicy foods I know I should not be eating them, but I do* (XF1p.5).

The following excerpts from a selection of transcripts represent the range of advice provided to clients.

> *With asthma patients I tell them about the foods to eat or avoid* (PMp.4).

> *Nutrition is very important. And I advise them on what they should avoid, depending upon their constitution* (CF1p.3).

> *We advise people on their diet, exercise, work and stress* (NM1p.2).

> *She was drinking because she thought it was good for her, not because she was thirsty. So I said, I want you to drink only when you are thirsty, not because you think you should* (DM1p.2).

> *I have told him that he needs to relax more. I have told him to take a quiet walk in park rather than going to the gym and doing things like that* (MF2p.5).

While personal lifestyle change was acknowledged as being difficult, the Category 2 approach insists upon the client doing their part to support the treatment effect.

> *He's been told by practitioners to change his eating habits but he won't comply with that. He doesn't really want to help himself. He just comes in* [for treatment]; *its almost as if he comes in for company sometimes...I know someone else who's been treating him, and they are quite frustrated. Because he wouldn't listen to what they are saying...They found that they couldn't make much improvement if he was not going to take their advice* (MF1p.4).

Other practitioners expressed doubt about the level of client cooperation in making the necessary lifestyle changes.

> Interviewer: *Do they have a role in getting better?*
> Practitioner: *They do. I always advise them but I don't know whether they follow the advice or not* (PM2p.6).

Yet some practitioners were satisfied with the level of client cooperation in following advice.

Interviewer: *And do they listen to you?*
Practitioner: *They do listen!* (RF1p.3).

In this approach the practitioner directs and advises the client, rather than empowering the client to take charge of her or his health. In the Category 2 model, power and knowledge still reside primarily in the hands of the practitioner.

> *They are at point A and want to get to point B, and I am the vehicle that's going to get them there. And if they are not willing to put petrol in the car, that vehicle is not going to work for them...If they don't listen to what I have to offer, they are not taking it seriously* (CF1p.3).

Practitioners who invoked the Category 2 model also reported that in many instances clients did not follow the advice provided. The following comments from three different practitioners provide some insight into the difficulties practitioners experienced.

> *I was treating this athlete, and I suggested that he didn't train for the rest of the week. And as soon as the treatment was over he went and did a run, and the next morning he was in pain. And I thought 'What did I tell you'. He didn't listen, so the effect of my treatment has gone out the window* (CF1p.4).

> *He still comes for treatment and gets results, which is nice...But in terms of him following my advice! Well, his diet is useless! And he is not supporting what I am trying to do* (GF1p.3).

> *He [the client] has been told about his diet many times. He complains and sees everyone, naturopaths and others. And complains 'all they ever tell him is to change his diet, and no one can help me'...'But I am not going to change my diet, and that is that'* (EF1p.6).

In being proactive on the issue of client compliance, one practitioner insisted that clients keep a diary as means of monitoring client compliance and progress.

> *And also just giving her some gentle advice on diet and what she should be looking at. And she is keeping a diary for me so I can actually see what she is doing* (SF2p.1).

In summary, the overall aim or intention of the practitioner in the Category 2 style of practice, as with Category 1, is that of resolving the client's presenting problem. The Category 2 model differs to that of Category 1 in terms of the strategies the clinician employs to achieve the desired therapeutic outcomes. In the Category 2 model practitioners not only apply their knowledge and skills to resolve the client's presenting condition, but also direct clients to make specific lifestyle changes. In all cases the advice provided to clients was specific to the presenting condition, rather than general in nature.

This approach to practice, which conceptualises the practitioner as an 'expert clinician and consultant/advisor', places significant demands upon the practitioner both in terms of his or her knowledge/skill level and ability to provide appropriate directives. With regard to learning, this approach requires that in addition to the learning expectations in Category 1, the practitioner is knowledgeable in a broad range of lifestyle matters in order to be able to advise the client.

Power in the healing process rests primarily with the practitioner who advises, informs and directs the client, rather than educating or empowering the client. However, unlike the Category 1 model, in the Category 2 model clients have a specified role.

As with the Category 1 approach, illness is seen as an inconvenience which needs to be removed from the client's life. The implication in this view is that good health is defined in terms of the absence of illness, rather than client wellbeing. The Category 2 approach is clearly 'problem focussed' rather than person-centred, with both the practitioner and client involved in resolving the presenting problem. Client compliance in following the practitioner's advice was noted as an issue in this approach. Lack of client compliance often led to feelings of frustration on the part of the practitioner.

In the first round interviews, the Category 2 model of practice was reported by 12 out of 24 participants in discussions about their clinical experiences. In the second round interviews 8 out of the 18 participants reported the Category 2 orientation. In interpreting these figures the same caveats raised in the concluding paragraph of section 4.2.1 also apply.

4.2.3   Category 3 Practice: Channelling change

The Category 3 view of practice is significantly different to other notions of practice identified in this study in that the role of the practitioner and the nature of the healing process is mystified with the invocation of more powerful and mysterious external forces to effect healing. In this approach the practitioner acts as a medium in channelling healing

power to the client to effect change at a deep personal level. The cosmic, universal or spiritual forces that the practitioner invokes are partially understood by the practitioner, but still perceived as being mysterious, partially unknowable and largely beyond the control of the practitioner.

In this approach the practitioner, who has learnt the art of connecting with these higher powers, acts as a channel for healing change. The client's role is one of accepting the guidance of the practitioner, and where expected, doing their part in the healing process. In terms of the practitioner-client interaction, the model shares some similarities with the Category 1 and 2 practice conceptions in that the client is somewhat dependent upon the practitioner as a channel for healing. However, the Category 3 model differs from the Category 1 and 2 view of practice in that the ultimate power in the therapeutic process rests not with the practitioner but with more powerful external forces.

In some of the transcripts the external power was seen as a spiritual force and in others simply a cosmic force. In other words, while some practitioners saw this model in terms of spiritual healing others advanced a non-religious perspective of the phenomenon. Of all the categories of acupuncture practice identified in this study, Category 3 was the most difficult to describe. It has been included in this analysis because it represents a qualitatively distinct experience of the phenomenon of acupuncture practice and as such is important to the focus of this research.

Because the Category 3 orientation views illness as complex and multidimensional, it offers the client a more evolved perspective of health than that found in Categories 1 and 2. In the Category 3 orientation, healing is not viewed in terms of symptom relief or the resolution of the underlying physiological causes of the client's condition, but as deep personal healing. The ability to effect such deep and complex change is seen as being beyond the healing capabilities of the client or practitioner and as such requiring the intervention of external forces.

> *I asked my spirit guide to tell me her problem. And my spirit guide said 'No'! So I asked her higher self to come to me and talk to me. Because she was more conscious of her spiritual self than her physical self, that's the level on which the healing needed to take place…So when she came the next time for treatment, I did some healing work on her. And she said to me 'What do you see'?…[And I said] the energy pattern left by the trauma hasn't shifted from you yet. You have quite a lot to let go of on an energetic level…I gave her a spiritual healing and there was all this bad energy coming out of her lung (QF1p.2).*

The same practitioner adds a little later in the interview.

> *And when I do healing or acupuncture, I think of myself as just a vehicle.*
> *This information and energy is just passing through me. And I am just this*
> *little child who doesn't know what is really going on and can't understand it.*
> *I recognize that it is not me who is doing it (QF1p.4).*

Not all practitioners who invoked access to 'higher powers' conceptualised this within a spiritual perspective. The following practitioners viewed this other power as a 'universal force or energy'.

> *There is plenty of universal energy to be drawn upon. In that sense we*
> *become mediums for the transmission of energy. So we need to foster our*
> *own clarity and not impose our own patterns onto it (OF2p.6).*

> *So there is an element of the universal force at work. And a lot of the time*
> *when I am treating I do have instinctual gut feelings. Things that I am not*
> *seeing physically or feeling in the pulse, all of a sudden just come to*
> *me...So I put this down to some universal connection (JM1p.9).*

In discussing a specific case of channelling healing energy, the following practitioner insists that clients must also play their part in the process of personal change. However, other practitioners did not express this view, which indicates that there is some variation within the Category 3 view of practice.

> *I see it is really important for people to take responsibility for themselves in*
> *the healing process. And for them to recognise that it is a process and the*
> *process is never really over. I can't do the job for them. I can do certain*
> *things to help them and put needles in certain places. But they have to go*
> *home and continue to work on themselves (QF1p.4).*

The actual way in which different practitioners acted as intermediaries and channels of healing energy, varied.

> *I will meditate with clients while the needles are in and they are comfortable*
> *resting. Acupuncture points assist the process and focussed meditation is*
> *used to assist clients deal with the underlying emotions (HM2p.7).*

> *Somehow, through the grace of God obviously, I am able to feel viruses*
> *and bacteria in various areas. I feel if they have had some virus and it is still*

hanging around. By using acupuncture and energy healing we can get it to move out (QF1p.3).

My goal is to work like this. Just to focus on basic diagnostic questions and the pulse, and then work with them [clients] *by looking at their aura and their meridians and feeling what is happening. And this is the way the lady in America works, her healing is channelled* (EF2p.3).

Belief and trust in external forces and their influence upon people's lives is a cornerstone of this approach.

I completely believe that [power of the universe in our lives]*...And from that belief I should just trust that who ever comes for treatment...It is for the right reason* (EF1p.6).

And it [Chinese medicine] *goes so well with my spiritual healing. It is all energetic. It's about energy. I see it* [Chinese medicine] *as another aspect to my spiritual healing* (EF1p.7).

I never wanted to be a doctor. I never had an overwhelming urge to heal people. It is more a matter of me wanting to understand about microcosms and macrocosms, and the flow of energy in the universe, and how this person is a reflection of the universe (OF1p.6).

Another practitioner comments.

Personally I believe that there is a dimension or realm there that everyone can connect with. It is just a matter of practising and training yourself to connect with it. And if connecting to the realm opens up other avenues for practice, then that is fantastic (JM2p.4).

In this perspective some practitioners also believed that greater universal forces were even responsible for directing clients to particular practitioners for treatment.

It is like an energy that is out there and people are just attracted to you...I don't know how it works, because in the Health Practice Unit we are designated clients [to treat]. *We don't pick them* (AF1p.3).

The Category 3 model of acupuncture practice is distinguished from other styles on the basis of both the practitioner aim and the strategies employed by the practitioner to achieve the aim. In this approach the practitioner acts as a channel for healing energy

and achieves this by connecting with the cosmic, universal or spiritual realm. It appears that clients are often involved in the healing process in some secondary way although the degree to which they are involved in undertaking lifestyle and attitudinal change is unclear.

In terms of practice related learning, the Category 3 approach requires that in addition to being a competent acupuncturist, the practitioner must develop the ability to interact with and channel healing energy. In distinction to Categories 1 and 2, the Category 3 approach views healing in terms of deep personal change, rather than symptomatic relief or the resolution of underlying physiological causes. From this perspective it appears that illness is often seen as a consequence of detrimental beliefs and associated behaviours over a long period.

The Category 3 practice perspective is more holistic than that in Category 1 or 2 with respect to its assertions about health and illness. However, its appeal to a higher force or external power to resolve health imbalances fails to empower clients because it promotes dependence upon realities external to the individual. While there is some degree of overlap between the Category 3 style of practice and the view that there is a spiritual dimension to practice (Theme C section 4.5.3) this study has identified the two as distinct facets of participants' experience of practice.

Although the Category 3 approach to practice was not common amongst participants, it represents a qualitatively different approach to acupuncture practice in terms of both referential and structural dimensions. Over the two interview rounds 7 different participants reported using the 'channelling energy' approach. The Category 3 model of practice was identified in 6 of the 24 first round interviews and 6 of the 18 second round interviews. In interpreting these figures the same caveats raised in the concluding paragraph of section 4.2.1 also apply.

4.2.4   Category 4 Practice: Empowering the client

The Category 4 model of practice is one in which the practitioner empowers the client to take charge of her or his own health. The practitioner provides treatment, which may be specific to the presenting condition or more general in focus, and at the same time educates the client to take charge of her or his overall health. In this model of practice power is shared. The client has the primary responsibility for determining and making necessary lifestyle changes. The practitioner has responsibility for providing acupuncture treatment, information/education and client support.

In distinction to the Category 2 approach the practitioner does not advise the client in a directive manner but rather educates the client with the expectation that the client decides upon specific lifestyle changes. Over the course of treatments the practitioner supports and reflects with the client about lifestyle changes and provides information where required. Unlike the Category 2 model, personal lifestyle changes are not limited to behavioural areas but also include changes to attitudes, beliefs and values.

As with the Category 3 approach, the Category 4 focus is more upon healing and person, than the client's presenting condition. Good health is seen in terms of personal wellbeing rather than just the absence of discomfort. Illness is seen as multifaceted and healing is seen as a complex ongoing process.

The following excerpts provide general insight into the practitioner-client dynamic in the Category 4 practice orientation.

> *I mindfully create a situation where the person doesn't feel like I have all the knowledge, and am doing it to them. And that's what makes their health better. I try to involve them* (UF1p.5).

> *I think that change of view has to come from them* [the client]. *You know, some people have this wall up and I don't think it is our job to break that wall down because they have to do it. That is their job* (SF1p.7).

> *It is not just my work* [client healing], *it is also their work. And if they are not doing their part, all I can say is 'This is what I can give you, and this is where I can take you'. I might give them some options, some exercises they can do* (HM1p.5).

Encouraging clients to become more involved in their own health and take a higher level of responsibility is a key feature in this approach.

> *I really encourage people to take responsibility for their own healing. And my role is to facilitate and help them on the path of their own healing. Help them achieve a bit of balance in areas where they may be out of balance. And also educate them* (EF2p.5).

> *I want them to understand, and that gives them more responsibility for their health...Putting the responsibility back onto them and empowering them* (AF1p.7).

This approach to healing is an inclusive one of 'working with the client', rather than one in which the knowledgeable practitioner 'acts for the client'.

> *I think the important thing is that they take responsibility for half of the healing...They need to feel part of that rather than saying 'my health responsibility is in your hands; you fix me'* (JM2p.8).

The following transcript excerpts provide some specific examples of how practitioners implemented the Category 4 practice model.

> *In some sessions I might be on the floor with the client doing* [teaching] *exercises and stretches, and suggesting things to them. And then getting feedback the next time I see them* (FF2p.2).

> *I set a monthly plan and try to review it. And I use the review sessions as an opportunity to bring up issues that they said they were going to do...So I do try to educate them. But when I have someone who doesn't really want to* [take responsibility]. *Someone who only wants a quick fix, that does make it difficult* (KM2p.2).

> *I commence the interaction* [clinical encounter] *with an impression of respect for the individual. And then I make efforts to share the power dynamic in the room by my body language, my manner of speech and style of questioning. So for example, I would not sit with the table between myself and the client. And I tend to avoid writing notes for the first five minutes* (UF1p.2).

Client-practitioner rapport was seen to be particularly important in the Category 4 model of practice that relies upon cooperation and mutual involvement in the healing process.

> *As we developed a relationship he was more willing to open up a bit more...He stopped coming for a while* [for treatment] *and then turned up at another clinic where I was working. He was a completely different person. He was now fully aware of his diet and making big changes* (AF1p.1).

In the Category 4 practice model, educating the client was seen as an important dimension of the practitioner's role.

That is part of my role, to educate them. If it is something they can change that will help them with their healing, in addition to how I can help them energetically [acupuncture treatments], *then yes I believe it is up to me to educate them* (IF1p.6).

I think that we are not only healers, we facilitate healing because we also educate them. So it is our role to educate people, and teach them about self healing, and learning about healing themselves, and doing the right thing (TM1p.5).

If I hadn't done all those other things [educate and inform her], *and had only done acupuncture, I don't think it* [acupuncture treatment] *would be as effective. It is more a matter of giving them responsibility to look after their own health, and not just me doing something to make her feel better* (VF2p.4).

The following excerpts illustrate that within this perspective, good health is seen in terms of a journey towards balance and wellness rather than the absence of disease.

Well, they are their own healer. And we help them get back into balance…It is really important that through some form or other, to help them to be responsible for their health (VF1p.5).

It is really up to clients to help themselves. It is up to the patients, the clients, in the end. You [the practitioner] *can facilitate a little bit and encourage, but really it is up to them. Wellness is up to them* (SF1p.8).

Healing is a journey that begins from within and I am simply here to help you along the way (JM2p.7).

Healing involves changing negative beliefs and attitudes.

I believe that in our role as a healer we can guide people. Help them make shifts energetically [acupuncture treatment], *but they have to follow through on the shifts…If they are not emotionally ready, or their belief systems are holding them back, then we have to work on that* (TM1p.5).

In summary, the Category 4 model of acupuncture practice aims to empower the client in the healing process. In this approach the practitioner and client share responsibilities, with the client in charge of her or his personal change and the practitioner in charge of

providing appropriate treatments. The practitioner is also involved in educating and supporting the client in personal and lifestyle changes.

In terms of practitioner learning, this approach requires that in addition to being a competent acupuncturist the clinician needs to develop a broad understanding of the healing process, as well as the ability to facilitate change and empower clients in the healing process.

The Category 4 model views good health in terms of personal wellbeing rather than simply the absence of discomfort, with a significant emphasis upon the healing process. There is also a greater emphasis upon changing negative beliefs, attitudes and values, than there is upon changing one's diet or exercise routine. Healing is seen as an ongoing process that is multifaceted in nature, driven by the client and supported by the practitioner. Wellbeing is seen to result from the complex balance of physical and psycho-emotional dimensions and as such accords with the Chinese medicine espoused theory view of holistic health.

As with the Category 3 model of practice, the therapeutic encounter is 'person centred' rather than 'problem focussed'. However, the Category 4 model differs to the Category 3 model in that power in the Category 4 model is shared between the practitioner and client. In addition to providing acupuncture, the practitioner facilitates change, reflects with the client in gaining understanding and supports the client in their personal change process. For the client's part the process demands openness to personal change, a willingness to change and an acceptance of responsibility in undertaking personal changes.

The Category 4 practice model is qualitatively different from the orientation in the preceding models with respect to the practitioner's intention and role, the strategies the practitioner employs, and the views about health and the healing process. It was notable that client compliance was seen to be less of an issue in the Category 4 practice model than the Category 2 'advice giving' model, perhaps because in the Category 4 model clients themselves decided upon the areas of personal change and the steps to be taken in achieving such changes.

The Category 4 model of practice was reported by 11 of the 24 participants in the first round interviews and 6 of the 18 participants in the second round interviews. In interpreting these figures the same caveats raised in the concluding paragraph of section 4.2.1 also apply.

4.2.5 Category 5 Practice: Flexible and negotiated

The Category 5 model of practice is qualitatively distinct by virtue of its flexible and considered approach to treatment. In this orientation the practitioner assesses the specific nature of the clinical presentation and decides upon the most appropriate treatment model. The Category 5 orientation recognises that clinical presentations differ significantly, with some conditions requiring only short-term quite focussed treatments and other conditions that have complex behavioural and emotional overlays requiring long-term treatments that actively engage the client in personal change.

While the practitioner's preference in the Category 5 model is typically for a 'person centred' holistic approach, the practitioner recognises that conditions that are not complex in nature, do not require multifaceted treatment. Even though the practitioner varies clinical strategies in accord with the nature of the clinical presentation, the model is not atheoretical. Instead it is a considered, flexible, negotiated and strategic approach.

Even when the specific treatment focus is confined to pain relief or resolving the presenting condition, the practitioner endeavours to involve the client in aspects of the process. The practitioner endeavours to share power in the healing process by educating the client, negotiating with the client in clinical decision-making and involving the client in activities that support the healing process.

The following transcript excerpts provide examples of the Category 5 model in which practitioners adjust their treatment approach.

> *I deal with each person differently. I see what they have come in with, but I don't have any rigid philosophies* [clinical practice styles] *that need to be expressed. I think what I try to do for most people is to help them get better so that they can cope a little better* (OF1p.6).

> *Some people might want a more clinical approach or are more interested in the interaction that goes with the consultation. So that's OK. I feel all right with that, and what it teaches me is how to moderate my approach depending upon how I am reading the person* (UF1p.6).

> *How I treat is determined both by the state of the client and my own state in a two-way interaction* (OF2p.6).

I am finding that a lot of how I work is driven by how the person responds to the first treatment. So I start with a few questions and then go to the pulse and then decide which way to go with that treatment...Rather than parcelling it up at the beginning, I spend time with them at the end [of the consultation] *and say that based upon what I have seen here and what you feel, this is perhaps where we can go* (FF2p.1).

If someone comes in with a painful shoulder, I will look at them in a completely different way to someone coming in with say [stress]*...And if they come again for a follow-up treatment, I might raise the issue that I think this is due to stress* (HM2p.1).

While the Category 5 model is characterised by clinical practice that is strategically flexible, it would appear that the preference is for a comprehensive treatment approach along the lines of a Category 4 model.

I help them. I provide relief. But I also tell them that the relief is only relief. So I do what they want to some degree. I give them the relief they want in order to explain to them and educate them that this medicine is about more than just symptomatic relief (HM1p.6).

It is all relative, but ultimately it is holistic practice. Deciding on the best thing to do. I find with musculoskeletal conditions like sciatica, you find out where the trigger points are and just treat them. Whereas if your client comes for a long-term treatment, you want to improve their health and take a different approach (TM2p.1).

The 'person centred' nature of this approach is expressed in the following excerpts that are indicative of a negotiated treatment approach.

I focus on what they want to get out of the treatment and what they want to concentrate on (VF1p.2).

My perception of the role that she wanted me to play was to give her space to air things. She wasn't asking me for advice and she wasn't specifically seeking counselling. She had a whole lot of stuff [personal issues] *that she was looking at and now she was sitting down with somebody opposite her. And she was using the treatment session in a way that was fair and reasonable. And I gave her a lot of space to talk through the issues and guided her by saying 'This is what we need to treat today'* (UF2p.6).

Either I can just take the edge off the condition whenever they are in pain, or do a few treatments close together, maybe three to five treatments and make more of a difference long-term. So at the end, handing the decision back to them, but giving them some direction (FF2p.2).

In summary, the Category 5 model is a strategically flexible one in which the professional assesses and decides which particular approach is best suited in view of the context and presenting situation. While the practitioner's preference appears to be for a comprehensive holistic approach, the client's presenting condition and the client's expectations are also considered. This is not to suggest that the practitioner simply complies with client demands, but rather that the practitioner assesses, considers, negotiates and decides upon an approach best suited to the situation within an overall holistic and person-centred perspective.

The Category 5 model operates on the principle that treatment is based on considered decisions rather than predetermined by the practitioner's view about what should happen. In the Category 5 model there is also a level of practitioner-client power sharing similar to that in the Category 4 model. In terms of learning the Category 5 model requires that the practitioner is broadly educated and develops the necessary understanding and flexibility to enable her or him to respond appropriately to varying demands.

The data showed that while practitioners operating within this model sometimes modified their treatment orientation to focus upon symptom relief or the resolution of the presenting condition, they strove nonetheless to educate clients about the broader Chinese medical perspective on health and healing. As well as developing clients' awareness of these matters, practitioners operating from this perspective encouraged clients to accept responsibility for their health.

This practice perspective differs to the previously discussed models in that it does not advance any one particular view of illness or health, but nonetheless holds a clear preference for the holistic perspective. In addition, the respective roles of the practitioner and client vary in the Category 5 model in accord with the approach employed in each clinical scenario.

The Category 5 flexible negotiated practice model was more common in the second round interviews, which were conducted after participants had had a greater period of clinical experience. In the first round interviews the Category 5 approach was identified in only 5 out of 24 transcripts. However, in the second round interviews it was found in 7 out of 18 interview transcripts. In interpreting these figures the same caveats raised in the concluding paragraph of section 4.2.1 also apply.

4.3   Inter-category analysis

4.3.1   Key features of each category of acupuncture practice

In accord with the phenomenographic approach of Murphy (1998), Prosser et al. (1994a) and Trigwell (2000), the categories of description are defined in terms of referential and structural axes. The referential axis denotes the specific intention or aim of acupuncture practice in each category and the structural axis denotes the strategies employed by the practitioner in achieving this aim. While the overall aim of the practitioner in each category was one of improving the health of the client, distinctly different aims were identified under this umbrella aim. The qualitative differences between the various aims, and the different strategies employed by practitioners in achieving specific aims, formed the basis for distinguishing between different conceptual positions. In addition to distinguishing between qualitatively different notions of practice on the basis of referential and structural axes, this summary also details the respective practitioner-client roles, the nature of the clinical encounter and the implications for learning.

In summarising the key features of each of the five categories of acupuncture practice identified in this study, the researcher uses the term 'client' in preference to 'patient' even though the two terms appear to be used interchangeably by interviewees without any apparent recognition of the different meanings each term holds. In the data of this study it is clear that the term 'patient' is more commonly used that 'client' even when participants are describing clinical encounters that are 'client centred'.

The major features of each category of acupuncture practice that form the basis for the group phenomenographic analysis are summarised in the following.

Category 1 Practice: Problem centered

> *Referential Axis (overall aim or intention of the practitioner):*
> To resolve the client's presenting problem either at a symptom level or deeper.
> *Structural Axis (strategy employed to achieve the aim):*
> The practitioner applies acquired knowledge and skill to resolve the problem.
> *Practitioner-Client roles:*
> The skilled practitioner is the one who effects change on the basis of acquired mastery of knowledge and skills.
> The client is the recipient of change and is required to attend for treatment as advised.
> Power in the therapeutic encounter resides with the practitioner.
> The client's role is a secondary one of cooperating with the practitioner.

Nature of the clinical encounter:

The clinical encounter is 'problem focussed' and 'practitioner controlled'.

The practitioner treats either the client's presenting symptoms, the physiological cause of the disharmony, or both.

Implications for learning:

The practitioner needs to be a competent practitioner who can apply knowledge and skill in clinical practice.

Category 2 Practice: Fixing and advising

Referential Axis (overall aim or intention of the practitioner):

To resolve the client's presenting problem either at a symptom level or deeper.

Structural Axis (strategy employed to achieve the aim):

The practitioner applies acquired knowledge and skill to resolve the problem and in addition provides advice to the client about lifestyle changes that need to be made.

Practitioner-Client roles:

The skilled practitioner is the primary change agent.

The client assists in the process by following the practitioner's specific directions/advice with regard to resolving the presenting condition.

The practitioner involves the client, but still holds the power in the process.

Nature of the clinical encounter:

The clinical encounter is 'problem focussed' and 'practitioner controlled'.

The practitioner treats either the client's presenting symptoms, the physiological cause of the disharmony or both, as well as advising the client about necessary lifestyle changes.

Implications for learning:

In addition to being a competent clinician the practitioner needs to be knowledgeable about a broad range of 'health lifestyle matters' in order to advise clients.

Category 3 Practice: Channeling change

Referential Axis (overall aim or intention of the practitioner):

To channel energies for personal healing.

Structural Axis (strategy employed to achieve the aim):

The practitioner acts as a channel for healing energy with the client having some level of involvement in the healing process.

Practitioner-Client roles:

The primary effect of healing is attributed to external healing energies.

The nature of clinical practice and healing are mystified.

For some this healing energy was seen within the context of a spiritual dimension and for others as a non-personalised universal force.

The client is involved in undertaking personal change but the extent of this or the degree to which they are responsible for their health is unclear.

With the practitioner acting as a channel for healing energy, both practitioner and client have secondary roles in the healing process.

Nature of the clinical encounter:

The focus in the clinical encounter is upon healing, person and wellbeing, more than problem resolution. In this respect the orientation is more holistic than that in Categories 1 and 2.

Implications for learning:

In addition to being a competent practitioner, the practitioner must develop the ability to interact with and channel healing energy.

Category 4 Practice: Empowering the client

Referential Axis (overall aim or intention of the practitioner):

To empower the client and facilitate change.

Structural Axis (strategy employed to achieve the aim):

The practitioner treats, educates and supports clients to take responsibility for their own health.

Practitioner-Client roles:

Power is shared between the practitioner and client.

The practitioner is responsible for providing treatments, facilitating change and empowering the client.

The client is responsible for her or his overall health and for implementing the necessary changes to lifestyle, attitudes or behaviours.

In distinction to the Category 3 orientation, the Category 4 practice model actively engages and empowers the client in the healing process.

Nature of the clinical encounter:

The focus in the clinical encounter is more upon healing, person, wellbeing and process than resolving the client's presenting problem.

The Category 4 model is more holistic than those in the previous categories, because it empowers the client to take charge of all dimensions that impact upon personal wellbeing.

Implications for learning:

In addition to being a competent acupuncturist, the clinician needs to develop a broad understanding of the healing process, as well as the ability to facilitate change and empower clients in the healing process.

Category 5 Practice: Flexible and negotiated

Referential Axis (overall aim or intention of the practitioner):

To assess each situation and decide upon the most appropriate treatment approach.

Structural Axis (strategy employed to achieve the aim):

The practitioner employs a flexible strategic approach dependent upon the specifics of the clinical encounter, with a preference for a 'person centred' holistic view of health and healing.

Practitioner-Client roles:

Power is shared, with the client and practitioner acting together.

Specific practitioner-client roles vary in accord with the model employed in any one particular context.

The practitioner educates and supports the client to take more responsibility for his or her health.

In the clinical encounter the focus may be upon resolving the presenting problem (as in Categories 1 and 2) or healing the person (as in Categories 3 and 4) with a preference for the latter.

Nature of the clinical encounter:

Treatment is varied in accord with a considered assessment of what is best in view of each specific clinical situation.

While the Category 5 model asserts a preference for the holistic approach, it also recognises that not all clinical presentations are complex or require multidimensional treatment strategies.

Implications for learning:

The practitioner needs to be broadly educated and skilled in a variety of clinical practice styles and to develop understanding and flexibility in order to structure treatments appropriately.

In view of the literature concerning Chinese medical practice (chapter two), these five categories represent varying degrees of dissonance or agreement with the espoused theory of Chinese medicine. Moreover, some of these categories of practice appear to be similar to those found in biomedicine even though such biomedical models have been critiqued in Chinese medical literature as inadequate. These issues of agreement and dissonance will be discussed in chapter six of this thesis.

4.3.2　Inter-category relationships: Group conceptions

The categories of description represent the qualitatively different ways in which individuals in the group experienced the phenomenon of acupuncture practice. When viewed together as the summation of the group's experience of acupuncture practice, these categories are seen as representative of the conceptual position of the group (Marton, 1981; 1994b). While individuals in the group may adopt different conceptual positions in different contexts, the sum total of the conceptions represents the group's relationship to the phenomenon (Svensson, 1997b).

The differences between conceptual positions and the relationships between conceptions within the group are delineated on the basis of the 'meaning aspect' in each conception. The conceptions are held by the group, not the researcher, and the sum total of these comprise the conceptual map, or collective intellect, of the group (Ekeblad & Bond, 1994). In phenomenographic research, the collective conceptual map is displayed in diagrammatic form as an 'outcome space table'. The following 'outcome space table' (Table 4a) is the distilled essence of the group's experience of the phenomenon of acupuncture practice. It displays the meaning of each conceptual position in terms of referential (aim/intention) and structural (strategy employed in achieving the aim) axes. It also displays the relationship between each conception in terms of the respective axes.

4.3.3 Outcome space table: Conceptions of acupuncture practice   (Table 4a)

	Referential→ Specific aim/nature of clinical practice	To resolve the client's presenting condition	To channel energies for client healing	To empower and facilitate change	To assess each situation and decide upon the best approach
	Treatment Focus→	Problem focus	Personal focus	Holistic focus	Flexible focus
Structural↓ Strategy employed to achieve the aim	**Practitioner &Client Roles↓**				
The practitioner's skills are applied to resolve the problem	The practitioner acts & the client accepts	**1**			
The practitioner treats and advises the client	The practitioner acts & the client follows the practitioner's advice	**2**			
The practitioner channels energy that effects change	The practitioner and client are both secondary participants		**3**		
The practitioner treats, educates and empowers the client	The practitioner and client work together			**4**	
The practitioner is flexible and strategic, employing the most appropriate approach.	The practitioner varies the approach and involves the client in the healing process				**5**

4.3.4   Explanation of the outcome space table

Similarities and differences between the five conceptions

Practice Conceptions 1 and 2 share the same practice aim (referential axis) of resolving the client's presenting condition either through relieving the client's symptoms or treating the cause of the symptoms. However, Practice Conceptions 1 and 2 differ from each other with respect to the strategies the practitioner applies (structural axis). In Practice Conception 1 the practitioner relies entirely upon his or her skills and knowledge to resolve the client's condition, with the client expected to do little more than attend for treatment when required by the practitioner. In Practice Conception 1 power in the therapeutic encounter and responsibility for client improvement rest with the practitioner. The clinical encounter in this model is 'problem focussed' and 'practitioner controlled'.

In Practice Conception 2, while the nature of clinical practice is also essentially 'problem focussed' and practitioner-controlled, the practitioner attempts to involve the client in the healing process by providing advice on lifestyle matters that the client is expected to follow. By involving the client, the practitioner does not divest control over the healing process but enlists the client's support in undertaking changes that will enhance the therapeutic effect of the acupuncture treatment.

Practice Conception 3 is different to Practice Conceptions 1 and 2 with regard to the practitioner's intention (referential axis) as well as the strategies employed in the healing process (structural axis). In this approach the practitioner acts as a channel for healing energies and the client is the recipient. Both the client and practitioner have secondary roles, as the healing change is attributed substantially to an external power beyond their control. In Practice Conception 3 the focus in the clinical encounter is upon 'healing and person', with some expectation of client involvement in making changes.

Practice Conception 4 is qualitatively different to the previous conceptions of practice in terms of both the practitioner's intent (referential axis) and the strategies employed by the practitioner in implementing the aim (structural axis). In this approach the practitioner is a facilitator of change who empowers, educates and supports the client to take charge of his or her health. While the focus upon healing, person and wellbeing has some parallels with the priorities in Practice Conception 3, Practice Conception 4 differs significantly with respect to its holistic focus and the level of power sharing between practitioner and client.

Practice Conception 5 is also qualitatively different to all other models with respect to both the referential and structural axes. Practice Conception 5 signals a flexible, reflective and considered approach in which the practitioner assesses each clinical presentation on its own merits and adapts the practice model accordingly. This model recognises that not

all clinical presentations are complex, or require holistic practice models, or demand high levels of client involvement in the healing process. Practice Conception 5 has parallels with Practice Conceptions 3 and 4 in that it is 'person centred' rather than 'problem focussed' (Practice Conceptions 1 and 2). Practice Conception 5 also has parallels with Practice Conception 4 in that it is holistic rather than reductionist.

In the outcome table analysis, the five conceptual positions of the group were seen to exist in a hierarchical relationship from simple to complex. In terms of the referential axis of the outcome space table, it can be seen that simple conceptions of acupuncture practice are subsumed within more complex ones. For example, the basic requirement of diagnosing and treating the client's condition, the practitioner's intent in Practice Conceptions 1 and 2, was seen as fundamental to and subsumed within more complex conceptions of acupuncture practice (Practice Conceptions 3, 4 and 5).

The clinical approach in Practice Conception 1 was 'practitioner controlled' and problem centred in focus. While Practice Conception 2 also employed a problem solving focus, there was a least some limited level of client involvement in the healing process. Practice Conception 3 advanced the perspective found in Practice Conceptions 1 and 2 by being more person centred, although within it there was still a degree of focus on resolving particular problems.

Practice Conception 4 was found to be 'person centred', holistic in focus and a model in which power was shared between the practitioner and the client. Practice Conception 5 was also identified as 'person centred', holistic and one which involved the client, but was seen as more advanced than Practice Conception 4 because of its ability to vary treatment models within a flexible reflective approach.

In terms of the strategies practitioners employed in the various practice conceptions (structural axes) a hierarchical progression is also evident. The application of knowledge and skill in resolving the client's presenting condition, the strategy in Practice Conception 1, is fundamental to all other practice models. Providing advice to clients, a strategy in Practice Conception 2 builds on the Practice Conception 1 strategy and is subsequently subsumed within the strategies in Practice Conceptions 3, 4 and 5. This progression continues through to Practice Conception 5, the flexible reflective orientation in which the practitioner tailors the treatment focus and treatment strategies based on a considered assessment of each clinical presentation.

Implications for learning

It was noted that in Practice Conceptions 1 and 2, therapeutic efficacy was dependent primarily upon the practitioner's level of knowledge and skill. The emphasis upon the practitioner's abilities and appropriate interventions as the basis for effecting change has been identified by Unschuld (1987) as a key practice perspective throughout the history of Chinese medicine. Moreover, since the focus in the clinical encounter in Practice Conceptions 1 and 2 is one of problem solving through the precise application of Chinese medical knowledge, the nature of the information practitioners depend upon is factual and clinically orientated. Learning in this context is mainly concerned with the acquisition of information and skill for effective diagnosis and treatment.

In Practice Conception 3 it was critical that the practitioner develop the ability to channel subtle universal forces for healing. Learning in this context was focussed primarily upon developing abilities, yet there was also an implied need to develop an awareness and understanding of such universal forces.

In Practice Conceptions 4 and 5 there was a greater emphasis on the need for understanding as the basis for practice. In Practice Conception 4 the learning priority was one of developing the perspective and ability to facilitate change and empower clients in the healing process. In Practice Conception 5 the learning priority was one of developing understanding and flexibility so that the mode of practice could be adapted without compromising fundamental principles of practice.

While practitioner competency is essential in all five models of acupuncture practice, the learning priority in Practice Conceptions 1 and 2 was the attainment of information and skill. In Practice Conception 3 it was primarily one of developing an ability. In Practice Conceptions 4 and 5 it was one of developing perspective and understanding. This issue will be explored further in chapter six of the thesis, subsequent to the analysis of the participants' conceptions of learning.

4.3.5   Lower, middle and higher order conceptions of practice

In the analysis of the categories of description of acupuncture practice in terms of referential and structural axes, and the display of this analysis in outcome space table format, it was seen that the conceptions identified existed in relationship to each other. The nature of this relationship was a hierarchical one in which there was a progression from simple conceptions to complex ones with the simple subsumed within the complex. The rudimentary notion of acupuncture practice as being the diagnosis and treatment of the client's condition (Practice Conception 1) was seen as fundamental to all other styles

of clinical practice. In Practice Conception 2, this rudimentary approach was extended to include the client's role in the healing process. In Practice Conception 3, the involvement of universal forces was included, with the practice focus shifting away from problem resolution to personal healing. In Practice Conceptions 4 and 5 the practice approach was further developed to empower the client in the healing process.

Having identified the qualitative differences between various conceptions of acupuncture clinical practice and the hierarchical relationship between the five different conceptions, it was possible to classify these conceptions as lower, middle or higher order models of practice. The criteria used in classifying the group conceptions were drawn from the distinctive characteristics in each of the five conceptions and informed by the literature on Chinese medicine and professional practice outlined in chapter two of this study. The classification criteria were:

- the degree to which the practice model was holistic as distinct to reductionist;
- the degree to which the practice model was 'person centred' rather than 'problem focussed'; and
- the degree to which the practice model empowered, rather than directed, the client.

The following table identifies the models of acupuncture practice as lower, middle or higher order conceptions of practice on the basis of these three criteria.

Lower, middle and higher order conceptions of acupuncture practice   (Table 4b)

		LOWER ORDER	MIDDLE ORDER	HIGHER ORDER	
Referential→ Specific aim/nature of clinical practice		To resolve the client's presenting condition	To channel energies for client healing	To empower and facilitate change	To assess each situation and decide upon the best approach
Structural↓ **Strategy** **employed to** **achieve the aim**	**Practitioner** **&Client** **Roles↓**				
The practitioner's skills are applied to resolve the problem	The practitioner acts & the client accepts	**1**			
The practitioner treats and advises the client	The practitioner acts & the client follows the practitioner's advice	**2**			
The practitioner channels energy that effects change	The practitioner and client are both secondary participants		**3**		
The practitioner treats, educates and empowers the client	The practitioner and client work together			**4**	
The practitioner is flexible and strategic, employing the most appropriate approach.	The practitioner varies the approach and involves the client in the healing process				**5**

Practice Conceptions 1 and 2 were identified as lower order conceptions of practice because they focussed more upon problem resolution than healing the person, were more reductionist than holistic in their approach and were lacking in practitioner-client power sharing. Practice Conception 3 was seen to belong to the middle order perspective because while it focussed more on personal healing than problem resolution, its reliance upon external forces in the healing process did not empower the client.

Practice Conception 4 was seen to be holistic in its approach, with a definite focus on empowering the client in the healing process. This model actively sought to share power in the therapeutic encounter and viewed healing as an ongoing process of striving for wellbeing. Practice Conception 5, in which the treatment model was varied in accord with an assessment of each clinical presentation, was also identified as a higher order practice perspective on the basis of the aforementioned criteria.

The order of conceptual hierarchy identified in this analysis is in accord with the inherent characteristics of each conception and the interrelationship between conceptions identified in this study rather than any *a priori* view of reality. The researcher acknowledges that other views of reality, especially certain religious perspectives that view the spiritual realm as being above the human dimension, could be inclined to place Practice Conception 3 as the highest order conception of practice. This study makes no comment upon religious perspectives and the varying ways in which these are conceptualised, but simply reports and analyses phenomena in accord with the focus of the study.

4.4 Distribution of Responses

4.4.1 Distribution of practice conceptions

The total number of respondents who reported each of the five conceptions of practice in first and second round interviews is displayed in the following table (Table 4c). In this and subsequent tables, frequency is defined in terms of the number of interviews in which the conceptual position was identified, rather than the number of times the position was reported. The numerical display is shown in total numbers rather than percentages, with 24 participants in the first round and 18 in the second round interviews.

The table also provides an overall summary of the frequency of each response for the two interview phases.

Distribution of conceptions of practice (Table 4c)

	Conception 1	Conception 2	Conception 3	Conception 4	Conception 5
Round 1 (*n* = 24)	18	12	6	11	5
Round 2 (n = 18)	13	8	6	6	7
Total	31	20	12	17	12

Considering that there were 24 participants in the first round of interviews and 18 in the second, the frequency of occurrence of each of the five conceptions of practice was proportionally similar in both interview rounds. Table 4c shows that Practice Conception 1 was reported by 18 out of 24 participants in the round one interviews and 13 out of 18 participants in round two, indicating a similar proportional occurrence in both rounds. Similar proportional patterns were seen across round one and two interviews for Practice Conceptions 2 and 4. The least common conceptions of acupuncture practice, Practice Conceptions 3 and 5, do not follow this pattern and instead were reported by a similar number of participants in both rounds even though the total number of participants in each round varied.

Table 4c shows that the most frequently reported conceptions of practice in both interview rounds were Practice Conceptions 1, 2 and 4. Practice Conceptions 1 and 2 were identified as 'problem focussed' lower order conceptions of practice and Practice Conception 4 as a 'person focussed', holistic and higher order perspective.

Practice Conceptions 1 and 2, were the most commonly employed styles of practice amongst this group of beginner acupuncture practitioners. Practice Conception 3, a middle order perspective, was not commonly reported by participants in this study. Perhaps the limited occurrence of Practice Conception 3 was due in part to the fact that the beliefs that underpin the Practice Conception 3 perspective are not highly prevalent within Australian society.

Practice Conception 4, a more complex approach, was employed by a significant number of practitioners even though the participants in the study were 'beginner practitioners'. Practice Conception 5, which required considerable ability, confidence and competence in varying one's practice style, was reported less frequently than Practice Conception 4 but still evident as a qualitatively distinct approach amongst the participants in the study. The summary pattern of distribution of the conceptions of practice is displayed in the following bar chart (Figure 4a).

Summary distribution of conceptions of practice (Figure 4a)
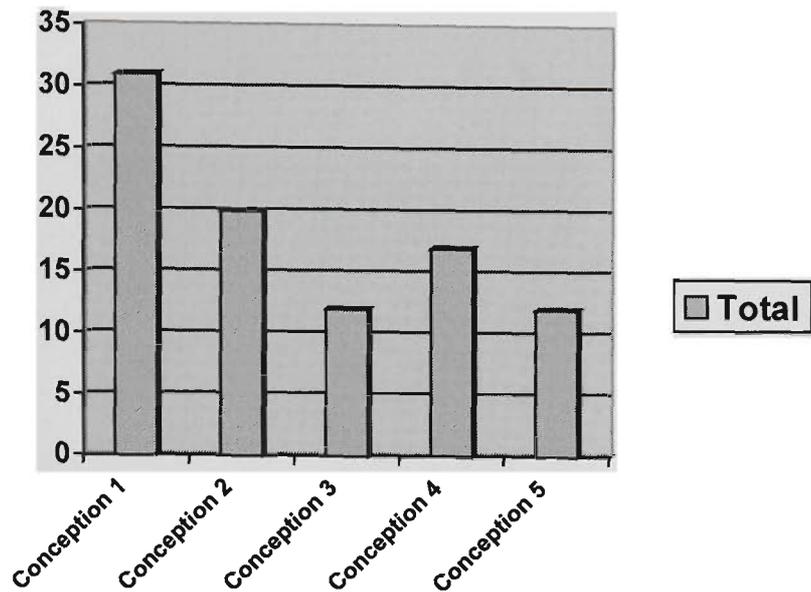
4.4.2 Distribution in terms of conceptual order

In section 4.3.5 of this study the five conceptions of acupuncture practice were categorised as either lower, middle or higher order perspectives in accord with specified criteria. The following table provides a summary of the frequency of occurrence of practice conceptions with regard to this categorisation.

Distribution of Practice Conceptions in terms of conceptual order (Table 4d)

	LOWER		MIDDLE	HIGHER	
	Conception 1	Conception 2	Conception 3	Conception 4	Conception 5
Round 1 (*n* = 24)	18	12	6	11	5
Round 2 (n = 18)	13	8	6	6	7
Total	51		12	29	

Table 4d shows that the most frequently occurring conceptions of acupuncture practice were lower order conceptions. The next most frequently occurring conceptions of practice were higher order conceptions; with the middle order conception of acupuncture practice occurring least in the data. The following figure displays this breakdown in bar chart format.

Summary distribution of Practice Conceptions in terms of conceptual order

Figure 4b)
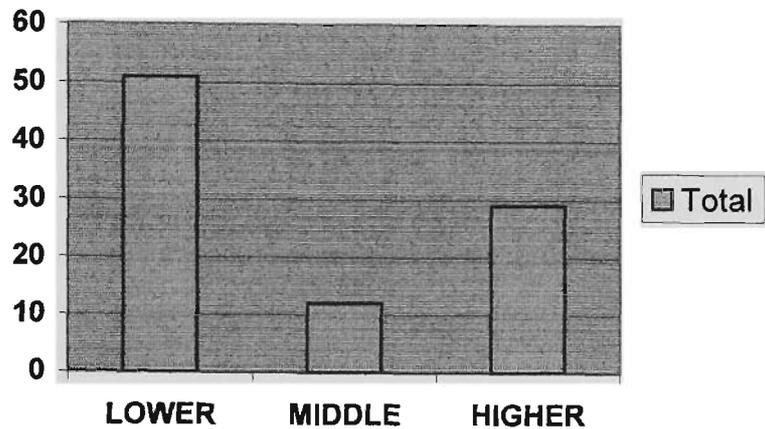
4.4.3 Distribution in terms of gender

With respect to gender, the total number of respondents who reported each of the five conceptions of practice in first and second round interviews is displayed in Table 4e. As with the previous distribution tables, the numerical display is provided in terms of total numbers rather than percentages. The table also provides an overall summary of the frequency of occurrence of practice conceptions in the two interview phases in terms of gender. The total number of respondents in round one was 24 of which there were 17 females and 7 males. In round two, the total number of respondents was 18 of which there were 11 females and 7 males.

Gender based distribution for conceptions of practice   **(Table 4e)**

	Conception 1		Conception 2		Conception 3		Conception 4		Conception 5	
	F	M	F	M	F	M	F	M	F	M
Round 1 (*n* = 24) (*F = 17: M = 7*)	12	6	8	4	4	2	8	3	4	1
Round 2 (n = 18) (*F = 11: M = 7*)	7	6	6	2	4	2	4	2	3	4
Totals - *Female/male*	19	12	14	6	8	4	12	5	7	5
	F	M	F	M	F	M	F	M	F	M

The table shows that in both first and second round interviews, each of the five conceptions of practice was reported more frequently by females than males, reflecting the overall ratio of females to males in the total number of participants (2:1).

With regard to the two lower order practice conceptions, Practice Conception 1 was reported more by males, yet Practice Conception 2 more by females in proportional terms. The middle order conception of practice was reported equally by females and males in proportional terms. With regard to the two higher order conceptions, Practice Conception 4 was reported more by females, yet Practice Conception 5 was reported more by males in proportional terms. In view of these findings, no pattern of distribution was found with regard to gender and the level of conceptual complexity. The variations in the apparent preference for specific practice conceptions between females and males, and the possible reasons for these differences, will be discussed in chapter six of this thesis.

In congruence with Table 4c, the most commonly reported conceptions of practice in terms of total numbers (Practice Conceptions 1, 2 and 4) were also the most commonly reported practice conceptions by both females and males respectively (Table 4e). This shows that there was no significant difference between the overall pattern of distribution in terms of the lower, middle and higher order perspectives and the pattern of distribution in terms of female/male participants. The summary pattern of distribution on the basis of gender is displayed in the following bar chart (Figure 4c).

Summary distribution of conceptions of practice in terms of gender   (Figure 4c)
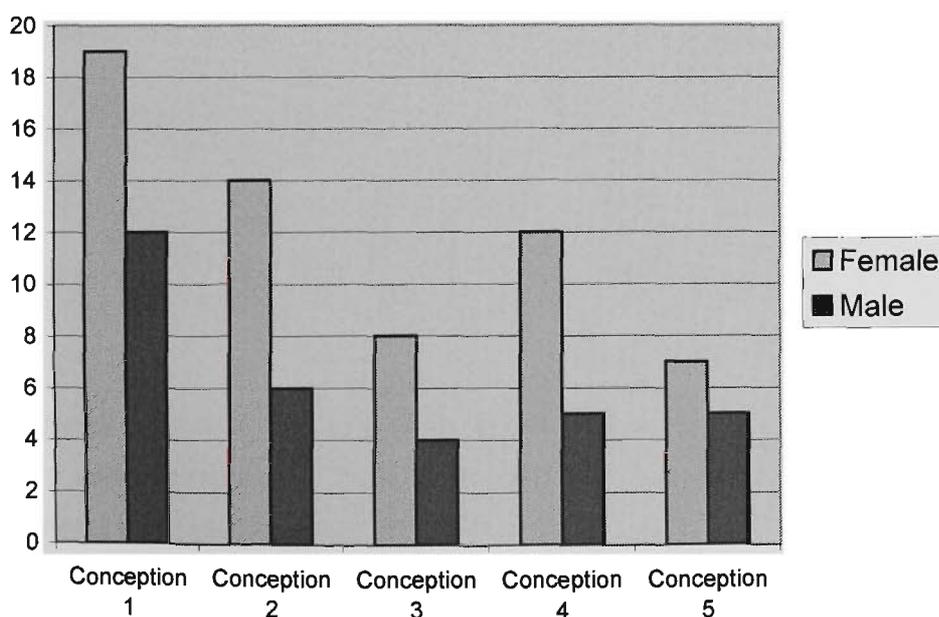
4.4.4   Distribution in terms of age/prior experience

On commencing university studies in Australia, students are categorised as either school leavers (SL) or mature age (MA) entrants. School leavers (SL) are defined as those students who commence university studies immediately after completing their secondary school education, while mature age (MA) entrants are defined as those who have undertaken work or other activities after their secondary school education and before commencing university studies. This classification provides a broad indication of age and experience prior to the commencement of university studies.

The following table displays the distribution of responses for each of the five conceptions of practice on the basis of whether participants commenced acupuncture studies directly after completing secondary school studies or engaged in other activities between exiting high school and commencing acupuncture studies at university. As with the previous distribution tables, the numerical display is provided in terms of total numbers rather than percentages. The table also provides an overall summary of the frequency of responses for the two interview phases. The total number of respondents in round one was 24 of which there were 10 school leavers and 14 mature age participants. The total number of respondents in round two was 18 of which there were 6 school leavers and 12 mature age participants.

Age/experience based distribution of conceptions of practice   **(Table 4f)**

	Conception 1		Conception 2		Conception 3		Conception 4		Conception 5	
	SL	MA	SL	MA	SL	MA	SL	MA	SL	MA
Round 1 (n = 24) *(SL=10; MA=14)*	9	9	7	5	2	4	3	8	2	3
Round 2 (n = 18) *(SL=6; MA=12)*	6	7	4	4	1	5	2	4	1	6
Totals - based on age	15	16	11	9	3	9	5	12	3	9
	SL	MA	SL	MA	SL	MA	SL	MA	SL	MA

In examining the combined occurrence of responses in round one and two, Practice Conception 1 was identified in 15 of the 16 interviews with school leavers, yet only 16 of the 26 interviews with mature age participants. A similar pattern was evident with Practice Conception 2 that was identified in 11 of the 16 interviews with school leavers, compared to only 9 of the 26 interviews with mature age participants.

However, there was a notable change in this proportional relationship in Practice Conceptions 3, 4 and 5. Practice Conception 3 was identified in only 3 of the 16 school leaver transcripts, yet evident in 9 of the 26 mature age participant transcripts. Practice Conception 4 occurred in only 5 of the 16 school leaver transcripts, but was evident in 12 of the 26 mature age participant transcripts. Practice Conception 5 was evident in only 3 of the 16 school leaver transcripts, yet occurred in 9 of the 26 mature age transcripts.

In terms of lower order (1 and 2), middle (3) and higher order (4 and 5) conceptions of acupuncture practice, the data reveals that the lower order Practice Conceptions (1 and 2) were more common amongst those who entered acupuncture studies directly after completing their secondary school education than the mature age group. The data breakdown also reveals that the middle (3) and higher (4 and 5) order conceptions of practice were more common amongst those who had pursued other endeavours between secondary school education and commencing university studies. The summary pattern of distribution on the basis of age/experience before commencing acupuncture studies is displayed in the following bar chart (Figure 4d).

Summary distribution of conceptions of practice in terms of age/experience

(Figure 4d)
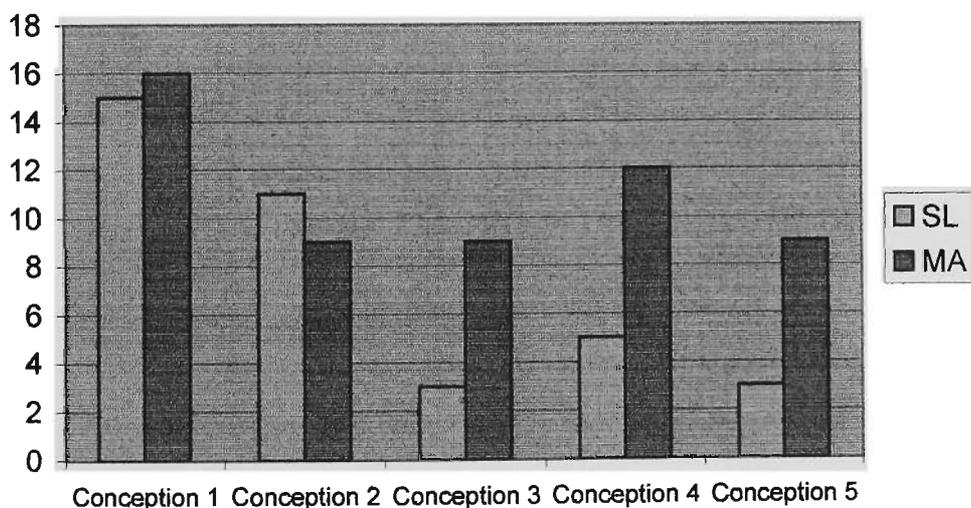
When considered within the context of the relative numbers of school leavers (SL = 16) and mature age participants (MA = 26) in the study, this bar chart reveals that lower order conceptions of acupuncture practice (1 and 2) were proportionally more common amongst school leavers. In addition, the middle (3) and higher (4 and 5) order conceptions of acupuncture practice were more common amongst mature age participants. The implication of this finding will be discussed in chapter six of this thesis.

4.5   Cross category themes

The research uncovered a number of cross category themes which pertained to participants' experience of the phenomenon of acupuncture practice but were not specific to any one conception or group of conceptions of practice. Because these themes provided additional insight into participants' understanding of acupuncture practice, an essential aspect of the central research question, and since they arose from the phenomenographic process, it was considered important to include the themes in understanding the participants' experience of acupuncture practice.

Cross-category themes that meet specified criteria are reported in this chapter. The criteria for reporting the themes are as follows:

1. The theme is not specific to any one conception of practice or group of practice conceptions identified in this study
2. The theme is significant with respect to the research question and aims.
3. The theme is reported in both first and second round interviews.
4. The theme is reported by a significant number of participants in the study, occurring in at least 10 of the total 42 interview transcripts.

While there was substantial overlap between the phenomena of practice and learning in the interview data, the most frequently reported cross-category themes were found to relate more to acupuncture practice than learning in practice. Consequently, the cross-category themes are reported and analysed within this chapter rather than elsewhere in the thesis. The identified cross-category themes are as follows:

A. The role of intuition in acupuncture practice.
B. The need for rapport and communication between practitioner and client.
C. The place of a spiritual dimension in practice.

The three themes are reported and described in order to convey the precise meaning of each and examined in relation to the five conceptions of acupuncture practice identified in this study.

4.5.1   The role of intuition in acupuncture practice

In the first and second round interviews, a number of participants commented on the place of intuition in clinical practice. They described intuition as a gut feeling, sense or instinct that informed clinical practice. Some practitioners tempered their intuitive insights with reflective evaluation before deciding whether to apply the insight or not. Other

practitioners adopted a 'test and see' strategy with intuitive insights, using clinical efficacy as the measure for evaluating whether the insight was beneficial or not.

The following excerpts provide insight into the phenomenon of intuition in clinical practice.

> Interviewer: *So from the start you felt that there was an underlying emotional basis to his constipation?*
> Practitioner: *I think I can usually feel this sort of thing from a client. I sense it even in the way that they respond to certain diagnostic questions, and I sense that this is some part to it* [the illness]. *I still go through all the usual diagnostic questions, but this other is something you sense* (AF1p.2).

> *What I was getting from her was a sense that she felt she worked really hard, but was not appreciated. This is what I was getting from her, and I thought I should explore this during the treatment...Of course it could have backfired, but that's the risk you take* (CF1p.1).

> *And now we have got to the basis of what is going on for her, I am working from an intuitive level...It* [diagnosis] *came from feeling where the blockage was. The blockage was around her heart and she was not able to express things. And I went from that and decided which points would open that and support that* (GF1p.1).

> *I don't know how to explain it. Once you are in there with the client asking questions, you sometimes forget to ask about certain things. But other things come up, and you ask about them and the consultation follows a certain natural path* (VF1p.3).

> *There is really not much more to add other than to say that intuition is playing a bigger part in my treatments. My subconscious directs things a bit. I end up using an acupuncture point I've never used before without having the intention to do so* (KM2p.9).

These excerpts and others indicate that within the group of participants, intuition played a role in the diagnostic aspect of the clinical encounter. Some participants also reported that intuition informed the clinical decision-making process.

Practitioner: *In some cases you have to go back and go through the steps* [diagnostic procedure], *but nine out of ten times it is an intuitive thing for me. The thing also with point selection that I am finding is that you have got your standard points, and every now and then when I am deciding upon which points to use, a really obscure point will come to mind and I think that could be useful but where has that come from?*

Interviewer: *Do you then check on the point function?*

Practitioner: *Yes, yes!* (JM2p.4).

Practitioner: *I guess that I would say that I use quite a bit of intuition in my treatment of people.*

Interviewer: *Could you expand a little on what you mean by intuition?*

Practitioner: *In selecting points…I will think that this person needs such and such a point as well. Then I will go ahead and trust my intuition and do it… And then after I will look back and go 'Yes that worked, and this connects to that'* (VF2p.2).

Pulse taking and the interpretation of pulse qualities was reported by a number of participants as a procedure that elicited intuitive responses.

When I felt her pulse I could feel there was a lot of grief stuck up here in the chest like a lump. The other pulses were like they weren't talking to each other. They were just separate little entities. It's as if the parts of her system weren't communicating (QF1p.1).

Practitioner: *I find that taking the pulse for me is like an emotional stethoscope. When I put my fingers on the pulse, questions come to mind that I might not have asked…*

Interviewer: *and does that information tend to be revealing?*

Practitioner: *Occasionally. Probably most of the time not very much will come up, but occasionally something quite exciting does come up. So I think I need to develop this more.*

Interviewer: *Developing your intuitive dimension?*

Practitioner: *Yes. Feeling what is going on rather than just feeling the pulse quality* (OF1p.2).

When I am taking the pulses, questions often arise for me, which I then put to people [clients]*…and those intuitions provide good leads* (UF2p.4).

Another practitioner reported that intuition came into play, not just during pulse taking, but whenever palpating the client diagnostically. In this regard and in relation to pulse taking, intuition seems to be based upon a certain level of physical connection between the practitioner and client.

> It can also happen when I am palpating. I feel things and I can't explain them. I'd touch somewhere and I know, I could just feel deficiency on a point [acupuncture point]. Or sometimes something will just come to mind, some intuitive thing (EF1p.4).

Some practitioners reported that their intuitive insights needed to be assessed against the information gained through systematic diagnosis or against Chinese medical theory, to determine the relevance and meaning of the intuitive insight.

> I do find that as far as points go, or treatment goes, or diagnosis goes, that instinct or intuition or that feeling is often very strong and I never dismiss it. No, never dismiss it!...On the other hand I also have to look at it scientifically [rationally] as well to find out the exact logic [meaning] (IF1p.5).

> I like to think that I have an intuitive side to me and I trust that...But I still find I need to have that strong TCM base of understanding for that [intuition] to operate well. Structure! If there is a piece of information missing [diagnostic information], I find the intuition just doesn't work (KM1p.5).

> Practitioner: And then I get a feeling of what to do. I might get a feeling that I should use one of the eight extra meridians. It will just come to me.
> Interviewer: And do you check this against other information?
> Practitioner: Yes I always do (EF2p.1).

However, in some instances intuitive insights were acted upon without any critical assessment.

> Sometimes after I talk to the supervisor about the person and discuss which points to use, when I go back to treat the client I just think 'No, I won't use that bilaterally'. But I don't know why I think that way. I just think, I won't do it that way (XF1p.4).

In summary, intuition was defined by the participants as a feeling, insight or instinct that informed diagnosis and clinical decision-making. Intuition was seen as a non-rational process, in contrast to the systematic diagnostic procedures that practitioners had learnt

at university. In some instances practitioners reported that they acted upon the intuitive insights without reflection or critical evaluation, however in most cases practitioners evaluated the insight before applying it in practice.

While the use of intuition was not linked to any specific conception of acupuncture practice identified in this study, it is reasonable to conclude that in view of the nature of each conception of practice some clinical orientations were more likely to engage intuition than others. It is arguable that intuition was less likely to be employed in the lower order Practice Conceptions (1 and 2), because their problem resolving focus was based largely upon 'factual' diagnostic information gained through systematic procedures rather than through intuitive insight.

It is likely that the middle order conception (Practice Conception 3), in which the practitioner acts as a channel for healing energy, is an orientation which would employ practitioner intuition because the orientation relies upon practitioner insight more than systematic TCM diagnosis. It is also possible that the higher order practice conceptions (Practice Conceptions 4 and 5), which are essentially 'person centred' and assume a higher degree of practitioner-client interaction in the therapeutic encounter, would involve practitioner intuition.

In the first round interviews 14 out of 24 participants reported that intuition had a place in their practice of acupuncture and in the second round interviews 7 out of 18 participants reported that they utilised intuition in the therapeutic encounter. Over the two interview rounds 16 different practitioners reported that intuition had a place in their style of acupuncture practice. These figures do not indicate how often intuition was actually employed by clinicians in their practice, but do indicate that this aspect was important to the group of participants.

In terms of other indicators, this theme was reported relatively more by females than males when considered against the total 2:1 ratio of female to male participants. Over the two interview rounds, the theme occurred in 17 female participant transcripts but only 4 male participant transcripts. However in terms of the School Leavers and Mature Age participants, the themes occurred equally in both when considered against the overall 16:26 ratio of SL to MA interview transcripts. Over the two interview rounds, the theme occurred in 8 SL participant transcripts and 13 MA participant transcripts.

4.5.2   The need for rapport and communication

A significant number of participants in both first and second round interviews reported that rapport and communication were significant in the clinical encounter. Participants described this aspect in terms of connecting with the client or establishing trust between client and practitioner, viewing this as important in achieving accurate diagnosis and providing effective treatment. Establishing good rapport and communication was also seen as important in negotiating with clients about lifestyle factors or attitudinal changes, and in supporting clients in their own healing initiatives.

The following excerpts provide an insight into the meaning and place of rapport and communication in acupuncture clinical practice, from the participants' standpoint.

> Practitioner: *I don't think you can properly treat a person unless you have connected on some personal level with them.*
> Interviewer: *A level of rapport and interaction with the client?*
> Practitioner: *The tricky part is having a connection but not too much of a connection. Still being able to operate and act objectively* (OF2p.6).

> *I was seeing him twice a week for a couple of months and eventually he gave me some credit for helping him change his diet...So over time we developed a level of friendship and each time I saw him I tried to explore what happened two years ago when he got bad constipation...As we developed a relationship he was more willing to open up a bit more* (AF1p.1).

> Practitioner: *People like to feel important when they are coming into your clinic and you are treating them. If you are focussed and really listening to what they are saying, and focussed on what they really what. That's important.*
> Interviewer: *So you work at building rapport?*
> Practitioner: *Yes, absolutely* (CF1p.3).

> *I think my strong points are my intuition and my empathy. I also have a strong instinct when it comes to diagnosis. And I am quite compassionate and usually able to get the client to open up* (IF1p.6).

And I approach the person in treatment more as a friend, but not so friendly as to want to continue the relationship after [treatment]. *I make sure of that* [not becoming over involved] *because you can get too friendly and very attached because they are real people* (HM1p.7).

Conversely, a lack of good communication was seen as problematic to treatment, possibly implying that the information gained through systematic diagnosis did not in itself provide a sufficient foundation for accurate clinical decision-making or treatment.

Practitioner: *There was difficulty communicating. I felt he did not express things easily, and so I treated him not knowing fully what to do. And I did not like that feeling very much...But in the end I really felt that he had my trust as a practitioner and I was happy with that.*

Interviewer: *How essential do you think that* [trust] *is to treatment?*

Practitioner: *Definitely! Very essential* (KM1p.2).

Practitioner: *But I felt he was not telling me the truth.*

Interviewer: *So you asked the usual diagnostic questions?*

Practitioner: *I went through the four methods. And went through the different patterns* [of disharmonies].

Interviewer: *But you didn't think you had got to the heart of it?*

Practitioner: *It wasn't that so much. It just seemed that everything I asked he had a story for...And I really felt that he was wasting my time* (SF1p.1).

Good rapport and communication were also seen to be important in encouraging the client to make necessary lifestyle changes.

We had a good friendship at the start of it [the treatment]. *And she seemed quite open to change and to resolving any issues, and to acting upon any suggestions that I had made, like re-enforcing the stretching, warm ups, cool downs. And she understood this too. So I felt that we had a good exchange and a good relationship too. Compared to the other client, the situation with her was always quite flowing, quite moving* (KM1p.4).

It's just that at the end of the session when they walk out, you think 'I don't know how successful that treatment was'. Because what is going on in the treatment room is not just about needles obviously. It is that connection as well. So I really measure whether I have connected and got some messages across (KM2p.3).

Effective interaction and communication were, in themselves, seen to constitute part of the treatment.

> I want to say something about people skills. There was a lady who came in for treatment and she was quite stressed. Early on in the session she started crying, so I sat down and talked her through it. And at the end she felt really great...A week later she came back and most of the physical symptoms were gone. So I thought to myself, how I relate to people, just talking to her, just listening, is already treating her (CF1p.1).

> In the second consultation she was really open with me. We were working on a whole lot of different things and I began to give her massage...I think she liked my personality and that's why she would talk about things (RF1p.1).

> I saw a client yesterday for an hour and a half and we ended up talking about everything. My family, her family, and it was a great treatment. But why did that happen?...Just connectedness (KM2p.8).

In summary, rapport and communication were described in terms of a level of connection, trust and honest open communication between the practitioner and the client. The presence of good rapport and communication was seen as beneficial to diagnosis, clinical decision-making and the process of practitioner-client education.

Implied in this perspective is the view that good rapport and communication are something additional to the basic requirements for competent acupuncture practice. This theme implies that positive outcomes in the therapeutic encounter are only partly attributable to the competent application of acupuncture, and that good communication and rapport positively influence therapeutic outcomes.

While a significant number of participants placed importance upon the need for practitioner-client rapport and good communication, the theme was not linked to any specific conception of acupuncture practice or group of conceptions identified in this study. Nonetheless, some practice orientations were more likely to emphasise the need for rapport and communication than others.

With regard to diagnostic procedures and clinical decision-making, it is arguable that good rapport and communication are less important in the lower order conceptions (Practice Conceptions 1 and 2) because these practice models rely substantially upon a

systematic semi-technical approach in diagnosis and clinical decision-making. On the other hand, the middle and higher order conceptions (Practice Conceptions 3, 4 and 5) are more likely to place importance upon good communication and client rapport because these orientations are more 'person centred' and rely upon a high level of practitioner-client interaction in the clinical encounter.

In the first round interviews 10 out of 24 participants reported that good communication and rapport were important in their practice of acupuncture. In the second round interviews 4 out of 18 participants reported on the importance of this dimension. Over the two interview rounds 12 different practitioners reported that good communication and rapport had a place in their style of acupuncture practice. These figures do not indicate how often this dimension was actually employed by clinicians in their practice, but do indicate that this aspect was important to the group of participants.

In terms of other indicators, this theme was reported relatively equally by females and males when considered against the total 2:1 ratio of female to male participants. Over the two interview rounds, the theme occurred in 10 female participant transcripts and 4 male participant transcripts. However in terms of the School Leavers and Mature Age participants, the theme was reported more by mature age participants when considered against the overall 16:26 ratio of SL to MA transcripts. Over the two interview rounds, the theme occurred in only 3 SL participant transcripts yet 11 MA participant transcripts.

4.5.3   Belief in a spiritual dimension to practice

A significant number of participants in both first and second round interviews reported their belief in a spiritual dimension to acupuncture practice, a theme that relates to the Practice Conception 3 model discussed previously in this chapter. In Practice Conception 3, while practitioners viewed their role as being intermediaries in the channelling of healing energy to clients, individuals did not necessarily conceptualise this role in spiritual terms.

With respect to this theme, the spiritual dimension was seen to provide the practitioner with personal insight and direction during the clinical encounter. This theme asserts a level of spiritual awareness or connectedness on the part of the practitioner, but does not imply that the practitioner necessarily views his or her role as one of channelling healing energies to the client (Practice Conception 3). In describing this aspect some participants also asserted that the spiritual dimension was part of the TCM worldview expressed in the ancient classics of the tradition.

The following excerpts report the presence of a spiritual dimension and its general place in clinical practice.

> There's certainly that other level there. That other dimension whatever you want to call it and I am fully aware of it. And at times I am quite sure that I am connected to it. But whether I am controlling this or...Personally I believe that there is a dimension or realm that everyone can connect with. It is just a matter of practicing and training yourself to connect with it. And if connecting to the realm opens up other avenues for practice, then that is OK. But other people would connect with that realm for personal reasons, personal growth, meditation and that sort of thing (JM2p.4).

> It is also necessary for the spiritual dimension to be taken into account. I can't define it, but I recognise it when it is present. It is the up-welling feeling that all things are in concert. A swelling of energy; a feeling of partaking in a universal power; a coming together. Inevitable yet unexpected, like a wave breaking (OF2p.6).

> I really feel that sometimes when I am in touch with myself...I just know the person is going to get better. So this is how I sense the spiritual side to practice. Coming from that connection with the client. Somehow there is something underlying going on that I am not consciously aware of (KM2p.6).

> I had a woman who came for treatment who had cancer, a tumour. Very quickly I gauged that she was at a spiritual level...So I looked her in the eyes and said 'Tell me about your meditation and the spiritual aspect'? (HM2p.3).

The spiritual dimension was defined in various ways. One practitioner viewed the spiritual dimension as openness to the universe.

> It is living with our eyes and ears open to the universe. And if we are open enough, we can see and hear with the universe (HM1p.6).

For another it was seen as a level of awareness.

> Just from having acupuncture treatment, and how that shift of awareness feels after the treatment, I think there is definitely a greater than physical dimension to it [acupuncture effect] (BF1p.5).

For another it was a universal force that provided insight.

> *So there is an element of a universal force at work. And a lot of time when I am treating I do have instinctual gut feelings. Things that I am not seeing physically or feeling in the pulse, all of a sudden just come to me. So I put this down to some universal connection* (JM1p.9).

For another it was about feeling connected to the universe.

> Interviewer: *When you say spiritual?...*
> Practitioner: *I suppose 'connecting' in a broader sense* (KM2p.7).

For another it was about being in touch with an intuitive level.

> *What I mean by spiritual is working intuitively with Chinese medicine. Creating a balance between asking questions and working intuitively with their bodies, and what acupuncture points I would choose to use through my intuition and through different means* (EF2p.1).

Practitioners who reported the spiritual theme also appeared to hold certain beliefs about the place of the spiritual dimension in their lives.

> *The spiritual dimension is not something I have chosen to develop because of what I want to do in my work. Rather it is part of who I am and so it is part of what I will find in anything I pursue* (FF1p.7).

> *I'm a big believer in how the universe provides. You ask and it will provide!...The year before I applied to do the acupuncture course, I was thinking 'What am I going to do with my life? Where am I going'?...So I wrote down everything I wanted. I could see me in a career where people were coming to me for help...So I put this information out into the universe, and the following year I got into this course. And I thought, 'The universe has provided'* (AF1p.5).

Some practitioners also acknowledged that it was not always appropriate to conceptualise illness and healing within a spiritual framework.

> *And you have these ideas* [spiritual views] *and you go to clinic and you sit down with the client who has sciatica and it is hard to bring that* [spiritual dimension] *into it* (OF1p.4).

The classical texts of Chinese medicine were seen to encapsulate the spiritual more than the modern TCM textbooks.

> Interviewer: *What do you get from reading the classics of Chinese medicine?*
>
> Practitioner: *Looking at the Ling Shu for the spiritual aspects more than you find in textbooks.*
>
> Interviewer: *Is that a particular area of importance for you?*
>
> Practitioner: *Yes it is. I think it is a bit under emphasised. It is a huge area* (OF1p.3).

> *I read those French writers such as Larre and their translations of ancient Chinese medical texts...I really like the book 'Course of Miracles', although it is not a Chinese medical text. It is interesting to see how these books are all saying the same thing [spiritual perspective]. And I get off on how incredibly perceptive these ancient writers were. These texts inspire me more than anything else...I utilise these texts in understanding and dealing with my situation. They help me understand my life map* (QF1p.5).

> *The classical texts seem to have quite a spiritual slant to them. And whether that is a cultural difference or not. Maybe in China these words are not spiritual; they are part of everyday language* (BF1p.5).

In summary, while the spiritual dimension was seen to have a place in clinical practice, no consensus emerged regarding the exact nature of this dimension. Practitioners saw this dimension in terms of universal connection, awareness and openness. A number of practitioners also pointed out that Chinese medicine acknowledged the spiritual dimension and this was apparent in the classical texts that were the basis of the Chinese medical perspective.

The spiritual dimension was seen as a dimension within people's lives and as such related to health, illness and healing. Moreover, the spiritual connection was seen to provide the practitioner with insight that informed clinical diagnosis and decision-making. However, it was also acknowledged that not all clinical presentations were complex, or required deep healing on the spiritual level, or the involvement of spiritual powers in the healing process.

While a significant number of participants placed importance upon the spiritual dimension in clinical practice, the theme was not linked to any specific conception of acupuncture practice or group of conceptions identified in this study. Nonetheless, the theme was closely related to Practice Conception 3 in which the practitioner acted as a channel for healing energies to effect client change.

Given the characteristics of this theme, it was less likely that the spiritual dimension was relevant to the lower order conceptions (Practice Conceptions 1 and 2) because these models relied substantially upon a systematic semi-technical approach to diagnosis and clinical decision-making. On the other hand, the higher order conceptions (Practice Conceptions 4 and 5) were more likely to place importance upon this dimension as these models were more holistic and tended to view healing in terms of deep personal change.

In the first round interviews 8 out of 24 participants reported a belief in a spiritual dimension to acupuncture practice. In the second round interviews 7 out of 18 participants reported the importance of this dimension. Over the two interview rounds 10 different practitioners reported a belief in a spiritual dimension to practice. These figures do not indicate how often this dimension was actually employed by clinicians in their practice, but do indicate that this aspect was important to the group of participants.

In terms of other indicators, this theme was reported relatively more by males than females when considered against the total 2:1 ratio of female to male participants. Over the two interview rounds, the theme occurred in 8 female participant transcripts and 7 male participant transcripts. In terms of School Leavers and Mature Age participants, the theme was reported more by mature age participants when considered against the overall 16:26 ratio of SL to MA transcripts. Over the two interview rounds, the theme occurred in only 3 SL participant transcripts yet 12 MA participant transcripts.

4.6   Chapter summary

In this chapter, the findings of the study with regard to acupuncture practice were organised and presented in four sections. The first section presented the categories of description of acupuncture practice identified in this study. Five qualitatively different categories of acupuncture practice were identified with segments from the interviews used throughout this section to highlight the breadth of meaning in each category as is customary in the presentation of phenomenographic research findings. In capturing the meaning of each category, particular attention was given to the characteristics of each category in terms of practitioners' primary aim and the strategies employed by practitioners in achieving the aim.

The second section provided an overall analysis of the categories of practice. The key features of each category of description were summarised in terms of the practice aim, practice strategies, practitioner-client roles, nature of the clinical encounter and implications for learning. On this basis the five categories were analysed together to provide the collective conceptual position of the group concerning acupuncture practice. The relationships between the conceptual positions within the group were identified in terms of referential and structural dimensions and displayed in an outcome space table. The outcome space table, which represented the collective conceptual map of the group of participants, detailed the hierarchical relationship between individual conceptual positions with simple conceptions subsumed within complex ones. Based on the outcome space table and designated criteria, the conceptions of acupuncture practice were subsequently analysed in terms of lower, middle and higher order conceptions. The results of this analysis were displayed in table format.

The third section of this chapter analysed the occurrence of the Practice Conceptions in the interview data in terms of frequency, gender and prior experience. From this analysis the study, based on a purposive not random sample, identified trends rather than conclusions that could be generalised to a wider population. To avoid any confusion with respect to this issue the study reported the occurrence of conceptions and other indicators in proportional terms rather than percentages as the use of percentages may mislead when sample numbers are relatively low.

The frequency of occurrence was defined in terms of the number of interviews in which the conceptual position was identified, rather than the number of times the position had been reported. The frequency of occurrence is reported in this study in order to show the degree to which each conception and theme is present in the data. It is not a measure of statistical significance.

Summary totals for each of the interview rounds were provided along with a combined summary of frequency across both rounds. With regard to the conceptions of practice, it was found that there were similar patterns of occurrence in both interview rounds. The lower order Practice Conceptions were reported most frequently, followed by the higher order Practice Conceptions with the middle order Practice Conception least frequently reported.

The frequency of occurrence was also analysed in terms of gender and prior experience. Some variations in the occurrence of Practice Conceptions in terms of gender were detected but these were not found to be in accord with the level of complexity across the five conceptions. An analysis of the occurrence of Practice Conceptions in terms of

age/experience, did reveal significant variations in terms of the level of conceptual complexity. It was found that in relation to the relative numbers in both groups, lower order conceptions were more prevalent amongst those who had commenced acupuncture studies immediately following secondary school education. Middle and higher order conceptions were significantly more common amongst those who had commenced acupuncture studies later in life.

The fourth section of this chapter presented three frequently reported cross-category themes that provided further insight into participants' experience of acupuncture practice. Each theme was examined in relation to the characteristics of the five conceptions of acupuncture practice reported earlier in this chapter. It was found that while particular themes had arguable relationships to some conceptions of acupuncture practice more than others, no specific theme was exclusively related to any one practice conception or group of conceptions.

As a whole, this chapter presented the participants' conceptions of acupuncture practice and an analysis of these conceptions from a variety of perspectives. The following chapter provides a presentation and analysis of the findings of the study in relation to participants' experience of learning that informs practice.

Chapter 5

Conceptions of Learning: Findings of the Study

5.1   Introduction

This chapter describes and analyses beginner acupuncturists' conceptions of learning that relate to practice. Five qualitatively different orientations to learning were identified from the interview data in this study. These five orientations form the category descriptions of the phenomenon 'learning in practice' as it appeared to the participants in the study. The meaning of each category is detailed in this chapter with representative quotations from the interview data to convey the nuances of meaning as is customary in the presentation of phenomenographic research findings. When viewed together these categories of description represent the range of conceptual positions within the group.

Each of the five conceptions are designated as qualitatively distinct orientations to learning on the basis of the specific aim/intention in learning and/or the strategy employed to achieve this aim. The analysis of the relationships between the five conceptions of learning is specified in terms of these two referents – learning aim and learning strategies. The conceptual analysis is displayed in outcome space table format, with subsidiary tables delineating approaches to learning as either deep or surface and learning processes as either atomistic or holistic.

The chapter is organised into four sections. The first presents the major findings - the categories of description with regard to beginner acupuncturists' experience of learning in practice. The second analyses the relationship between these different categories as representative of the collective conceptual map of the participants. The third analyses the approaches to learning which are inherent in the five group conceptions. The fourth explores the frequency of the occurrence of the conceptions in the group with respect to specific conceptions, gender and age/experience.

5.2   Categories of description

As noted in the previous chapter and detailed in the methodology of this study, the categories of description represent the qualitatively different ways in which the group of participants experienced the phenomenon under study. Drawing on the

phenomenographic research of Crawford et al. (1994), Prosser et al. (1994a) and Tempone (2001), this study distinguishes the qualitative differences in the categories of learning on the basis of learning aims and the strategies employed in achieving these aims. In accord with the phenomenographic perspective, the five categories of learning in practice reported by the group of beginner acupuncturists were not an *a priori* set of categories, but ones that arose from the interview data *per se.*

In addition to the aforementioned parameters of learning aim and learning strategy, the descriptive categories of learning in this research are defined in terms of 'learning as' rather than 'learning through' or 'learning by'. Phenomenographic studies which describe the categories of learning in terms of 'learning through' (Gerber et al., 1994) or 'learning by' (Crawford et al., 1994) place the emphasis upon learning strategies rather than learning aims when distinguishing between categories of description. In contrast, the studies by Beaty, Dall'Alba and Marton (1990), Bruce and Gerber (1994b), Keogh (1994) and Prosser et al. (1994a) which place the emphasis upon 'learning as', employ a more appropriate descriptor for identifying and distinguishing between categories of learning. This study has adopted the latter approach as the most appropriate way of identifying orientations to learning which are inclusive of both the learning aim and the strategy employed to achieve the aim.

The five categories of learning in practice, identified in this study are:

- **Category A Learning: The acquisition of knowledge and skills.** The aim in Category A learning is to accumulate knowledge and skills through memorising information that can be reproduced and applied in acupuncture practice to achieve the desired clinical results.

- **Category B Learning: The observation and emulation of practitioners.** The aim in Category B learning is to accumulate knowledge and skills through observing, emulating and copying other practitioners for the purpose of reproducing and applying this in acupuncture practice to achieve the desired clinical results.

- **Category C Learning: The attainment of personal practice experience.** The aim in Category C learning is to build up personal experience of what works in clinical practice by experimenting with knowledge and skills, retaining that which is effective for future application.

- **Category D Learning: The development of understanding and meaning.** The aim in Category D learning is to understand and find meaning in Chinese medical knowledge through processes that involve practice, reflection, sharing and discussion, for the purpose of informing acupuncture practice.

- **Category E Learning: Personal development.** The aim in Category E learning is personal development through processes that involve practice, reflection, sharing and discussion to develop oneself as a person and as a practitioner.

Each of the five categories represents qualitatively different positions on learning with respect to the learning aim, the strategies employed in achieving the aim or both. In the detailed presentation and explanation of each category, transcript excerpts are included to convey the meaning and qualitatively unique perspective of each position. The transcript excerpts have been coded to protect the identity of the participants. As noted in the previous chapter, the first letter of the code denotes the specific participant, the second letter indicates whether the participant is female or male (F or M), the following number indicates whether the excerpt was taken from a first or second round interview (1 or 2) and the concluding item specifies the page number of the transcript excerpt.

5.2.1 Category A Learning: The acquisition of knowledge and skills

The Category A view of learning focuses on acquiring knowledge and skills that have direct application in the practice of acupuncture. The knowledge is acquired primarily through a process of rote learning, which features memorisation of new information and the relearning and/or clarification of previously learnt information. In many instances the knowledge sought is quite detailed and specific.

> *I feel like there is only a handful of points that I use and I try to add to that. Each week I try to learn five points to add to my repertoire of points. That's the main thing* (AF1p.8).

> *The only textbook I regularly read is Deadman, and that is for getting information on specific point function to decide which is best. And if I come across a really tricky case in the clinic, then I will do a bit of reading on it, but not a great deal* (JM1p.4).

Sometimes the information sought is not new, but previously learnt and then forgotten. The impetus for going back and relearning is based in the Category A premise that practitioners must know the basic information and be able to apply it correctly.

> *When you get to see your own clients, that's when the learning process starts and you find out that the more you think you know, the less you actually do know. And then you go back to the books, even the first year and second-year books and start relearning...I think I have spent more time*

while doing this clinical internship, going back over really early lecture notes. Dragging them out with the cobwebs all over them. And relearning things, very, very basic things which you forget along the way because you don't realise the importance of them (IF1p.1).

I feel the need to still be revising the last four years of notes. And I have plucked stuff out of those notes for the clinical folder, but need to continually go back and revise (UF1p.4).

While the information sought is predominantly in the domain of Chinese medicine, other information that complements Chinese medical knowledge and has obvious application to clinical practice is also acquired.

I brought a couple of books in China. This one is quite good; it is a mixture of Zang Fu and biomedical information (OF2p.2).

I refer to Western books as well, muscular skeletal especially, which might give me information about trigger points or pressure points which are not necessarily within Chinese medicine, but still useful stuff (HM1p.8).

I also want to learn naturopathy. I want to learn iridology. That is my ultimate picture...I would like to be able to offer a lot more than just acupuncture (GF1p.6).

In each case the respondent was actively involved in seeking new knowledge or clarifying that which had been learnt in the formal curriculum and then forgotten. It is apparent that the clinical practice context necessitated students to be active seekers of knowledge, rather than just passive recipients.

I usually have Deadman's book with me in the clinic. And I don't feel embarrassed at all in looking up a point in front of the client. It's the basic initial knowledge that we covered in the first couple of years that I find myself going back to (CF1p.5).

Back to basics! Basics are very important – point location, point function, symptoms, treatment principles (RF1p.5).

Participants placed priority upon acquiring knowledge that could be applied directly in clinical practice rather than knowledge that was peripheral to, or would simply inform clinical practice. As such Category A learning is not concerned with the acquisition of

knowledge out of a purely academic interest, but the acquisition of knowledge for application to specific conditions in clinical practice.

> *And if I am not happy about how the [shoulder] treatment is going, I will look up and see what other aspect of the shoulder I could treat (DM2p.4).*

> *Like if someone did not want acupuncture and it was an emotional issue, I would use some psychological techniques. Or I might add some herbal medicine to the treatment. Just having other things you can do. Other things I want to learn are the Bowen technique and other musculoskeletal techniques (DM1p.8).*

In Category A learning, knowledge acquisition is seen in terms of three distinct phenomena – the learner, the knowledge and the clinical situation in which it is applied. In this orientation, knowledge is treated as a reality separate to the learner, which is objectified, acquired and then applied. The practitioner is not required to modify or adapt the knowledge to the context of practice, implying that the knowledge is factual and capable of producing the required results regardless of contextual differences.

In terms of information sources, textbooks are preferred because they contain information in clear summary form for easy memorisation and reproduction.

> Interviewer: *And when you are faced with difficult cases...*
> Practitioner: *I look up the book because I don't know who to ring. Whatever [book] is appropriate because I have got a lot of books and some that explain lots of problems [conditions]. But I usually look at those books that I can find the information quick enough (PM2p.2).*

In contrast, the Classical texts of Chinese medicine, are not seen to be as useful because the Classics '*are not that easy to understand'* (NM2,p.4).

The Category A view of learning in which knowledge is seen as pieces of information for acquisition and application, favours a 'problem focussed' rather than 'person focussed' orientation in clinical practice.

> *Before she came in I knew what she was coming for and had an idea from a bit of reading about the condition. And I have treated quite a few knees in the past, so they were generally treated the same way...By the fourth treatment we had the pain on a scale of about one, and she decided that she was content and happy with the result (DM1p.1).*

In the Category A orientation, if the applied knowledge/skills do not produce the expected clinical results, other information that will resolve the clinical presentation is sought.

> *And if the treatment is not working, I look at the textbook and ask what else I can try. What other points are there? That is when I start looking at the non-standard points* (TM2p.4).

In summary, the overall aim or intention in the Category A learning orientation is that of acquiring skills and knowledge that can be applied in clinical practice to achieve desired outcomes. Practitioners achieve this aim by accumulating a repertoire of knowledge, information and skills from recorded sources for application to specific conditions. While the major focus is upon acquiring acupuncture specific information, additional 'clinically useful' information is also added to the practitioner's repertoire.

In the Category A learning orientation, the interest is in acquiring knowledge which assists in 'problem focussed' rather than 'client centred' activity. The challenge for the practitioner is to master the knowledge in a process that involves acquiring, remembering and correctly applying the knowledge in the clinical context.

In this orientation, knowledge is treated as factual information that produces efficacious results when correctly understood and applied. When expected results are not achieved, additional knowledge is acquired and applied, rather than existing knowledge revised or adapted.

In the first round interviews, the Category A orientation to learning was reported by 17 out of 24 participants in discussions concerning learning that supported and improved clinical practice. In the second round interviews 10 out of the 18 participants reported the Category A orientation to learning. These figures indicate that within the group of participants the Category A orientation was a common approach to learning. The figures do not indicate how often each practitioner employed this approach, nor are the figures a basis for concluding that participants who did not report the Category A orientation never adopted this perspective.

5.2.2 Category B Learning: The observation and emulation of practitioners

As with the Category A perspective, this orientation to learning focuses on acquiring knowledge and skills that have direct application in the practice of acupuncture. In both orientations the learners are seen to be active participants, not passive recipients in the learning process. However, in the Category A orientation, knowledge is mainly acquired

through reference to recorded information while in the Category B orientation the focus is one of learning through observing, asking and emulating experienced practitioners.

Experienced practitioners know what has happened and what is really wrong [i.e. are able to diagnose accurately etc]...*I just ask her questions and she explains* (NM2p.4).

I would love to be able to 'hook up' with a practitioner, someone who is out there practising. That would be really good (SF1p.3).

As with the Category A learning orientation, the purpose of learning is to acquire knowledge and skills that have direct application in clinical practice.

Because we work together, sometimes she just tells me straight away what to do, because she has experience (NM1p.2).

She says that you put that in for twenty minutes or half an hour and if the feet get very hot, you know Yin Xu (NM2p.6).

For some participants this type of learning was seen to be akin to an apprenticeship style of learning.

Interviewer: *So the emphasis for you now is upon learning from others, along the lines of an apprenticeship?*
Practitioner: *Yes, like an apprenticeship...I think I will go to China first and get more experience in practising Chinese medicine* (NM1p.5).

The Category B learning orientation of acquiring knowledge and skills from experienced practitioners can also be achieved through observing experienced practitioners. Again the purpose in learning is to acquire knowledge/skills and then apply these in practice.

I've observed various practitioners and their techniques while being a student. But I would really like to observe more practitioners and watch them treat. Because you pick up little techniques. Maybe doing something you never thought about. Even if it is just a matter of turning the light down in the treatment room and putting on music. That can really help someone. Little things like that can make the treatment a whole lot better (RF1p.7).

This perspective implies that the knowledge and skills gained through formal training are not adequate for clinical practice, and therefore beginners also needs to learn from experienced practitioners.

> *I am not going to open my clinic straight away. I will be working with others first* (NM1p.5).

Similar to Category A learning, the content focus in Category B learning is not restricted to acupuncture specific information, but includes all information that can be acquired and applied to improve practice.

> *The other thing that is significant to my practice is that I have finally found a Chinese Kung Fu master. I am learning Kung Fu from him and next year I'm starting Qi Gong with him, and I will also be doing Dao Yin with him. And I am hoping that as I get to know him better, I will be able to come into his clinic to observe and learn* (EF2p.4).

While the Category A orientation places priority upon the recorded and broadly accepted body of knowledge contained in textbooks or curriculum content, the Category B orientation focuses upon acquiring and applying practical knowledge which encapsulates the experience and insight of senior practitioners.

> *I have learnt from experienced practitioners that you don't need to use so many points. You don't need to use four or five points, sometimes two or three is really enough* (NM2p.6).

In this teacher-student relationship the experienced practitioner was sometimes depicted as a 'master' of Chinese medicine, ostensibly because she or he had applied the knowledge and come to understand it.

> *I looked up Maciocia* [textbook] *and the Ling Shu* [classical text], *but there was not much information in the Ling Shu...And then I remembered something from the master I had been training with over there in Asia* (PM1p.2).

Through clinical experience, 'master practitioners' acquire valuable knowledge beyond that which is contained in the textbooks.

> He teaches her things that are not in the book and she tries these approaches in clinic and gets good results (NM1p.5).

This excerpt also implies that the knowledge is viewed as objectified information which the novice practitioner can simply acquire and apply to achieve efficacious results.

While this orientation focuses on learning from experienced practitioners, the interest is nonetheless that of learning the tradition rather than an adapted or modified version of Chinese medicine. The distinction between the knowledge in Category A and B is not that one is seen as traditional knowledge and the other as practitioner modified information, but rather that one is seen as the formal recorded tradition and the other as the experienced/applied tradition.

This approach to learning was also expressed by one participant in the desire to establish a new graduates clinic in which graduates could practice for six months to a year with experienced practitioners as a way of integrating and practicing their skills.

> *I want to start a new graduates clinic…To be able to address the difficulties*
> *of being new to practice and being early out in the world* (LF1p.6).

In summary, the overall aim or intention in the Category B orientation to learning is the same as that of Category A - acquiring skills and knowledge that can be applied in clinical practice to achieve desired clinical outcomes. Practitioners achieve this aim by accumulating knowledge from the experience of senior practitioners. As such the Category A perspective is subsumed within the Category B orientation to learning which employs additional strategies in the accumulation of knowledge.

While the major focus in the Category B perspective is upon acquiring acupuncture specific information, additional information is also seen to be beneficial. As with the Category A orientation, the clinical focus is 'problem focussed' rather than 'client centred'. Therefore, the challenge for the practitioner is to master the knowledge in a process that involves acquiring, remembering and correctly applying the knowledge in the clinical context.

In this orientation, knowledge is practice based but still objectified in the sense that what is learnt from experienced practitioners is applied to other clinical situations in unmodified form. The practitioner is not required to modify and adapt the knowledge to the context of practice, implying that the knowledge is seen as factual and capable of producing the required results regardless of contextual variations.

The Category B orientation to learning was not reported as frequently as the Category A perspective, but is included in this analysis because it represents a qualitatively different learning orientation which parallels styles of learning in the history of Chinese medicine.

The Category B orientation to learning was reported by 6 out of 24 participants in the first round interviews and 2 out of 18 participants in the second round interviews. In interpreting these figures the same caveats raised in the concluding paragraph of section 5.2.1 also apply.

5.2.3 Category C Learning: The attainment of personal practice experience

The Category C experience-focussed orientation to learning was identified as qualitatively distinct to other orientations on the basis of its focus upon personal experience as the basis for learning. In the Category C orientation, practitioners took what they had learnt, experimented with it in practice, retained what worked for them and discarded or placed 'on hold' knowledge that they found to be either ineffective or irrelevant in clinical practice. Through practical application and personal experience, practitioners accumulated a body of personal practice knowledge for clinical use.

This orientation was seen to be different to that in Categories A and B where knowledge was accepted as valid either because it was part of the recorded tradition or because it was found to be effective by experienced practitioners. In the Category C orientation, knowledge was seen to be clinically useful on the basis of one's personal clinical experience.

> *Sometimes I will just try something new. For example I might never have needled a certain point for joint problems...So I try it and check with the client about how it went next week. Or I will be using Ashi points and I might hook the electro on and see how they respond...But no, I guess that I am not really getting information from anywhere else* (DM2p.5).

This orientation operates on a 'test and see' approach to learning. For example, it strives: *To find out in practice whether a point works or not* (PM1p.4).

Experiential knowledge is retained on the basis of clinical experience rather than reflection on or evaluation of that experience.

> Interviewer: *Do you find that you do much homework in regard to your treatments?*
> Practitioner: *To be honest, no! And I have been like that all the way through the [university] course...and I know that through experience I will learn. So I am fairly happy accepting that I hardly know anything* (VF1p.2).

An additional aspect to this type of learning is the attainment of proficiency in clinical skills through repeated practice.

> *I know why a thready pulse is thready, and why a choppy pulse is choppy. The theory is fine. It is the reality under the fingers which is difficult and takes time. It is the stuff that no one else can teach you because it is tactile* (FF2p.6).

In this approach to learning, knowledge held within the tradition of Chinese medicine, or gained from other sources, is not seen to be efficacious *per se* until it has been personally tested in clinical practice.

> *Theoretical knowledge is a base; the only way to learn is from more practical experience* (MF2p.8).

> *On a case-by-case basis, as I treat people I learn more. Using the case to learn because I will remember it. I find I retain things better that way* (EF2p.3).

While the testing of knowledge is important in any learning process, the lack of critical reflection in the learning process means that practitioners apparently have no process for sifting through the possible reasons for clinical efficacy or lack thereof. They appear to have no way of knowing if a lack of clinical efficacy was due to the incorrect application of the knowledge, the lack of practitioner competency or some other factors. Nor do they seem to know if positive clinical results can be attributed to the appropriateness of theory or the correct application of that theory.

Personal experience is seen to provide a sense of certainty about what works and therefore what will work in the future.

> *I still feel in a way that I am experimenting. You know what I mean? Why don't we try this or why don't we try that? I guess the thing is that I like it to work. I would like to be able to say to my friends 'we will do this and you won't have another migraine headache'* (SF1p.3).

Clinical practice is seen as an opportunity to try out a range of different theories and assess their usefulness on the basis of experience.

I really think there is a large element of doing everything we can even if it seems a bit obscure. Because these patients don't know any better. They are not going to come in and ask for a Dai Mai treatment. The patients are coming in here assuming that we are assessing everything and looking at every treatment principle we know to see if that will help (JM1p.6).

I am really treating this first year [post graduation] *as an experience year, so it has been very good. I have learnt some things that don't work and some things that do* (KM2p.1).

While this approach to learning is experienced based, the lack of discussion with others, evaluation and personal reflection, leaves the learning 'unrefined'.

I tried these points with electro-acupuncture. I tried needle threading. I tried bladder points. I tried Gall Bladder local points, distal points like Bl60 and Si3...but nothing would work (XF1p.2).

This approach to learning is only possible in clinical contexts or health conditions where the practitioner sees the client on a regular basis and is able to learn from the client's response to treatment.

Interviewer: *How do you cope with seeing clients only once?*
Practitioner: *It's quite frustrating. You can't follow things up to see whether you have made any progress. You can't learn anything* (MF1p.2).

At the Women's Prison it's interesting...It's not a different client every week as it is a the detox centre. At the prison I see the one person for six weeks and check their progress. You can see whether the acupuncture is effective (CF1p.2).

Interviewer: *So when you have a one-off treatment, you never know the result?*
Practitioner: *Yes. It's a real pity because I can't learn much from it* (BF1p.3).

The experience based orientation to learning also requires that the beginner acupuncturist practises on a broad range of client conditions in order to build up a body of 'first hand' practice based knowledge.

There are problems in getting certain types of patients; problems in being rostered in clinics where you see a patient only once...If you only see

clients once and never do any follow-up, there is no way of being able to gauge how it is going and their reaction (IF1p.1).

In addition to providing a process for testing theoretical knowledge in clinical practice, this approach also provides the practitioner with a way of learning new things pertinent to clinical practice.

> *I am learning new things every day. Sometimes I am learning how to handle a client, learning how to touch the client, and learning how to respond to inquiries when people ring me. It is all a process of learning anyway* (PM2p.4).

> Practitioner: *That experience changed my approach. So now even if the point is not sensitive I might still use it.*
> Interviewer: *In other words you are learning new things from your clinical experience?*
> Practitioner: *very much so* (WF2p.2).

This approach to learning also recognises that there is a level of learning that can only come with practice.

> *I have already devoted over ten years to learning Chinese medicine. I have already gained a certain amount of knowledge and without practising I cannot go any further* (WF2p.6).

As with the orientation in Learning Categories A and B, learning in Category C focuses upon clinical experiences that are 'problem focussed' more than 'person centred'.

> *There was this woman who had a problem with being overweight, but that was not her only problem...And another one was this young man who was worried about his looks. He came in complaining about a backache, and sore knees, but it actually turned out to be the dark circles under his eyes he was most concerned about* (IF1p.2).

A definite advantage to the practice-based approach to learning is that it provides beginner practitioners with a means of building confidence in their ability as practitioners and confidence in the efficacy of the therapy *per se*.

> *I'm fine with the theory to a point, but I need the 'hands on'. That's how I gain my own confidence* (CF1p.6).

Being confident that your diagnosis was the right one, the first time...I guess it would help to have the patient each week in that situation and to know that you are still going down the right track (BF1p.4).

In summary, the overall aim or intention in the Category C learning orientation is that of learning through personal experience of what works for oneself in clinical practice. It includes the testing of learnt knowledge, with clinical efficacy being the basis for retaining or discarding the knowledge. It also includes adding to one's repertoire of knowledge and skills by learning new things in clinical practice that are additional to traditional theory.

The Category C orientation provides a means by which inexperienced practitioners can refine their clinical skills through individual practice, even if the model lacks professional guidance, feedback or reflection. The style of learning is clearly one of experimentation rather than action-reflection and as such can denigrate the client by treating her or him merely as an object of learning.

The Category C orientation differs to that of Categories A and B with respect to its learning intention (validating knowledge through clinical practice) and learning strategy (testing theory in practice). The Category C orientation advances a utilitarian view of knowledge in which clinical usefulness is the focus of learning. The approach assumes that what is valid for one clinical situation will be similarly appropriate in another.

The orientation is similar to the learning orientation in Categories A and B, with respect to the focus upon acquiring information/skills that can be applied in clinical practice for effective problem solving. In this respect, the orientation in Categories A, B and C is more 'problem focussed' than 'client centred'.

The Category C orientation to learning was reported by 14 out of 24 participants in the first round interviews and 12 out of 18 participants in the second round interviews. These figures indicate that within the group of participants the Category C orientation was a common approach to learning in practice. In interpreting these figures the same caveats raised in the concluding paragraph of section 5.2.1 also apply.

5.2.4 Category D Learning: The development of understanding and meaning

The learning aim in the Category D orientation is that of developing meaning and understanding, and as such is qualitatively different from the Category C aim of learning to accumulate knowledge. In Category D, understanding and meaning are achieved through a variety of strategies that include personal reflection on clinical experience and/or discussion with peers and mentors about one's clinical experience. In distinction to the previous three categories, in Category D there is less emphasis upon accumulating a body of knowledge and more emphasis upon finding meaning in acupuncture theory and one's practice experience.

> *It is important that people become good practitioners, not just good technicians...I think also that we need to encourage thinking and not just memorising and repeating, in our studies* (FF1p.9).

> *I was able to integrate and look into her case really deeply. And from that I kept coming up with the same possibility of points* (HM1p.1).

Understanding is also seen to result from discussions with peers and colleagues.

> Interviewer: *what do you gain from these discussions?*
> Practitioner: *They help me understand connections that are not obvious and well explained in textbooks. They help me translate my theory into real life situations and make theory contemporary* (FF1p.2).

Developing understanding is seen as particularly important in an area such as Chinese medicine where, due to the complexity of the conceptual framework, learning takes time.

> *Acupuncture is not your typical science degree. It's about changing your whole process of thinking from a Western to Eastern approach. It's quite different. It can be quite difficult if you don't have that unity within the whole group* [of peers] (CF1p.7).

The process of gaining understanding is seen as a way of coming to terms with the theoretical complexity of Chinese medicine.

> *Although there are some things in the Chinese books that I still cannot understand...Before you understand things, they seem really complicated. After you understand, then it is simple* (WF1p.5).

This comment reveals that 'understanding' is the focus of learning in Category D, distinguishing it from the view that learning is primarily concerned with accumulating knowledge (Categories A and B) or gaining experience (Category C).

A reflective/evaluative approach is seen to be particularly useful in developing understanding and appropriate treatment strategies in difficult client presentations. In discussing the treatment of lymphoma, a condition that receives only minimal discussion in Chinese medical literature, one interviewee commented.

> I looked at some medical books I had, but these did not give me a great deal of useful information. So I went through all sorts of Chinese medical books, and there were different ideas on how to treat the presentation...And I spoke with a couple of my classmates to share some ideas with them (KM1p.2).

Discussion with others and reflection on one's clinical practice are seen as key strategies in the process of developing understanding and meaning.

> Interviewer: Do you consult much with the clinical supervisors?
> Practitioner: Definitely. I always want new ideas and input. I am always hungry, not for knowledge, but for wisdom (HM1p.7).

Advancing a similar view, another practitioner states: And we talk about this and I think about it. And it helps me understand (WF1p.6).

Another interviewee, commenting upon diagnosing and treating a difficult condition commented:

> I am just trying to work out how to understand it [the client's presentation]. Looking at it from Six Divisions, or as a latent pathogen...Being a bit bewildered about where to start (OF1p.3).

In addition, negative or unexpected clinical results can also be catalysts for learning.

> If I am not getting results, I will always go back and look at the file and see if there is something I have missed (JM1p.4).

During the clinical internship period, students reflected on their treatments in discussion with the clinical supervisors or other clinicians they knew in order further insight.

Yes I discuss things [clinical experiences] *with a couple of practitioners. It is important to get their insight because they have been practicing for a number of years* (CF1p.5).

Some interviewees reported that they had set up their own study/discussion groups as a means of supporting their ongoing learning.

I am involved with an ongoing study group with people where we discuss a broad range of things...And I feel this will be ongoing as much as it has to be (LF1p.2).

The other thing I feel that has been really valuable is the fact that it is a small group...the culture of discussion, disclosure and support I get in the small group which is in contrast to the university (FF1p.3).

Interviewer: *Will you continue with your discussion group when you finish the course?*
Practitioner: *Yes definitely...We find it very, very valuable. And I have distinct concerns, very distinct concerns about not wanting to be isolated after finishing Uni...I need to create opportunities to de-brief as well as to share and expand knowledge* (UF1p.3).

For one practitioner, learning together was seen as sharing a journey.

It is sharing a journey of what it is like to set up in practice and starting off as beginning practitioners...And somewhere in there, I am learning from what other people are doing in practice as well. The primary thing for me is not learning about practice, but sharing and learning from others about how I feel (LF2p.2).

Participants stated that reflective learning might result from reviewing client case histories or gaining feedback from experienced practitioners.

I do keep case notes and do refer back to them. At first I was doing that sort of reflection at three in the morning, which got very tedious. It has settled down now (UF2p.3).

I discuss it with her and see if she thinks I am on the right track. It is really good to get feedback like that, and before they come in next time I look over the case history (MF2p.2).

In contrast to the apparently individualistic and competitive nature of formal university education, learning with others is seen as supportive.

> *Competition between practitioners is, I think, cultivated in the university. Or at least there is a competitive culture that we continue through the university. Yet what I have found in the study group is that level of competitiveness has fallen away and the group is really on about support and the adventure of learning...When we are doing something we are passionate about there is a strong desire for reflection...When learning gets caught up in competitiveness, a lot of opportunity is lost for a different way of learning in a more exploratory 'wherever you are is OK' way of learning. And I know that it is hard in an academic system, but when you are competing, you are not open. You are not giving and exchanging (FF2p.5).*

> *I've got my fellow students to talk with about these things, because we've all got different experiences. What I see clearly, another person doesn't. Even though we have got the same level of basic knowledge, we can help each other (AF1p.6).*

This approach to learning differs from the Category C view that what is learnt in practice can be simply replicated in varied contexts. Instead, the Category D view holds that each situation is unique and requires understanding in its own right.

> *If someone comes in with a tennis elbow, and because I have treated fifty tennis elbows before, I can't be arrogant and assume that this one is no problem. I have got to go through it [diagnosis] as if it were my first one and look at every possible reason (JM2p.6).*

There is a perceived need for practitioners to understand and adapt to the context of contemporary clinical practice. An overly literal adherence to traditional theory, which can occur in Categories A or B, is seen as problematic.

I think I am starting to realise that I need to...Not to forget what I have learnt, but just try and get closer to the reality of situations. Just lose a bit of theory and try to understand what is really going on. Try to understand things from my own perspective rather than just believing what I read in books (OF2p.7).

In contrast to Category C learning, the Category D orientation does not simply accept and reproduce from one context to another, instead it seeks understanding.

Looking at things and trying to understand why things worked well. Was it the person or was it me? Or was it the method? There are just so many different things you can do and that is what I am trying to narrow down at the moment (KM2p.5).

In summary, the Category D orientation to learning focuses on developing meaning and understanding as the basis for effective practice. Knowledge is not seen as something factual that is simply acquired and applied (Categories A and B) nor is it seen as a purely pragmatic commodity (Category C). Instead, knowledge and learning are viewed as part of a complex dynamic that resides in the interplay between the practitioner, the clinical context and the body of established theory and beliefs.

The Category D orientation stands in contrast to the view that learning should be focussed upon accumulating knowledge (Categories A and B) or experience (Category C). The Category D orientation focuses on achieving understanding and meaning, so that knowledge can be adapted in clinical practice. Personal reflection about theory and one's own clinical experiences, in addition to discussion and reflection with peers and mentors were noted by participants as key strategies for deepening understanding and meaning in a supportive non-competitive environment.

The learning orientation focuses more upon understanding people and situations than compiling a compendium of clinical solutions to health problems. The orientation provides a process for handling clinical conditions rather than a bank of solutions to clinical conditions as in Categories A and B. In view of this, the approach is particularly relevant in dealing with the culture-bound nature of Chinese medical knowledge and the complexities of contemporary clinical practice.

The Category D orientation to learning was reported by 20 out of 24 participants in the first round interviews and 15 out of 18 participants in the second round interviews. Within the group of participants, Category D was the most frequently reported orientation to

learning in practice. In interpreting these figures the same caveats raised in the concluding paragraph of section 5.2.1 also apply.

5.2.5 Category E Learning: Personal development

The learning strategies in Category E are similar to those employed in the Category D orientation, however there is a qualitative difference between the two categories in terms of the learning aims. In Category E the learning aim is that of personal development, distinct from the practice-focussed meaning and understanding intent in Category D. The Category E learning orientation differs also to that in Category D with respect to its focus upon practitioners themselves rather than the clinical context or the body of knowledge in the Chinese medical tradition.

> *I am finding that to get more of that connection, I am going to have to change some of my life. And that is a big issue for me too...So I am going to have to change if I am going to keep in touch with myself and generate a more spiritual approach that I sense strongly at times, but is there all the time* (KM2p.6).

Therefore the practice of Chinese medicine is not just like any other job, it is a lifestyle.

> Practitioner: *This is a lifestyle thing, not just a job. It is a career, an extension of my life and how I live. That's how I see it. In a way, the course* [university] *has been fine-tuning me. This course is fine-tuning me and has set me up in a way that I really didn't think I would be able to be involved.*
> Interviewer: *so this is more than a job.*
> Practitioner: *yes definitely. And being who you are. All the different sides of you are being forced to come out at different times whether you like it or not* (KM1p.6).

An example of self-reflective learning for personal development appears in the following excerpt.

> *It's about acceptance. I used to expect a lot more, now I accept a lot more. But I expect of myself more than ever, which I shouldn't right now. I think I am being too hard on myself* (HM1p.5).

The implication in the Category E position is that through being more 'personally aware', the practitioner will be more focussed and effective in clinical practice.

What goes on for me personally affects what happens in my practice of Chinese medicine. I have been working on separating myself from the clinical situation if I am not ready to work in that situation (HM1p.4).

I suppose that I feel that who I am at the moment influences a lot of things in the treatment room. And I sense that there will be changes coming up for me there (KM2p.8).

Personal development is also nurtured by the mentor-mentee learning relationship that one practitioner had developed with a colleague.

It also serves the function of discussing my own development as a practitioner. Being able to talk to someone who knows what it is like to be doing the same work (FF1p.4).

Working and learning with others is seen as a means of fostering personal development.

If you can't get along with your peers. My God! In practice we need to grow together (CF1p.7).

Learning in a supportive group environment is also seen as valuable because it overcomes the isolation of facing personal challenges alone.

And also to be able to say 'Oh My God, I really stuffed up!' And not feel alone with that stuff of feeling I really blew it with that person. All that self doubt (FF2p.4).

In this process of personal development, practitioners also learn from their clients.

I will look at their problem in relation to my life. Why am I attracting that particular person into my life? Some might be overworked and I think, so am I. Some might be depressed and I think, so am I (HM2p.5).

But after saying this, I have days when I think 'My God! What a terrible treatment I gave. Why did I do that treatment'? (KM1p.6).

Interviewer: *so how did you feel about cutting her off?*

Practitioner: *well it was hard. I went around a number of people to seek advice on the matter. It was really hard for me because I did feel guilty. I did feel I had to save her. I am not perfect and I have lessons to learn about these things* (QF1p.4).

I think I have learnt to deal with that because I have learnt how to deal with my own issues to the point that if someone asks me about these things, I won't get so worked up. I have really learnt in the past year or so how to deal with my own personal relationships so that I don't bring them to the consultation (RF2p.6).

For one practitioner, learning acupuncture was seen as a personal journey of growing in insight and overcoming negative childhood messages.

There is a journey of knowledge and wisdom, and this is a kind of personal journey which has to do with what I study and learn…
Messages like 'I am not good enough. You will never be good enough. You don't know what you are doing' (LF2p.2, p.6).

In summary, the Category E learning orientation focuses on personal development, engaging the same learning strategies identified in Category D – personal reflection, sharing, discussion and feedback. While Category E assumes the previous orientations to learning, it is not focussed primarily on accumulating knowledge (Categories A and B) or experience (Category C) or developing clinical practice understanding (Category D), instead it is primarily concerned with personal understanding and development.

As with Category D, the Category E learning orientation is clearly 'person focussed' rather than 'problem focussed' (Categories A, B and C). Moreover, the Category E learning orientation is ostensibly related to clinical practice in its assertion that through personal development the practitioner is more able to cope with the challenges of clinical practice. Personal individual reflection, in addition to discussions with and feedback from peers and mentors, were noted by participants as key strategies for increasing self-understanding.

The Category E orientation to learning was evident in 5 of the 24 interviews conducted in the first round interviews and 5 of the 18 transcripts in the second round interviews. Over the two interview rounds 7 different participants reported that personal development was a focus of their learning. While the Category E orientation did not commonly occur in the transcripts, it nonetheless represents a qualitatively distinct position on practice related

learning in the group of participants. In interpreting these figures the same caveats raised in the concluding paragraph of section 5.2.1 also apply.

5.3   Inter-category analysis

5.3.1   Key features of each category of learning

As noted in the previous chapter and the methodology outlined in this study, the categories of description are defined in terms of referential and structural axes. The referential axis denotes the specific intention or aim of the learning category in the context of acupuncture practice and the structural axis denotes the learning strategies employed in achieving this aim. While the data showed that the overall aim in learning was that of improving practice, stated explicitly in Categories A to D and implicitly in Category E, a number of distinct and specific aims were identified within this umbrella aim and these differences formed the basis for distinguishing between different conceptual positions. Together the referential and structural axes formed the basis for distinguishing between each conceptual position. In addition, this analysis also details the 'tools employed' in implementing the learning strategy (e.g. referral to textbooks and class notes) as a way of further clarifying the nature of each learning strategy.

As the categories of description form the basis for the group phenomenographic analysis, the key features of each category are first summarised in the following.

Category A Learning: The acquisition of knowledge and skills
  Referential Axis (overall aim or intention):
  To accumulate information and skills that can be applied in practice.
  Structural Axis (strategy employed to achieve the aim):
  To memorise information and gain clinical competence in areas that pertain predominantly to the Chinese medical tradition.
  Tools employed in the strategy:
  Checking textbooks for new information or re-learning that which has been forgotten. Reviewing class notes.
  Assumptions about the nature of knowledge:
  Knowledge is seen as factual and therefore when correctly memorised and applied in practice produces the desired clinical outcomes.
  There is no need to adapt or modify the knowledge to the clinical context.
  Implications for practice:
  Practice is seen in terms of the mastery of knowledge and skills.
  Practice is 'problem focused' more than 'client centred'.

The practitioner holds the power, fixes the problem and effects change.

Category B Learning: The observation and emulation of practitioners

Referential Axis (overall aim or intention):

To accumulate information and skills that can be applied in practice.

Structural Axis (strategy employed to achieve the aim):

To emulate, observe and copy from experienced acupuncturists.

Tools employed in the strategy:

Guidance from an experienced practitioner.

Assumptions about the nature of knowledge:

Knowledge is seen as factual and therefore when correctly memorised and reproduced in practice produces the desired clinical outcomes.

There is no need to adapt or modify the knowledge to the clinical context.

Implications for practice:

Practice is seen in terms of the mastery of knowledge and skills.

Practice is 'problem focused' more than 'client centred'.

The practitioner holds the power, fixes the problem and effects change.

Category C Learning: The attainment of personal practice experience.

Referential Axis (overall aim or intention):

To accumulate personal experience of what works for oneself in practice.

Structural Axis (strategy employed to achieve the aim):

Experimenting in practice, retaining what works and discarding or putting 'on hold' that which is not useful. The predominant, but not sole focus, is upon learning things that pertain to the Chinese medical tradition.

Tools employed in the strategy:

Practitioners' knowledge and skills are tested in clinical practice.

Assumptions about the nature of knowledge:

Knowledge and skills need to be tested in practice in order to be validated.

Knowledge is seen as factual on the basis of whether it produces the desired clinical outcomes. If the knowledge is found to be effective in one context it is assumed to be equally applicable in another.

There is no need to adapt or modify the knowledge to the clinical context.

Implications for practice:

Practice is seen in terms of the mastery of knowledge and skills.

The practitioner needs to be broadly experienced in order to acquire the breadth of personal clinical experience necessary as a base for clinical practice.

Practice is 'problem focused' more than 'client centred'.

The practitioner holds the power, fixes the problem and effects change.

As the individual practitioner is the sole arbitrator of what knowledge should be retained or discarded, this approach can lead to the development of idiosyncratic practice.

Category D Learning: The development of understanding and meaning.

Referential Axis (overall aim or intention):

To develop understanding and meaning for the purpose of informing clinical practice.

Structural Axis (strategy employed to achieve the aim):

Reflection, sharing and discussion of matters that pertain to and arise from clinical practice.

Tools employed in the strategy:

Personal reflection; review of case histories; recourse to texts to enhance insight and understanding; learning with and from others through the sharing of experiences and discussion.

Assumptions about the nature of knowledge:

Chinese medical knowledge is situated and contextually bound. Therefore, one needs to understand and discover the meaning within the tradition in order to adapt and apply the knowledge.

Implications for practice:

The practitioner needs to be reflective and thoughtful.

In each clinical encounter the practitioner needs to explore, adapt and create the treatment approach.

Practice is a process of ongoing discovery and what works in one situation may not in another.

Practice is more 'person centred' and 'process focused' than 'problem centred'.

Category E Learning: Personal development.

Referential Axis (overall aim or intention):

To develop oneself and in so doing become a better practitioner.

Structural Axis (strategy employed to achieve the aim):

Reflection, sharing and discussion of matters that pertain to and arise from the personal dimensions of clinical practice.

Tools employed in the strategy:

Personal reflection; review of case histories; recourse to texts to enhance insight and understanding; learning with and from others through the sharing of experiences and discussion.

Assumptions about the nature of knowledge:

Developing understanding and meaning serve as a springboard for personal development.

Chinese medical knowledge informs one's values and view of life because it embodies wisdom and is the catalyst for engendering wisdom.

Through personal insight, development and change, one becomes more attuned to the clinical context and a more effective practitioner.

Implications for practice:

The practitioner must learn the right way of acting.

The practitioner needs to be reflective and thoughtful.

Practice is a process of ongoing discovery and development.

Practice is more 'person centred' and 'process focused' than 'problem centred'.

5.3.2   Inter-category relationships: Group conceptions

As noted in the previous chapter and explained in the methodology employed in this study, the categories of description represent the qualitatively different ways individuals in the group experience the phenomenon of learning. When viewed together as the total representation of the group's perception about learning, these categories are seen as representative of the conceptual position of the group. While individuals in the group may adopt different conceptual positions in different contexts, the sum total of the conceptions represents the group's relationship to the phenomenon (Marton & Booth, 1997b).

The differences between conceptual positions and the relationships between conceptions within the group are delineated on the basis of the meaning-aspect in each conception and the sum total of these represents the collective position of the group with respect to the phenomena of practice related learning. The collective conceptual map of the group is displayed in the following 'outcome space table'. The table displays the meaning of each conceptual position in terms of referential (aim/intention) and structural (strategy employed in achieving the aim) axes. It also displays the relationship between each category in terms of the respective axes, in a hierarchical progression from basic conceptual positions to more complex ones.

5.3.3 Outcome space table: Conceptions of learning (Table 5a)

Referential→ *Learning intention and overall aim*		To accumulate information and skills which can be applied in practice	To accumulate personal experience in practice	To develop understanding and meaning to inform practice	To develop oneself and thus become a better practitioner
Structural↓ *Strategy employed to achieve the aim*	**Structural↓** *Tools employed in the strategy*				
Memorise information and learn practice skills	Referral to textbooks, notes and other recorded information	A			
Emulate, observe and copy other practitioners	Guidance from experienced practitioners	B			
Experiment in clinical practice	Testing one's knowledge and skills in practice		C		
Reflection on practice	Reflection, review, sharing and discussion			D	E

5.3.4 Explanation of the outcome space table

Learning intention

In all five conceptions of learning the overall learning aim was that of improving clinical practice, however the notion of clinical 'best practice' varied in accord with participants' conceptions of knowledge and practice. In Learning Conceptions A and B knowledge was seen as factual on the basis of its place in the tradition. Therefore, the challenge for the practitioner was one of mastering the knowledge and skills through memorisation and repeated use in order to achieve clinical competence. In Learning Conception C knowledge was seen as factual from the pragmatic perspective of clinical efficacy. Therefore, the challenge for the practitioner was one of testing the knowledge in clinical practice to accumulate and master a body of pragmatic knowledge for ongoing clinical use. In Learning Conceptions A, B and C the skilful practitioner, through achieving mastery, was seen to be able to apply the knowledge and produce the desired clinical outcomes.

In Learning Conception D knowledge was seen as situated rather than factual and 'best practice' was seen in terms of the practitioner gaining insight and understanding that could inform practice. From this perspective, clinical 'best practice' was seen in terms of the practitioner achieving insight and wisdom. Learning Conception E holds a similar view of knowledge to Learning Conception D, however 'best practice' was viewed in terms of the practitioner's personal development.

Similarities and differences between the five conceptions

Learning Conceptions A and B share the same learning intent of accumulating information and skills for application in clinical practice, with the focus being primarily, although not exclusively, upon knowledge and skills that lie within the domain of Chinese medicine. However, Learning Conceptions A and B differ from each other with respect to the strategies each employs in achieving this learning aim. In Conception A the strategy employed is that of memorising new information/skills or re-learning previously studied information/skills and then applying these in clinical practice. However, in Learning Conception B the learning strategy is one of observing, emulating, copying and being guided by an experienced practitioner. This learning strategy, while different to that in Learning Conception A, is nonetheless underpinned and supported by the Learning Conception A strategy of memorising information/skills.

Learning Conception C is different from A and B with regard to both the learning intent (accumulating a body of experience based knowledge/skills) and learning strategy (testing knowledge/skills in clinical practice). Learning Conception D also differs from the prior conceptions in terms of both the learning intent (the development of understanding

and meaning) and learning strategy (reflection, review, discussion and sharing). Learning Conception E adopts similar learning strategies to those in Learning Conception D, but differs from Learning Conception D in terms of its learning aim (personal development).

In the outcome space table analysis, the five conceptual positions of the group were seen to exist in a hierarchical relationship from simple to complex. In terms of the referential axis of the outcome space table, it can be seen that simple conceptions of learning are subsumed within more complex ones. For example, the accumulation of knowledge and skills for application in practice (Learning Conception A) is basic to the other learning aims across the referential axis. The aim in Learning Conception C, that of accumulating personal practice experience, assumes a level of information and skill - the aim in Learning Conceptions A and B. The aim in Learning Conception D, developing understanding and meaning, requires that practitioners first have a level of knowledge, skill and experience (Learning Conceptions A, B and C). Likewise the aim in Learning Conception E, personal development, is based upon the referential position in Learning Conceptions A to D.

While the conceptions of learning were seen as structured within a hierarchical progression in which basic conceptions were subsumed within complex ones, it was not clear whether the tools employed in achieving these aims, as detailed in the outcome space table, existed in a similar progression. For example, it is possible that the learning tools employed in Learning Conception B (guidance from experienced practitioners) or Learning Conception C (testing one's knowledge and skills in clinical practice) might differ slightly when subsumed within the learning aims of higher order conceptions.

5.3.5   Learning motivation: Internal or external requirements and demands

An additional perspective to understanding the qualitative differences between conceptions of learning in phenomenographic analysis is the measure of whether each conception satisfies internal or external demands and requirements (Prosser et al., 1994a). In this study of acupuncture practice and learning, it is clear that all five conceptions of learning are underscored by the practitioner's internal motivation to improve clinical practice, rather than any external requirement such as passing exams.

While there were no apparent external requirements driving the learning process, it was not clear whether some conceptions of learning were indicative of external learning demands and others of internal learning demands. It is arguable that learning in conceptions A, B and C was apparently motivated by the external demand of clinical problem solving. It is also arguable that learning in conceptions D and E, while still related to clinical practice, was motivated more by the internal desire to understand. This distinction is supported by the observation that in Learning Conceptions D and E knowledge was not treated as a commodity that could be acquired, applied, used, retained or discarded, but as understanding that was internalised and integrated.

However, in this study any differentiation between the conceptions of learning as indicative of external or internal learning demands is debatable. It is arguable that clinical problem solving, the focus in Learning Conceptions A, B and C, is indicative of an internal, rather than external, learning demand. In view of the data and the participant cohort (beginner practitioners), the researcher in this study was not able to conclude whether specific learning conceptions were driven by external or internal learning demands.

5.4   Approaches to learning

5.4.1   Surface and deep approaches to learning

In addition to adopting varying conceptions of learning, phenomenography asserts that students also adopt varied approaches to learning (Marton, Hounsell & Entwistle, 1997a). From a phenomenographic perspective, what people learn is underpinned both by their conception of learning and their specific approaches to learning (Lybeck, 1988; Marton & Booth, 1997b). While conceptions of learning reveal how students see learning, approaches to learning reveal 'how they go about learning' and 'what they do' as a consequence of their conception of learning.

Marton and Säljö differentiated approaches to learning on the basis of whether these were surface or deep, with surface approaches defined as those that focussed upon content acquisition for the purpose of reproduction/use and deep approaches as those that focussed upon fostering meaning and understanding (Marton et al., 1997a). The surface/deep distinction adopted in this study is in accord with this primary distinction and its elaboration in other studies (Booth, 1997; Crawford et al., 1994; Entwistle & Ramsden, 1983; Higgs, 1992; Prosser et al., 1994a; Rogers, 1998; Zaslawski, 1996a).

Surface approaches to learning are those that:

- focus upon content acquisition for the purpose of reproduction and use;
- are motivated by immediate or short-term goals;
- are oriented to task completion; and
- utilise memorisation and the acquisition of knowledge/skills to complete the task.

Deep approaches to learning are those that:

- focus upon furthering meaning and understanding;
- are motivated by a concern for making sense of phenomena;
- are oriented to understanding and integrating new ideas in the light of previous knowledge; and
- utilise reflection, discussion and exploration as learning strategies

The approach identified in Learning Conception A was that of memorising information/skills to apply in clinical practice for the purpose of resolving the client's presenting problem. This is clearly a surface approach in terms of the focus upon acquiring information for the purpose of undertaking specific tasks. A similarly surface approach is evident in Learning Conception B where the aim is to acquire information to apply in clinical practice. The difference between Learning Conceptions A and B lies in the different ways they acquire information, with the former utilising memorisation of information from textbooks or notes, and the latter utilising observation and emulation of experienced practitioners.

Learning Conception C focuses upon accumulating personal practice experience to support ongoing clinical practice. In this orientation the practitioner experiments in practice to establish what works and what does not. The basis for retaining, discarding or placing information 'on hold' is not reflective-practice but rather the subjective clinical success of the practitioner. By accumulating a bank of personal 'practice based knowledge' on the measure of 'what works for the individual practitioner', Learning Conception C also employs a surface approach to learning.

In contrast, Learning Conceptions D and E focus upon the development of meaning and understanding, and represent deep approaches to learning. In Learning Conception D the practitioner focuses upon developing understanding to inform clinical practice through reflecting upon, sharing and discussing clinical experience and broader knowledge with peers and colleagues. Learning Conception E employs similar learning strategies, although the aim of personal development differs to that of Learning Conception D. In Learning Conceptions D and E the purpose in learning is to inform clinical practice rather than determine it, with the practitioner engaging with knowledge and the client's situation to make sense of clinical realities.

The following two tables provide summary overviews of the learning approaches inherent in the five learning conceptions identified in this study with respect to the surface/deep distinction.

Surface/Deep approaches to learning   **(Table 5b)**

                (in terms of learning strategies and tools employed)

LEARNING APPROACH →		SURFACE		DEEP	
LEARNING STRATEGY↓	**Tools employed in the strategy↓**				
Memorise information and practice skills	Referral to textbooks, notes and other recorded information	**A**			
Emulate, observe and copy other practitioners	Guidance from experienced practitioners	**B**			
Experiment in clinical practice	Testing one's knowledge and skills in practice		**C**		
Reflection on practice	Reflection, review, sharing and discussion			**D**	**E**

Overview of approaches to learning in relation to conceptions of learning

(Table 5c)

Referential→ Learning intention and overall aim		To accumulate information and skills which can be applied in practice	To accumulate personal experience in practice	To develop understanding and meaning to inform practice	To develop oneself and thus become a better practitioner
Structural↓ Strategy employed to achieve the aim	Approach ↓				
Memorise information and practice skills	S U	A			
Emulate, observe and copy other practitioners	R F A C	B			
Experiment in clinical practice	E		C		
Reflection on practice	D E E P			D	E

In Section 5.3 it was noted that while the purpose of learning in each conceptual position was that of improving clinical practice, the different conceptions of learning were indicative of different views about clinical 'best practice'. Likewise, these tables indicate that different approaches to learning are indicative of different views of what constitutes 'effective learning'. In Learning Conceptions A, B and C effective learning is seen in terms of one's ability to absorb, retain and apply information as needed. In Learning Conceptions D and E effective learning is seen in terms of one's ability to understand and integrate new and previous knowledge in order to make sense of phenomena.

5.4.2 Atomistic and holistic learning strategies

Phenomenography also proposes that in addition to identifying students' approaches to learning as either surface or deep, it is also beneficial to distinguish whether students go about their learning tasks in an 'atomistic' or 'holistic' manner (Eizenberg, 1988; Ramsden, Whelan & Cooper, 1989; Svensson & Hogfors, 1988). An atomistic process is one in which the learner segments the whole and focuses on the individual parts of a specific problem, separate to the whole, in a generally reductionist approach to learning. A holistic perspective is one in which the learner focuses on the whole and individual parts in relation to the whole, in a generally global approach to learning.

In Learning Conceptions A, B and C where pieces of information were isolated, learnt and stored for future use, an atomistic learning process was employed. However, in Learning Conceptions D and E where there was an attempt to find meaning in relation to previously held knowledge and the contemporary context, learners employed holistic learning processes. The following table lists the five conceptions of learning in terms of the atomistic/holistic distinction.

Atomistic/Holistic learning strategies   **(Table 5d)**

PROCESS UNDERTAKEN →		ATOMISTIC		HOLISTIC	
LEARNING STRATEGY↓	**Tools employed in the strategy↓**				
Memorise information and practice skills	Referral to textbooks, notes and other recorded information	**A**			
Emulate, observe and copy other practitioners	Guidance from experienced practitioners	**B**			
Experiment in clinical practice	Testing one's knowledge and skills in practice		**C**		
Reflection on practice	Reflection, review, sharing and discussion			**D**	**E**

Noting the similarities between Table 5d and Table 5c, it is apparent that in this study, surface approaches to learning employed atomistic learning strategies and deep approaches to learning employed holistic learning strategies.

5.5 Distribution of Responses

5.5.1 Distribution of learning conceptions

The total number of respondents who reported each of the five conceptions of learning in the first and second round interviews is displayed in the following table (Table 5e). In this and subsequent tables, frequency is defined in terms of the number of interviews in which the conceptual position was identified, rather than the number of times the position was reported by each individual participant. The numerical display is shown in total numbers rather than percentages, with 24 participants in the first round and 18 in the second round interviews. The table also provides an overall summary of the frequency of occurrence of each response for the two interview phases.

Distribution of conceptions of learning   **(Table 5e)**

	Conception A	Conception B	Conception C	Conception D	Conception E
Round 1 ($n = 24$)	17	6	14	20	5
Round 2 (n = 18)	10	2	12	15	5
Total	27	8	26	35	10

The table shows similar patterns of frequency of occurrence of the five conceptions of learning in both the first and second round interviews. The most frequently reported conceptions of learning in both interview rounds were conceptions A, C and D, with A and C representing surface approaches to learning and D a deeper approach. The most frequently reported conception of learning was Conception D – the development of meaning and understanding. The overall pattern of distribution is displayed in the following bar chart (Figure 5a).

Summary distribution of conceptions of learning   **(Figure 5a)**
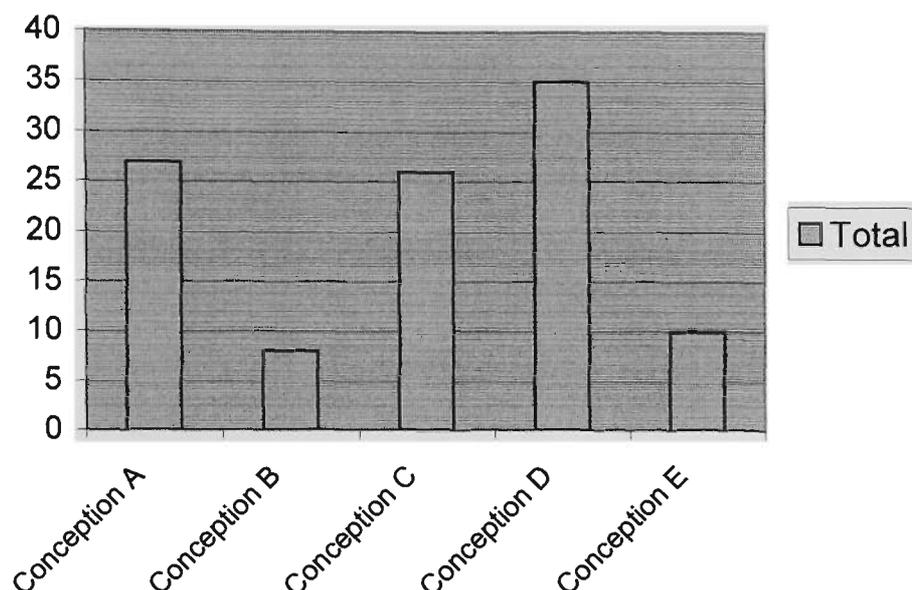
When analysed in terms of deep and surface approaches, it was found that surface approaches to learning were more common than deep approaches (Table 5f). However, of the five learning conceptions identified in this study, the most frequently reported was Conception D that was classified as a deep approach to learning.

Distribution of surface/deep approaches to learning   **(Table 5f)**

	SURFACE			DEEP	
	Conception A	Conception B	Conception C	Conception D	Conception E
Round 1 ($n = 24$)	17	6	14	20	5
Round 2 (n = 18)	10	2	12	15	5
TOTAL	61			45	

5.5.2   Distribution in terms of gender

The total number of respondents who reported each of the five conceptions of learning in the first and second round interviews on the basis of gender is displayed in Table 5g. As with the previous distribution tables, the numerical display is provided in terms of total numbers rather than percentages. The table also provides an overall summary of the frequency of occurrence of learning conceptions in the two interview phases in terms of gender. The total number of respondents in round one interviews was 24 of which there were 17 females and 7 males. In round two interviews, the total number of respondents was 18 of which there were 11 females and 7 males.

Gender based distribution of conceptions of learning (Table 5g)

	Conception A		Conception B		Conception C		Conception D		Conception E	
	F	M	F	M	F	M	F	M	F	M
Round 1 (n = 24) (F = 17: M = 7)	12	5	4	2	9	5	16	4	3	2
Round 2 (n = 18) (F = 11: M = 7)	6	4	1	1	7	5	10	5	3	2
Totals - Female/male	18	9	5	3	16	10	26	9	6	4
	F	M	F	M	F	M	F	M	F	M

The table shows that in both first and second round interviews, each of the five conceptions of learning was reported more frequently by females than males, reflecting the overall ratio of females to males in the total number of participants (approximately 2:1).

With regard to the three surface conceptions, Learning Conception A was reported equally by males and females in proportional terms; Learning Conception B was reported almost equally by males and females; and Learning Conception C was reported more by males. With regard to the two deep conceptions, Learning Conception D was reported more by females and Learning Conception E more or less equally by females and males. In view of these findings, this study concluded that while there were some variations in the occurrence of Learning Conceptions between females and males there was no apparent variation in the frequency of occurrence in terms of the surface/deep distinction.

In congruence with Table 5e, the most commonly reported conceptions of learning in terms of total numbers (Learning Conceptions A, C and D) were also the most commonly reported by both females and males respectively (Table 5g). This shows that there was no major difference between the overall pattern of distribution of learning conceptions and the pattern of distribution in terms of gender. The summary pattern of distribution on the basis of gender is displayed in the following bar chart (Figure 5b)

Summary distribution of conceptions of learning in terms of gender   (Figure 5b)
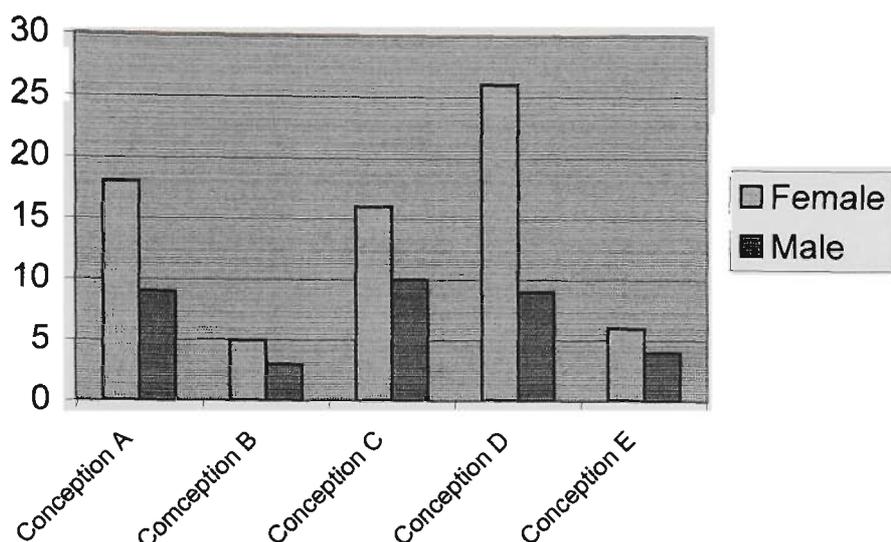
On the basis of Table 5g and Figure 5b, this study detected no significant variations in the distribution of the conceptions of learning on the basis of gender and level of conceptual complexity. The variations in occurrence that were detected, and the possible reasons for these variations, will be discussed in the final chapter of this thesis.

5.5.3   Distribution in terms of age/experience

As noted in the previous chapter, university students in Australia are categorised as either school leavers (SL) or mature age (MA) entrants. School leavers (SL) are defined as those students who commence university studies immediately after completing their secondary school education, while mature age (MA) entrants are defined as those who had undertaken work or other activities after their secondary school education and before commencing university studies. This classification provides a broad indication of age and experience prior to the commencement of university studies.

The following table displays the distribution of responses for each of the five conceptions of learning on the basis of whether the participant commenced studies directly after completing secondary school studies or engaged in other activities before commencing acupuncture studies at university. As with the previous distribution tables, the numerical display is provided in terms of total numbers rather than percentages. The table also provides an overall summary of the frequency of responses for the two interview phases. The total number of respondents in round one was 24 of which there were 10 school leavers and 14 mature age entrants. The total number of respondents in round two was 18 of which there were 6 school leavers and 12 mature age entrants.

Age/experience based distribution of conceptions of learning (Table 5h)

	Conception A		Conception B		Conception C		Conception D		Conception E	
	SL	MA	SL	MA	SL	MA	SL	MA	SL	MA
Round 1 (*n* = 24) (SL=10; MA=14)	10	7	3	3	6	8	7	13	0	5
Round 2 (n = 18) (SL=6; MA=12)	4	6	1	1	3	9	5	10	1	4
Totals - based on age	14	13	4	4	9	17	12	23	1	9
	SL	MA	SL	MA	SL	MA	SL	MA	SL	MA

In examining the total responses for round one and two, Learning Conception A was identified in 14 of the 16 interviews with School Leavers, yet only 13 out of the 26 interviews with mature age participants. A similar pattern was evident with Learning Conception B with a higher proportional occurrence identified in the interview transcripts of school leavers (4 out of 16 as compared to 4 out of 26 for the mature age group).

This trend changed with Learning Conception C that was reported in similar proportions in both groups, with it occurring in 9 out of 16 school leaver transcripts and 17 out of 26 mature age participant transcripts. However, with Learning Conceptions D and E the trend moved in the opposite direction with these being more evident in mature age responses. Learning Conception D was identified in 23 out of 26 mature age transcripts and 12 out of 16 school leaver transcripts. Learning Conception E was identified in 9 out of 26 mature age transcripts and only 1 out of 16 school leaver transcripts.

In terms of surface (A,B,C) and deep (D,E) conceptions of learning (Table 5c), the data reveals that the surface Learning Conceptions (A and B) were more prevalent amongst those who entered acupuncture studies directly after completing their secondary school education. Learning Conception C occurred in similar proportions in the interview transcripts of both SL and MA groups. However, deeper Learning Conceptions (D and E) were found to be more prevalent amongst those who had pursued other endeavours before commencing university studies.

Summary distribution of conceptions of learning in terms of age/experience
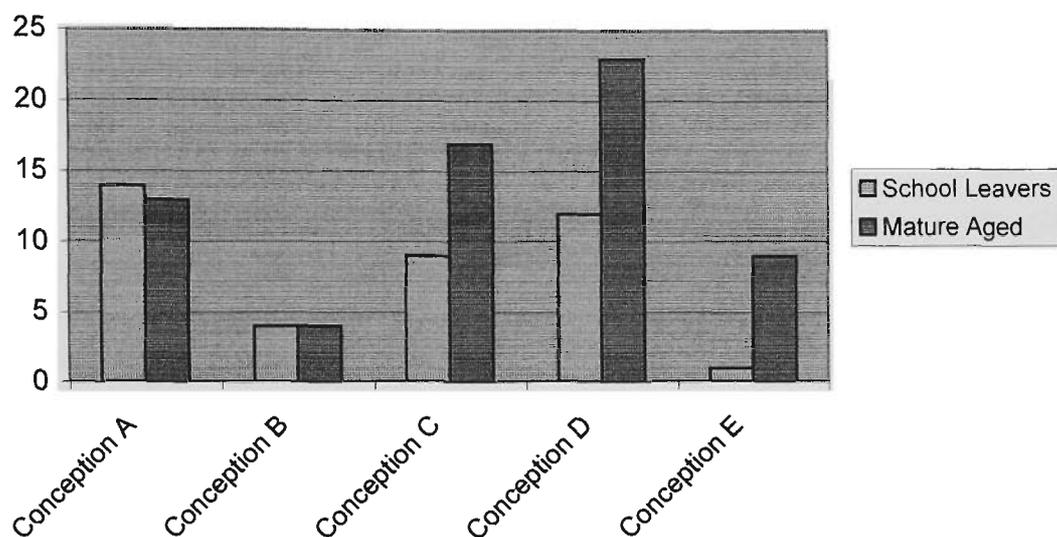
When considered within the context of the relative numbers of school leaver interviews (SL = 16) and mature age participant interviews (MA = 26) this bar chart shows that surface approaches to learning (Learning Conceptions A and B) were more common amongst school leavers and deep approaches to learning (Learning Conceptions D and E) were more common amongst mature age participants. The implication of this finding will be discussed in chapter six of this thesis.

5.6   Chapter summary

This chapter was organised into four sections. The first presented the categories of learning identified amongst the participants in this study. Five qualitatively different categories of learning in acupuncture practice were identified with segments from the interviews used throughout this section to highlight the breadth of meaning in each category as is customary in the presentation of phenomenographic research findings. In capturing the meaning of each category, particular attention was given to the characteristics of each category in terms of the learning aim and the strategies employed to achieve the aim.

The next section provided an overall analysis of the categories of learning by first summarising the salient features of each category in terms of the learning aim; the learning strategy employed to achieve the aim; the tools employed in the learning strategy; the assumptions concerning the implied view of knowledge; and the implications for acupuncture practice. On this basis the five categories were analysed together to

identify the collective conceptual awareness of the group regarding learning in acupuncture practice. The relationships between the conceptual positions within the group were designated in terms of referential and structural dimensions and displayed in an outcome space table. The outcome space table, which represents the collective conceptual map of the group of participants, detailed the hierarchical relationship between individual conceptual positions with simple conceptions subsumed within complex ones.

The third section analysed the five conceptions of learning in terms of surface/deep approaches to learning and atomistic/holistic learning processes. Learning Conceptions A, B and C were identified as being surface in their approach to learning and adopting atomistic learning processes. Learning Conceptions D and E were identified as being both deep and holistic.

The final section in this chapter analysed the occurrence of the conceptions in the interview data in terms of frequency, age/experience. From this analysis the study, based on a purposive not random sample, identified trends rather than conclusions that could be generalised to a wider population. To avoid any confusion with respect to this issue the study reported the occurrence of conceptions and other indicators in proportional terms rather than percentages as the use of percentages may mislead when sample numbers are relatively low.

The frequency of occurrence was defined in terms of the number of interviews in which the conceptual position was identified, rather than the number of times the position had been reported because in many cases the same conceptual view of learning was reported a number of times by the same individual. Summary totals for round one and two interviews were provided along with a combined summary of frequency across both rounds. It was found that there was a similar pattern of occurrence of learning conceptions in round one and two interviews. Overall, surface conceptions were reported by a greater number of respondents than deep ones. However, deep conceptions of learning were still significant in their occurrence with Learning Conception D being more common than any other conception of learning.

The frequency of occurrence was also analysed in terms of gender and age/experience. While some apparent gender preference was detected in terms of the occurrence of Learning Conceptions C and D, the study did not detect any pattern of variation in terms of gender and the surface/deep distinction. An analysis of frequency based on age/experience, did reveal significant variations in terms of the surface/deep distinction. It was found that in relation to the relative numbers in both groups, surface conceptions of

learning were reported more commonly by those who had commenced acupuncture studies immediately following secondary school education. It was also found that deep conceptions of learning were significantly more common amongst those who had commenced acupuncture studies later in life.

As a whole, this chapter presented the participants' conceptions of learning and an analysis of these conceptions from a variety of perspectives. In the following chapter, these findings are discussed in combination with the findings of chapter four and other research that pertains to learning and practice.

Chapter 6

Discussion and Conclusions

6.1   Introduction

The final chapter of this thesis discusses the research findings and their implications for acupuncture education. Throughout this chapter the findings are discussed with respect to how they support, parallel and/or diverge from the current literature.

The study arose out of an interest in the phenomenon of westerners learning and practising oriental medicine in the West. The distinct characteristics of the Chinese medical perspective on health, illness and healing were discussed in the literature review as part of the espoused theory of Chinese medicine. The notions advanced in the Chinese medical perspective were seen as substantially different to those in biomedicine, yet the literature review also revealed that attempts to define Chinese medicine in juxtaposition to biomedicine were flawed. Unschuld (1987) proposes that with respect to clinical practice the differences between Eastern and Western practitioners may not be as extreme as first thought, yet knowledge about what practitioners actually do in practice is a largely unexplored area.

This study employed a phenomenographic orientation to investigate the phenomenon of practice from the perspective of practitioners' experience. The study identified five conceptions of acupuncture practice which were defined in terms of the practice aim (referential parameter) and the strategies employed by practitioners in achieving the practice aim (structural parameter). The study also identified and reported a number of significant practice themes not specifically related to any one conception of practice or group of practice conceptions.

Some of these themes in conjunction with Practice Conception 3 pointed to characteristics that differentiated Chinese medical practice from that of Western biomedicine. It was apparent that the other four conceptions of practice held by the group of beginner practitioners had parallels with certain biomedical notions of practice. This unexpected finding raised the question of whether or not acupuncture practice in Australia was being gradually westernised by the dominant biomedical paradigm or simply modified by the priorities of westerners practising traditional acupuncture.

In exploring acupuncture practice from the perspective of what beginner practitioners actually do (theory in use) rather than what they are supposed to do (espoused theory), the researcher was surprised to find that there was no reference to evidence-based practice. Participants stated that their practice of acupuncture was informed by traditional theories, observation of practitioners, personal experience, discussion and reflection, rather than knowledge that arose from research either in the field of Chinese medicine or related health areas. In using the term 'evidence-based practice' this study is referring to knowledge that has been tested by or results from research, rather than knowledge in which veracity is measured by traditional usage, personal experience or other subjective factors.

The study also found that even though participants in the study had recently completed four years of training in traditional Chinese medical practice with a strong emphasis upon espoused theory, some of the group's conceptions of practice diverged substantially from the espoused theory of Chinese medicine. In view of this the researcher was left wondering about possible variations in participants' views about the role of espoused theory in practice and more generally the relationship between beliefs and practice amongst these practitioners of Chinese medicine.

The literature review showed that the body of knowledge that underpinned Chinese medicine education and practice in Australia, while providing an alternative discourse to biomedicine, was nonetheless highly culture-bound. Yet the various conceptions of practice identified in this study indicate that not all conceptions of practice treated the knowledge as culture-bound, with lower order practice conceptions treating Chinese medical knowledge as essentially factual. It would also appear that certain conceptions of learning acupuncture identified in this study treated traditional knowledge as more or less factual and other conceptions allowed for its culture-bound characteristics.

This chapter explores such issues that arose from the study and relate to the phenomenon of learning and practicing acupuncture in Australia. The first section in this chapter returns to the proposition that actions, in this case acupuncture practice and learning, are associated with conceptions. This section deals with the relationship between the conceptions of acupuncture practice held by beginner practitioners and how they go about learning to support their style of practice. Drawing on the findings from chapters four and five, this section identifies the logical patterns of relationship between the primary conceptual maps of practice and of learning as well as the subsidiary analysis tables. In exploring the relationship between practice and learning, this section also examines the relationship between conceptions and gender as well as conceptions and age/experience, and advances possible reasons for the variations related to these indicators.

The second section discusses the implications of the study's findings for learning and practice. It discusses the particular views of learning and practice identified in this study, the extent to which they are similar to or different from those in other studies, and the possible reasons for apparent variations. The implications of the findings for undergraduate acupuncture education and practitioner professional development are explored with specific proposals advanced. This section also explores the apparent dissonance between espoused theory and practice in certain Practice Conceptions identified in the study and the implications of such dissonance for practice and learning. This dissonance, in addition to the tension between Eastern and Western priorities in the practice of acupuncture, points to areas of struggle for students and practitioners of traditional acupuncture in the West.

The third section of this chapter reflects upon the benefits and limitations of the research design and methodology employed in this study. Specific suggestions for future research are summarised and the chapter concludes with a reflective account of the research journey undertaken in this study.

6.2 The relationship between practice and learning

This section draws on the findings from chapters four and five to explore the logical associations between specific conceptions of acupuncture practice and learning. The resulting relationships between conceptions of practice and conceptions of learning are not based on a re-analysis of the interview data, as the patterns of cross-conceptual relationships were not clearly evident in the data per se, making it also impossible to undertake any valid cross-tab analysis between the two conceptual groups. The following section relies upon 'logical association' in exploring cross-conceptual relationships.

6.2.1 The relationship between conceptions of practice and conceptions of learning

In chapter four of this study the collective experience of the participants in relation to acupuncture practice was identified in terms of five qualitatively different, yet related, conceptions of practice. It was also found that each of the five conceptions of acupuncture practice had accompanying demands in terms of particular skills and knowledge required for effective practice.

In Practice Conception 1 where the practitioner applied his or her knowledge/skill to resolve the client's presenting condition, the learning priority was one of achieving

competence in the broad body of knowledge/skills that pertained to Chinese medical practice. In this approach to practice, the clinical encounter was seen in terms of practitioner problem-solving with therapeutic outcomes dependent upon the ability, knowledge and skill of the practitioner.

With respect to the specific characteristics of the conceptions of learning identified in this study, Practice Conception 1 was seen to be logically related to Learning Conceptions A, B and C. In Learning Conception A the practitioner focussed upon memorising information and gaining proficiency in clinical skills for application in clinical practice. In Learning Conception B, while the practitioner's focus was still upon accumulating knowledge and skills to apply in clinical practice, the learning strategy also included observing and emulating experienced practitioners. In Learning Conception C the focus shifted to one of accumulating personal experience through testing the body of knowledge in clinical practice and retaining the useful aspects for future use. In Learning Conceptions A, B and C, Chinese medical knowledge was seen as a body of information/skills; learning as a process of acquiring these; and practice as the correct application of Chinese medical knowledge in diagnosis and treatment to achieve desired therapeutic outcomes.

In Practice Conception 2, while practitioner competence was assumed, she or he also provided advice to clients in the hope that they follow this advice and make the necessary lifestyle changes to support the therapeutic aims of the acupuncture treatment. In terms of learning, the practitioner needed to be a competent clinician as well as knowledgeable in a broad range of 'health lifestyle matters' in order to provide appropriate advice to clients. In view of these characteristics, Practice Conception 2 was seen to be logically related to Learning Conceptions A, B and C as these focus upon equipping the practitioner with knowledge and skill.

Practice Conception 3 was seen as different from Practice Conceptions 1 and 2 in terms of both referential and structural dimensions. In Practice Conception 3, the practitioner acted as a channel for external healing energies in order to effect change in the client. The focus in this approach was more upon effecting personal change, healing and wellbeing than the problem resolution focus of Practice Conceptions 1 and 2. To this extent Practice Conception 3 was more 'person centred' than 'problem focussed'. In terms of learning, Practice Conception 3 required that in addition to clinical competence, the acupuncturist needed to develop the ability to channel subtle universal forces for healing.

Practice Conception 3 is based upon the practitioner learning a certain therapeutic approach and to this extent is logically related to Learning Conceptions A, B and C. In

some instances Practice Conception 3 could also logically relate to Learning Conception D, the development of understanding and meaning, or Learning Conception E, practitioner personal development. However Learning Conceptions D and E were not seen to be the most logical associations based on the nature of the specific conceptions identified in this study.

Practice Conception 4 was identified as one in which the practitioner facilitated change and empowered clients to take primary responsibility for their health. In addition to being a competent practitioner, the clinician needed to have a broad understanding of healing processes, as well as the ability to facilitate change, educate and empower clients in the healing process. In this approach practitioner-client dialogue was essential in order to achieve understanding, formulate specific treatment strategies and provide appropriate client support.

Practice Conception 4 has an association with the focus of Learning Conception D, developing understanding and meaning to inform clinical practice. Practice Conception 4 also bears similarities to Learning Conception D with respect to the shared notion of the practitioner as a reflective actor, whether this be in the context of learning (reflective learner) or practice (reflective practitioner).

Practice Conception 4 has parallels with Learning Conception E (practitioner personal development) as both point to the need for practitioner understanding and awareness. Nonetheless, it is possible that practitioners could place emphasis upon understanding and empowering clients in the clinical encounter (Practice Conception 4) without attending to practitioner personal development (Learning Conception E).

In Practice Conception 5 the practitioner acts in a flexible and strategic manner to adapt the treatment approach based on an assessment of each clinical presentation. While the model shows a preference for a holistic and comprehensive approach to diagnosis and treatment, it also acknowledges that not all conditions or clients require or want comprehensive treatment models. This is not an atheoretical model of practice but one in which theory is varied and situated. In terms of practice related learning, Practice Conception 5 requires that the practitioner be broadly educated and experienced in a range of practice styles as well as being flexible in responding to varying clinical demands. There are clear parallels between the focus of Practice Conception 5 and Learning Conception D as both emphasise the need for understanding as the basis for action.

The following table summarises the five Practice Conceptions and their logically related Learning Conceptions on the basis of the respective attributes of each.

Associations between practice and learning conceptions (Table 6a)

Conceptions of practice	Associated conceptions of learning in terms of learning aim
Practice Conception 1 The practitioner applies knowledge and skill to resolve the client's presenting condition	**Learning Conceptions A, B & C**
Practice Conception 2 The practitioner advises the client in addition to applying knowledge and skill to resolve the client's presenting condition	**Learning Conceptions A, B & C**
Practice Conception 3 The practitioner channels energies for deep personal change.	**Learning Conceptions A, B & C** **Learning Conceptions D & E** – possible associations
Practice Conception 4 The practitioner empowers the client and facilitates change.	**Learning Conception D** **Learning Conception E** – possible association
Practice Conception 5 The practitioner is flexible and strategically adapts the treatment model in each clinical presentation.	**Learning Conception D**

The relationships across the two conceptual maps of practice and learning show that there were logical associations between specific conceptions of acupuncture practice and conceptions of learning within the group. However, the patterns of relationships across the two conceptual maps did not present as simple one-to-one relationships. This finding concerning the patterns of relationships between conceptions of practice and conceptions of learning supports the phenomenographic view that conceptions influence actions (Lybeck, 1988; Marton & Booth, 1997b).

6.2.2 The relationship between conceptions of practice and approaches to learning

In chapter four the Practice Conceptions across the group were categorised as lower, middle or higher order conceptions. The criteria used in ranking the group conceptions were drawn from the distinctive characteristics in each of the five conceptions and informed by the literature on Chinese medicine and professional practice outlined in chapter two of this study. Practice conceptions were identified as higher, middle or lower order conceptions based on the degree to which they were holistic rather than reductionist, 'person centred' rather than 'problem focussed' and 'client empowering' rather than 'practitioner controlled'.

Practice Conceptions 1 and 2 were identified as lower order conceptions; Practice Conception 3 as a middle order conception; and Practice Conceptions 4 and 5 as higher order conceptions (Table 4b). This analysis provided additional insight into the hierarchical relationship between the five conceptions of acupuncture practice identified in this study.

In accord with common phenomenographic practice, the five conceptions of learning were categorised as either surface or deep approaches. Surface approaches were broadly defined as those that focussed upon content acquisition for the purpose of reproduction/use and deep approaches as those that focussed upon making meaning and achieving understanding (Marton et al., 1997a). In distinguishing between surface and deep approaches, the study utilised specific criteria based upon this primary phenomenographic distinction and its application in other studies (Booth, 1997; Crawford et al., 1994; Entwistle & Ramsden, 1983; Higgs, 1992; Prosser et al., 1994a; Rogers, 1998; Zaslawski, 1996a). Learning Conceptions A, B and C were identified as surface approaches to learning and Learning Conceptions D and E as deep approaches to learning (Table 5b).

Based upon Tables 4b and 5b that identify levels of conceptual complexity, and the previous section that explored the patterns of association across the two conceptual maps (Table 6a), it is possible to explore further the patterns of conceptual relationship between the two phenomena – practice and learning. The following Table 6b integrates data from Tables 4b, 5b and 6a to explore whether lower order conceptions of practice are associated with surface approaches to learning and/or whether higher order conceptions of practice are associated with deep approaches to learning.

Associations between practice conceptions and learning approaches   (Table 6b)

Conceptions of practice			Conceptions of learning	
Lower	Middle	Higher	Surface	Deep
Practice Conception 1			Learning Conceptions A, B & C	
Practice Conception 2			Learning Conceptions A, B & C	
	Practice Conception 3		Learning Conceptions A, B & C	(& possibly D, E)
		Practice Conception 4		Learning Conception D (& possibly E)
		Practice Conception 5		Learning Conception D

By interfacing specific findings summarised in previous tables, Table 6b shows the interrelationships between the conceptions of practice and approaches to learning in terms of levels of complexity. The table reveals that in general lower order conceptions of practice were logically related to surface approaches to learning. The middle order conception of practice was substantially associated with surface approaches to learning. The higher order conceptions of practice were associated with deep approaches to learning.

This conclusion focuses on the primary learning orientations related to each conception of practice and the tendencies in approaches to learning to support different practice needs. It raises questions about the adequacy of surface approaches to learning in supporting higher order styles of practice in which practitioners attempt to accommodate and situate complex culture-bound knowledge in the contemporary western context.

The occurrence of conceptions of practice in relation to learning approaches

In chapter four of this study the frequency of occurrence of each of the five Practice Conceptions was reported (Table 4d), with frequency defined as the number of participants who reported the conceptual position rather than the number of times the position was reported by each individual participant. The table showed that lower order Practice Conceptions were the most commonly reported styles of practice. The higher order Practice Conceptions were the next most frequently reported, and the middle order Practice Conception was the least commonly reported. Chapter five showed that a similar

analysis existed in the distribution of the approaches to learning on the basis of the surface/deep distinction (Table 5f).

The following table brings together Tables 4d, 5f and 6b to summarise the frequency of occurrence of the conceptions of practice and conceptions of learning in terms of levels of complexity.

Frequency of distribution patterns across the two conceptual maps   (Table 6c)

Frequency of occurrence of Practice Conceptions	Practice Conceptions in terms of complexity and occurrence	Learning Conceptions in terms of complexity and occurrence
MOST frequently reported	LOWER ORDER Practice Conceptions 1 & 2 *n = 51*	SURFACE Learning Conceptions A, B & C *n = 61*
LESS frequently reported	HIGHER ORDER Practice Conceptions 4 & 5 *n = 29*	DEEP Learning Conceptions D & E *n = 45*
LEAST frequently reported	MIDDLE ORDER Practice Conception 3 *n = 12*	SURFACE more than DEEP More related to Learning Conceptions A, B & C *(n = 61)* than D and E *(n = 45)*

This summary table shows that the most frequently reported conceptions were the lower order practice conceptions and the related surface learning approaches. In addition, the table also shows that the higher order conceptions of practice and the related deep approaches to learning were both less frequently reported. The data on the frequency of occurrence across the related conceptual groupings shows tendencies in terms of occurrence and association that lend support to the proposition that lower order Practice Conceptions relate to surface approaches to learning and higher order Practice Conceptions relate to deep approaches to learning.

6.2.3   The relationship between practice themes and conceptions of practice

In chapter four of this study three cross category themes which pertained to participants' experience of the phenomenon of acupuncture practice, were reported. These themes

were reported because they resulted from the interview process employed in the study and were seen as potentially relevant to the research aims.

While various themes were identified, only frequently occurring themes that accorded with specific criteria were reported (section 4.5). The reported cross-category themes were:

A. The role of intuition in acupuncture practice
B. The need for rapport and communication between practitioner and client
C. The place of a spiritual dimension in practice

In chapter four each theme was reported and analysed in relation to the conceptions of practice to which it most closely related in terms of intrinsic characteristics. In each case it was found that while no conception of practice excluded any of these three themes, the themes were more closely related to middle and higher order conceptions of practice than lower order ones that employed a semi-technical approach in diagnosis and clinical decision-making.

Some themes pointed to aspects of clinical practice that distinguished traditional acupuncture practice as different from biomedically defined health disciplines. Theme A emphasised that knowing could occur through intuition. Theme C emphasised the relationship between spirituality and health, signalling that it was not sufficient to understand illness and health only in physiological and psychological terms.

A review of the acupuncture curriculum in the related university program showed that while there was a pedagogical emphasis upon the development of rapport and communication as aspects of clinical practice (Theme B), the formal curriculum did not focus upon the development of the other two areas (Themes A and C). One can only assume that the development of intuition and a spiritual dimension to practice occurred outside of the formal curriculum.

The study did find variations in the frequency of occurrence of particular themes with respect to gender and age/experience, however it did not find any obvious patterns of variations. Theme A was reported relatively more by females than males, but equally by SL (School Leaver) and MA (Mature Age) participants (section 4.5.1). Theme B was reported relatively equally by females and males, but more by MA than SL participants (section 4.5.2). Theme C was reported relatively more by male than female participants, as well as more by MA than SL participants (section 4.5.3).

While it is difficult to draw any conclusions from these particular findings concerning aspects of the occurrence of each theme, the findings do point to areas of interest for

future research. It would be interesting to explore whether females in general place a higher emphasis upon intuition in practice than males or whether males in general place a higher emphasis upon spirituality in practice than females. It was notable that the themes distinguished Chinese medical practice as being different to mainstream biomedical practice, and as such signal a starting point for studies which seek to compare and distinguish between the two forms of medicine.

6.2.4 The relationship between conceptions and gender

In exploring the phenomena of acupuncture practice and of learning in practice, this study acknowledged that women's voices were often missing in phenomenographic research (Hazel, Conrad & Martin, 1997). In the design of this study, gender was a key consideration in the selection of participants and an indicator in exploring associations with various conceptions. On the basis of the research design, the focus of the interview questions and the nature of the data used in the analysis, this study attempted to capture differences in conceptual preference that were gender related.

Table 4e chapter four showed that in both first and second round interviews each of the five conceptions of learning was reported more frequently by females than males, reflecting the overall ratio of females to males in the total number of participants (Table 5g). Moreover, Learning Conceptions A, C and D, the most commonly reported Learning Conceptions, were also the ones most commonly reported by both females and males respectively.

Amongst participants it was found that:
- Learning Conception A was reported equally by males and females;
- Learning Conception B was reported almost equally by males and females;
- Learning Conception C was reported more by males;
- Learning Conception D was reported more by females; and
- Learning Conception E more or less equally by females and males.

While this study does not attempt to analyse the occurrence of conceptions in terms of statistical significance, these findings indicate that there appears to be some gender related differences with respect to conceptions of learning. However, the study did not find that these variations were associated with particular trends.

With regard to the conceptions of practice it was found that in both first and second round interviews each of the five conceptions of practice was reported more frequently by females than males, reflecting the overall ratio of females to males in the total number of interviews (approximately 2:1). With regard to the two lower order conceptions of practice,

Practice Conception 1 was reported more by males, yet Practice Conception 2 more by females in proportional terms. The middle order conception, Practice Conception 3, was reported equally by females and males in proportional terms. With regard to the two higher order conceptions, Practice Conception 4 was reported more by females, yet Practice Conception 5 was reported more by males in proportional terms. In view of these findings it was clear that in terms of gender there were some apparent variations. However, the study did not find that the variations associated with gender were indicative of particular trends.

The findings of this study with respect to gender associations differed somewhat from those in a study of beginner medical students (Dall'Alba, 1995). While Dall'Alba found that male students tended towards a 'problem focussed' view of medical practice and female students tended towards a 'client supportive approach', this study did not find a similar association. This study found that with respect to 'problem focussed' practice, Practice Conception 1 was reported more by males and Practice Conception 2 reported more by females. With respect to the 'client centred' practice, Practice Conception 4 was reported more by females and Practice Conception 5 more by males.

It is possible that because biomedicine has developed within a rational scientific orientation and has perhaps been shaped more by male values than female ones, gender related views are likely to be more polarised and more evident in notions of biomedical practice than in Chinese medicine. At the same time it must be acknowledged that Chinese medicine, like biomedicine, is a male dominated profession even in Australia (Bensoussan & Myers, 1996). The reason why the differences in conceptual preferences amongst Chinese medicine practitioners are not as polarised as those in biomedicine may relate to the difference in values in the two medical systems, with the espoused theory of Chinese medicine demonstrating a lesser emphasis upon values embedded in rationality than the values of biomedicine.

In exploring and discussing the variations in conceptual preference with respect to gender, this research does not suggest that gender is a causative factor but rather an association. The low numbers of participants in this study signals caution in being conclusive about interpreting the mixed variations in occurrence with respect to gender. Further studies are clearly needed to explore the basis of any possible gender related variations in conceptual preference in the domain of Chinese medicine practice and learning.

6.2.5 The relationship between conceptions and age/experience

In chapters four and five of this thesis, the frequency of occurrence of practice and learning conceptions was analysed in terms of whether the participants commenced university acupuncture studies directly after completing their secondary school education (School Leavers - SL) or later in life (Mature Age – MA). While it was acknowledged that in terms of the MA grouping there was a broad range of variables with respect to experience and age, there were identifiable patterns of conceptual preference associated with this indicator. In summary, it was found that amongst the SL group there was an identifiable preference for lower order conceptions of practice and amongst the MA group there was a clear preference for higher order conceptions of practice (Table 4f).

A similar pattern was evident in the occurrence of learning conceptions in terms of the SL and MA cohorts. With respect to conceptions of learning, the SL cohort showed a preference for surface approaches to learning and the MA cohort showed a preference for deep approaches to learning (Table 5h). When viewed together these findings (Tables 4f & 5h) show that lower order conceptions of acupuncture practice and learning were more prevalent in the interviews with participants who had entered acupuncture studies immediately after completing secondary school education, while higher order conceptions of practice and learning were more prevalent in the transcripts of the mature age cohort.

There are parallels between this finding and an earlier study by the researcher that focussed on student experience of learning the acupuncture paradigm (Ryan, 1995a). In that earlier study it was found that in comparison to younger students, mature age students reported less difficulty in understanding and applying the dominant paradigm of Traditional Chinese Medicine (TCM). While the precise reasons for this age/experience based variation are unclear, it would be inappropriate to interpret the findings of the current study within a Piagetian framework (Piaget, 1973) and conclude that the variations related to differences in participants' stages of development. Neither the data of this study nor the phenomenographic orientation are suitable foundations for an analysis that explores variations in terms of stages in psychological development (Marton, 1988b; Marton & Booth, 1997b; Säljö, 1988).

On the basis of these age/experience related findings it might be concluded that entry to acupuncture studies should be restricted to mature age students as this group appeared to show a greater propensity for deep approaches to learning and higher order conceptions of practice. However, apart from issues of equity of educational opportunity, such a simplistic conclusion would be misguided because the study did not find that all mature age students adopted deep approaches to learning, nor did it find that all younger

students adopted surface approaches to learning. The study only identified a trend in relation to age/experience.

Furthermore, a desire on the part of educators to select students who are more likely to have deep approaches to learning in preference to those who do not, appears to assume that students' conceptions of a discipline and their approaches to learning are fixed or not open to development. Moreover, selecting students on the basis of their existing conceptions of practice or ways of learning suggests that teachers do not have a role in supporting the development of more effective approaches to learning.

This research asserts that because Chinese medicine is an area quite foreign to many students in the West, the pre-held conceptions of the discipline and views about learning it are likely to be varied and in some instances based on little information. Therefore, this study supports the phenomenographic view that teachers need to create learning environments that challenge and expand students' conceptions of the discipline and approaches to learning it (Dall'Alba, 2002; Marton & Booth, 1997b; Prosser & Trigwell, 1997).

6.3 Implications for practice and learning

6.3.1 Views about practice

Five qualitatively distinct conceptions of acupuncture practice were identified in this study. These conceptions of practice, ranging from lower order to higher order conceptions, were described as follows:

Practice Conception 1 Resolving the client's presenting problem, treating the symptoms and/or the cause through the application of acquired knowledge and skills.

Practice Conception 2 Resolving the client's presenting problem, treating the symptoms and/or the cause through the application of acquired knowledge/skills and by providing advice to the client about necessary lifestyle changes.

Practice Conception 3 Channelling external energies to heal the client at a deep level.

Practice Conception 4 Empowering the client and facilitating change by treating, educating and supporting the client in the healing process.

Practice Conception 5 Assessing each situation to decide upon the most appropriate treatment approach.

The study found that Practice Conceptions 1, 2 and 4 were the most commonly identified conceptions of practice across the group and respectively by both female and male participants (Tables 4c and 4e). Practice Conception 1, the least evolved conception of practice, was clearly the most frequently identified in this study. However, high frequency of identification of a conception in a phenomenographic study cannot be equated with high frequency of its use by practitioners. It can only be used as an indication of the conceptions apparently favoured by the group. Moreover, it must be remembered that these were practitioners in their final year of an undergraduate program and their first year of practice after graduation. It is therefore possible that the apparent preference for certain Practice Conceptions over others relates to the challenges faced by novice practitioners.

It was difficult to compare these five conceptions of practice with those identified in other phenomenographic studies due to the significantly different nature of the discipline under study and the limited range of phenomenographic studies that explore orientations to professional practice in health sciences. In informing the discussion of the findings, medical students' understanding of practice (Dall'Alba, 1995; Dall'Alba, 2002) and nursing students' conceptions of competent practice (Ramritu & Barnard, 2001) were explored. One defining similarity between the conceptions of clinical practice identified in these studies and the present research was whether the focus of practice was predominantly upon 'problem centred' or 'client centred' activities. In this study it was found that the lower order Practice Conceptions were predominantly problem centred, the higher order Practice Conceptions were predominantly 'client centred', and the focus in the middle order Practice Conception was a mixture of these two foci.

In describing their experience of clinical practice it was evident that participants used the terms 'client' and 'patient' more or less interchangeably without recognition of the differing meanings that each term conveys. In the data in this study it was not clear whether by using the term 'patient' participants were signifying an implied power relationship in the therapeutic encounter or were simply adopting common language. However, the lack of critique concerning the extensive use of the terms 'patient' and 'practitioner' in Chinese medical discourse points to an area for further research.

The study acknowledged the diversity in styles of acupuncture practice throughout history and that there was no one correct model of practice (Birch, 1998a; Unschuld, 1987; Willmont, 1998). At the same time the study found that the lower order conceptions of practice, while historically valid, were limited to the extent that they were more 'problem focussed' than 'person centred' and failed to empower the client in the healing process. It was argued that the higher order conceptions of practice that adopted an empowering 'person centred' approach were more likely to lead to enhanced therapeutic outcomes as

well as being open to the complexities that accompany the use of culture-bound knowledge in contemporary practice.

Section 6.2 of this chapter showed that conceptions about learning acupuncture were logically related to conceptions of acupuncture. Therefore, this thesis proposes that by expanding student experiences and awareness of the phenomena of acupuncture practice and learning, students would be better able to move between varying practice models and learning styles in accord with situational needs.

In chapter two of this thesis it was noted that various authors have critiqued the technical-rational approach to acupuncture practice and advanced Schön's reflective-practice model as best suited to meeting the challenges of acupuncture practice in the West (Fish, 1995; Moir, 1995; Zaslawski, 1995c). However, this study found that the most frequently reported conceptions of acupuncture practice (Practice Conceptions 1 and 2) had close parallels with the technical-rational view of professional practice. While this emphasis may not accurately reflect the frequency of use of the conceptions in practice and may relate to the fact that the participants were 'beginner practitioners', it is also likely that the presence of lower order practice conceptions amongst participants relates to certain curriculum priorities and the dominance of the post 1949 model of 'systematic acupuncture' in Chinese medical discourse.

Even though the appropriateness of Practice Conceptions 1 or 2 in certain situations is sustainable, their inappropriateness as models for engaging with the complexities of clinical practice and their apparent prevalence amongst the participant beginner practitioners, are causes for concern. Practice Conceptions 4 and 5, while not reported with the same frequency as Conceptions 1 and 2, had significant parallels with Schön's reflective-practice model which Ryan (1995b) and Scheid and Bensky (2000) have suggested is desirable in contemporary acupuncture practice.

The higher order Practice Conceptions are arguably more appropriate because they promote practitioner reflection and a higher level of informed professional judgement; acknowledge the context dependent nature of knowledge in clinical practice; adopt holistic/comprehensive perspectives rather than reductionist/narrow ones; and advance client empowerment rather than practitioner control. From a phenomenographic perspective, the development of these higher order models, whether through undergraduate education or professional development programs, is dependent upon pedagogies that provide students/practitioners with qualitatively varied experiences and opportunities to reflect upon these experiences to advance awareness, understanding and conceptual change (Marton & Booth, 1997b).

6.3.2 Beliefs and practice

Chapter two of this thesis examined the espoused theory of Chinese medical practice and concluded that Chinese Medicine was structured upon the notions of holism, order, interrelationship and balance (Beinfield & Korngold, 1991; Kaptchuk, 1986; Larre et al., 1986; Maciocia, 1989; Watson, 1991; Wiseman & Ellis, 1995). In the context of clinical practice these notions meant that: -

- health was viewed more in terms of wellbeing than the absence of disease;

- health was seen as dependent upon the balance of a multitude of interrelated factors;

- practitioners took account of all factors that influenced the individual's state of health;

- practitioners tailored treatments in accord with the unique characteristics of each client's condition; and

- clients were expected to be involved in the healing process through undertaking necessary lifestyle adjustments.

This espoused theory, which underpins specific acupuncture theories and practices, was seen as being based in Chinese philosophical and cultural beliefs, rather than evidence-based knowledge. However the findings of this study have raised questions about the extent to which the espoused theory of Chinese medicine is the main knowledge referent in acupuncture clinical practice in Australia. It is probable that in countries such as Australia where the espoused theory is not supported within a broader socio-cultural belief system, practitioners are inclined to modify practice in accord with their own western values.

From this study of beginner acupuncturists' conceptions of practice and of learning it can be seen that lower order Practice Conceptions (1 and 2) which are 'practitioner centred' and 'problem focussed' do not accord with the espoused theory of Chinese medicine. Higher order Practice Conceptions (4 and 5) that are more 'client empowering' and focussed on promoting personal wellbeing are arguably closer to the basic tenets of the espoused theory.

At first, this finding would appear to support the view that in professional practice there are often discrepancies between espoused beliefs and practices (Argyris & Schön, 1974). However, closer consideration reveals that the relationship between belief and practice is somewhat unclear in the field of Chinese medicine, as apparent disjunctions are not seen as problematic or in need of resolution. Because the tradition continues to tolerate a wide diversity of practice models and theoretical perspectives, in spite of post 1949 attempts at standardisation (Sivin, 1990), Chinese medicine cannot be viewed as a narrowly focussed medical tradition in which there are only a few accepted practice styles (Birch, 1998a).

In chapter two it was explained that contradictions within the tradition have been further compounded by the inclusion of biomedically-influenced innovations such as acupuncture analgesia, auricular acupuncture and point injection therapy. These apparently reductionist perspectives that are structured upon the values of the biomedical paradigm and appear to be at odds with the espoused beliefs of Chinese medicine, now appear in textbooks alongside ancient philosophically based theories.

The finding of this study that lower order conceptions of practice were acceptable to those who had trained as practitioners of Traditional Chinese Medicine could indicate that participants viewed the espoused theory as an ideal to which they aspired rather than being the summation of guiding beliefs that formed the basis of good practice. The finding could also indicate that there are variations amongst practitioners regarding their views about the body of knowledge that is the basis for practice. Practice Conceptions 1 and 2 appear to be based upon the belief that Chinese medical knowledge is factual and when applied correctly in clinical practice will produce the expected clinical outcomes. On the other hand, Practice Conceptions 4 and 5 suggest that Chinese medical knowledge is context-bound with relevance and validity being situated in each unique clinical situation.

The apparent contradiction between beliefs and practices identified in this study could also indicate that practitioners hold varied interpretations of the notions asserted by the espoused theory of Chinese medicine. In other words, while practitioners of Chinese medicine share a common language they might not necessarily share the meanings ascribed to fundamental concepts of Qi, holism and good health. The likelihood of varied views about such fundamental concepts is supported by Campbell (1998) and Parker (1998) who assert that even the term 'holism' is applied inconsistently across the broad range of complementary therapies.

With respect to the Practice Conceptions identified in this study, it could be argued that in Practice Conception 1 holism is seen in terms of the practitioner following all the prescribed methods (*Si Zhen*) and principles (*Ba Gang Bian Zheng*) in diagnosis and treatment. In other Practice Conceptions, holism is apparently seen in terms of getting the client involved in the healing process and taking primary responsibility for their own healing process (Practice Conception 4) rather than simply following the practitioner's advice (Practice Conception 2).

On the basis of the findings of this study it is not possible to be conclusive about the reasons for the apparent contradictions between beliefs and practices in certain conceptions of acupuncture practice. However, it is apparent that within the community of Chinese medical practice, practitioners learn to live with cognitive dissonance. Given the importance accorded to espoused theory and tradition in Chinese medical literature,

exploration of the apparent dissonance between beliefs and practice, and the various ways practitioners handle the dissonance, are important issues for future educational research if acupuncture education is to be tailored to practice.

6.3.3 The tension between Eastern and Western priorities

This study acknowledges the concern in Chinese medical discourse that the practice of this distinctly Eastern health modality in a Western context raises the likelihood that Chinese medicine will be misunderstood, misinterpreted and misrepresented within a Western framework. Adding to such concerns, this study found that the most frequently reported Practice Conceptions (1, 2 and 4) had arguable parallels to some styles of biomedical practice. It is apparent that even though the artefacts and theories of acupuncture practice vary significantly from those in biomedicine, in terms of the practice dynamic there would appear to be some areas of similarity.

While this study of beginner acupuncturists' conceptions of practice and learning did not focus specifically upon exploring tensions and contradictions related to differences between Eastern and Western values, evidence of the tension was found with respect to the different ways the two forms of medicine dealt with contradictions. In biomedicine, and more generally in the Western scientific perspective, there is a priority upon resolving contradictions to gain new knowledge with the latest scientific findings and theories considered to be the most valid. On the other hand Chinese medicine tolerates the existence of contradictions within the body of knowledge that guides theory and practice. In Chinese medicine apparently contradictory theories are simply seen as different perspectives on the same reality, with no obvious desire or process within the tradition for resolving these disjunctions.

Unlike biomedicine the body of knowledge in Chinese medicine has grown through a process of adding new insights rather than refining knowledge. The end result has been that Chinese medicine offers its practitioners varied ways of understanding and treating the same person, utilising practice experience as the guarantee for beneficial treatment outcomes. Meanwhile, biomedicine offers its practitioners substantially coherent theories which require correct application for successful results.

The successful practice of Chinese medicine is dependent upon the extent to which practitioners have gained broad understanding and sufficient experience to be able to decide upon the most appropriate clinical approach and theoretical perspective in each clinical presentation. Practising in this manner demands flexibility. In view of this, students of Chinese medicine in the West need to resist the desire to resolve

contradictions between varying theoretical perspectives, or to treat theories as either right or wrong, or to look for the right clinical treatment instead of the most appropriate one. It is apparent that the challenges posed by the Chinese medical perspective are substantial for those educated in the West where the broad emphasis in the education system is often upon distinguishing between views as either correct or incorrect.

The extent to which beginner acupuncturists in this study had attained the ability to live with contradictions is questionable in view of participants' apparent preference for the lower order Practice Conceptions (1 and 2) in which the view of practice is essentially reductionist. These lower order styles of practice that reflect a syndrome identification approach to diagnosis and treatment, would appear to lack the conceptual breadth and flexibility necessary for complex clinical decision-making.

In studying Chinese medicine in Australia, the desire to provide the right diagnosis/treatment is not just reinforced by the learner's own cultural priorities but also by the subtext in many textbooks that give the impression that clinical decision making is about deciding between right or wrong treatments. The focus on knowing the right answer is also possibly reinforced by a curriculum that requires students to study a considerable body of information in which knowledge is presented and assessed within the factual parameter of being either right of wrong.

Neither this study nor the previous one conducted at a different university (Ryan, 1995a) revealed that students opposed the inclusion of biomedical subjects in the Chinese medicine program. Instead students' concerns about this area of the program have tended to focus on the amount and detail of biomedical information, its relevance to acupuncture clinical practice and the considerable time expended in memorising information to pass exams. Such findings signal that where teaching and assessment procedures focus on content memorisation and recall, surface approaches to learning are reinforced.

Although Practice Conception 5 was not one of the frequently occurring conceptions of practice in the data, it emphasises the need for flexibility in clinical practice. It signals to the practitioner the need to maintain an open stance to the variations and contradictions within the body of knowledge that informs clinical practice. It also acknowledges the East-West tension which arises in applying ancient culture-bound knowledge in contemporary Australian health practice.

In exploring the East-West tensions that pertain to the practice of Chinese medicine, Western influences upon Chinese medicine are normally portrayed as problematic rather than beneficial. However, the Western emphasis on evidence-based practice is

something practitioners of Chinese medicine cannot afford to ignore. While this study found that beginner practitioners relied substantially upon untested traditional knowledge and personal experience as a basis for practice, the absence of interest in evidence-based practice is likely to be problematic in advancing Chinese medicine in the modern world.

While there is a level of acceptance of Chinese medicine in Australia, one cannot assume that this endorsement is based solely on clients' positive therapeutic experiences. It is possible that the social acceptance may also be related to the alternative discourse Chinese medicine provides to those disillusioned with biomedicine. In addition, by providing clients with considerably lengthy consultations and 'quality time', by involving them in the healing process and by utilising techniques which are less traumatic and invasive than those of biomedicine, Chinese medicine fills a gap in health care delivery left vacant by biomedical practitioners.

The future of Chinese medicine in the West is in question if the rationale for its existence lies mainly in providing an alternative health discourse, rather than therapeutic interventions grounded in evidence-based knowledge. In making this assertion the researcher is not proposing that there be an increase in the current mode of clinical trial research which simply confirms that acupuncture is effective in the treatment of asthma or any other condition, but rather that there is a critical need for research which advances clinical practice. Studies that investigate the most therapeutically effective ways of treating different types of asthma or any other condition are likely to be of more interest to Chinese medicine practitioners, more relevant to clinical practice and more likely to foster evidence-based practice, than research which simply confirms that which practitioners already know from their experience.

6.3.4 Views about learning

Five qualitatively distinct conceptions of learning that ranged from simple to complex were identified in this study. These conceptions of learning were described as follows:

Learning Conception A	Accumulating knowledge and skills to apply in practice through the memorisation of information.
Learning Conception B	Accumulating knowledge and skills to apply in practice through observing, emulating and copying from experienced practitioners.

Learning Conception C   Accumulating personal experience to apply in practice by experimenting in treatment then retaining what works and putting 'on hold' knowledge that does not produce identifiable positive clinical results.

Learning Conception D   Developing understanding and meaning to inform clinical practice through reflection, sharing and discussion.

Learning Conception E   Personal development through reflection, sharing and discussion, and in consequence becoming a better practitioner.

The study found that Learning Conceptions A, C and D were the most commonly identified conceptions of learning within the group as well as the most frequently identified conceptions by both males and females in terms of the gender ratio in the group. Again, it must be noted that frequency of identification in a study such as this cannot be interpreted as frequency of use in practice. However, frequency of identification does provide an indication of the conceptions that are apparently favoured by the group.

A review of other phenomenographic studies found that there was a significant degree of congruence between these five conceptions of learning and those identified in other discipline areas (Beaty et al., 1990; Bowden, 2000b; Bruce et al., 1994b; Crawford et al., 1994; Dall'Alba, 2000; Eizenberg, 1988; Ekulnd-Myrskog, 1997; Gerber et al., 1994; Keogh et al., 1994; Marton & Booth, 1997b; Pietroni, 1995; Prosser et al., 1994a; Säljö, 1975). Variants of Learning Conception A, with its emphasis on accumulating knowledge though memorisation, have been identified and classified as surface approaches to learning in possibly every phenomenographic study on conceptions of learning. While this approach to learning is useful in rudimentary tasks such as learning the location of acupuncture points or memorising specific information in biomedical anatomy, physiology and pharmacology, this and other surface approaches do not assist learners in finding meaning in the use of complex knowledge in clinical practice.

Variants of Learning Conception D with its emphasis upon developing understanding and meaning have been identified and classified as deep approaches to learning in many phenomenographic studies. Learning Conception E that focused upon personal development and change of personal values, while not as common as Conceptions A and D, has also been identified in other studies of student learning (Beaty, Dall'Alba, & Marton, 1990; Bruce & Gerber, 1994b; Keogh et al., 1994).

Learning Conception C with its emphasis upon experience-based learning has some parallels with conceptions found in other studies that focus upon learning through doing and applying knowledge (Crawford et al., 1994; Keogh et al., 1994; Marton & Booth,

1997b). However, Learning Conception B, with its emphasis upon learning through observation and emulation is quite different from the learning conceptions identified in many other phenomenographic studies, except with respect to its emphasis upon experiential learning.

While many phenomenographic studies have explored conceptions of learning held by those who are still studying the subject or discipline, this study looked at learning conceptions within a group as they approached the completion of their formal studies and commenced independent practice. In this respect the study identified and analysed both orientations to learning 'to practice' and to learning 'in practice'. This subtle yet important distinction informs all five conceptions of learning identified in this study and may well be an important reason for differences between the findings of this study and of others.

Learning Conceptions A, B and C were identified as surface approaches to learning and Learning Conceptions D and E as deep approaches. In accord with phenomenographic tradition, surface approaches were defined as those that focussed upon content acquisition for the purpose of reproduction/use and deep approaches as those that focussed upon developing meaning and understanding (Marton, Hounsell & Entwistle, 1997a). In this study it was found that while surface approaches to learning were reported more frequently than deep ones (Table 5f), the most commonly identified approach to learning was Learning Conception D, a deep approach to learning. This finding suggests that while undergraduate acupuncture education may have fostered or supported the Learning Conception D focus of developing understanding and meaning to inform clinical practice, there was still a strong emphasis in the group of participants upon learning as the acquisition of knowledge/skills for application in clinical practice.

The apparent prevalence of surface approaches to learning in the group may be attributable in part to the content focus in the acupuncture curriculum, including the inclusion of the biomedical subjects that require students to memorise large quantities of factual information. The relevance of this biomedical information to acupuncture clinical practice is debatable. Certainly, no participant in this study identified biomedical knowledge as part of their learning needs. It would appear that on the basis of this study and a previous one by this researcher with students in a different university acupuncture program (Ryan, 1995a), students of traditional acupuncture view the biomedical knowledge in the curriculum largely in terms of information which needs to be memorised and reproduced in exams.

In chapters one and two of this thesis it was noted that acupuncture education in Australia has been substantially influenced by developments in China in which the primary emphasis in learning appeared to be upon acquiring knowledge and skill for

application in clinical practice. Moreover, because teachers of Chinese medicine in Australia are essentially practitioners who in many cases have little training in teaching, it is possible that they have adopted simplistic pedagogies. From a phenomenographic perspective, if teachers conceptualise their role as one of conveying information and subscribe to a content laden curriculum in which student assessment focuses upon the reproduction of memorised information, then students are likely to adopt surface approaches to learning (Entwistle et al., 2000; Marton & Ramsden, 1988a).

The seminal research of Perry (1970), and of others who have built upon his research, shows that students tend to expand their approaches to learning and conceptions of reality as they progress through college studies. Perry argued that this phenomenon was not due to changes in personality as these did not change substantially from year to year, but is attributable instead to students' reinterpretation of reality in differing and varied ways as new questions arose or former explanations became inadequate. He found that through their college years students reassessed their ways of making sense of the world when previously held outlooks failed to cope with new understandings, complexities and uncertainties.

Perry's research provides a plausible explanation for the finding in this study regarding the relationship between age/experience and the associated complexity of participants' conceptions of acupuncture practice and learning. With respect to this study it is likely that the mature age students in the cohort, through previous formal studies and life experiences, have had opportunities to reassess their ways of relating to complex phenomena that many school leavers may not have experienced. This finding bears parallels with that of the researcher's previous study in which it was found that older students reported less difficulty than younger students in understanding the acupuncture paradigm (Ryan, 1995a). In noting this observation the researcher is not proposing that the cognitive development of students be left to natural growth they progress through their studies, but proposes instead that teachers need to create learning experiences that advance student understanding and awareness (Marton & Booth, 1997b).

In terms of undergraduate acupuncture education, teachers need to be cognisant that within any one class there is likely to be a diversity of student conceptions of acupuncture and approaches to learning acupuncture. These different conceptions need to be explored and developed. Specific learning tasks will appear as boring, fulfilling, challenging or even incomprehensible depending upon how the individual student makes sense of the phenomena - acupuncture and learning. In helping students learn, teachers need to see themselves as facilitating and supporting student learning rather than simply transmitting acupuncture knowledge and experience. With respect to teaching, this challenges teachers to create learning experiences that lead students to a greater

understanding of variations in awareness and assist students develop the ability to accommodate culture-bound knowledge in clinical practice. What is needed are pedagogies that develop in students both conceptual awareness/understanding and a readiness to embrace conceptual change through reflective practice (Prosser & Trigwell, 1999)

6.3.5   Implications for undergraduate acupuncture education

In his previous study of acupuncture education in Australia, Ryan (1995a) concluded that the content structured curriculum did not take account of the many other activities that students reported to be important in coming to an understanding of the acupuncture paradigm. In that previous study, participants reported that in coming to understand and practice acupuncture, learning through observation, practice and reflection were as important as the memorisation of information. This previous conclusion is supported and extended by the findings of the current phenomenographic study in which participants reportedly developed understanding and meaning through reflection, sharing and discussion (Learning Conception D).

The former study identified students' concerns about curriculum content and acknowledged that a content focussed curriculum in an educational environment in which students were expected to 'know' substantial quantities of information, especially biomedical information, placed the learning focus upon the memorisation of information to pass exams (Ryan, 1995a). Dall'Alba (1995) has reported similar learning consequences with the content focussed curriculum in biomedical education. Ryan's (1995a) study concluded that in acupuncture education there needed to be more emphasis upon activities and processes that assisted students in understanding and functioning within the acupuncture paradigm, and less emphasis upon memorising substantial quantities of information, some of which had limited application in clinical practice.

In addition to this pertinent finding, phenomenographic studies have found that since different academics often hold varied conceptions of the same formal curriculum, it is important to also explore educators' conceptions of teaching, learning and curriculum in any proposal for educational change (Balla et al., 1992). Identified dissonance between conceptions held by heads of departments, course coordinators and academic staff (Martin et al., 1999), signals the need to explore teachers' conceptions of learning and teaching rather than assuming that a change in curriculum content and structure will result in improved teaching and learning.

Debate concerning the perceived ability or inability of westerners to understand and practice complex Chinese medical theory (Deadman, 1992; Flaws, 1991) has assumed that acupuncture 'best practice' in the West is concerned with the practitioner's ability to correctly understand and faithfully apply ancient theories. Because this debate assumes that the body of traditional knowledge is valid and able to be applied in unmodified form, the Deadman-Flaws discourse has focussed upon curriculum content rather than curriculum processes. Their discourse also assumes that good teaching is concerned with the accurate transmission of huge quantities of traditional knowledge by experts; that learning is about acquiring the knowledge in correct form; and that practice is defined as the correct application of the learnt knowledge.

Curriculum design that is based upon teachers' judgements about the knowledge and skills which students need to know to practice effectively, evident in the Chinese Medicine Registration Board's educational guidelines (CMRB, 2002) and the Australian Guidelines for Traditional Chinese Medicine Education (NASC, 2001), assumes that the nature of Chinese medical practice is stable and that the challenges practitioners will face in the future are already known. Such assumptions are clearly unsustainable in contemporary clinical practice. From a contemporary practice perspective it is important to structure curricula in such a way that through the curriculum process learners become adept in handling previously unknown challenges in their area of practice (Bowden & Marton, 1998). The challenge lies in creating a curriculum that does not only enable students to solve known problems, but assists them in developing skills to handle currently unknown problems.

Phenomenography asserts that this can be achieved in a curriculum that focuses students upon experiencing and understanding 'variation' (Marton & Booth, 1997b). By presenting students with a range of specifically designed work based problems it is argued that teachers can assist learners in expanding their ways of seeing, understanding, interacting with and responding to different challenges (Bowden & Marton, 1998). Being faced with situations that lie beyond the defined body of knowledge, challenges the student to explore different bodies of knowledge and different ways of learning knowledge. In the context of acupuncture education, a pedagogy that enables students to experience varied perspectives will arguably enhance the student's ability to adapt in varied clinical situations instead of teaching them 'clinical solutions' to specific conditions for future application in prescription like manner.

In an attempt to promote the development of key abilities amongst students, Victoria University has designated a range of 'Core Graduate Attributes' to be developed across all programs. These include the ability to: - problem solve in varied settings; locate, evaluate manage and use information effectively; communicate effectively; work

autonomously and collaboratively; and function effectively amidst social and cultural diversity (CGAWG, 2003). While these attributes are being included in curriculum documents, the likelihood that they will be achieved is dependent to a large extent upon the way these are understood by staff and the importance staff attribute to supporting students in achieving these attributes. If not supported by pedagogical values, it is likely that these too will be seen as yet another onerous imposition upon staff by university management.

In exploring teaching in higher education, Ramsden (1992) identifies three major pedagogical positions. The first, which appears to be quite common in acupuncture education and perhaps related to the fact that acupuncture lecturers are essentially practitioners who teach rather than educationalists, conceptualises teaching as transmitting knowledge to students. In this model students are expected to digest and apply a body of knowledge, assuming that there is a seamless flow between theory and practice. The knowledge base is not seen as problematic in practice and therefore there is no need for students to critically reflect upon it. Moreover, since there is no question about discrepancies between the knowledge and the realities of practice, there is no perceived need for students to explore what practitioners actually do with the knowledge. This view about teaching and knowledge which overlooks the dissonance between beliefs and practice, has close parallels with Learning Conception A and Practice Conceptions 1 and 2 identified amongst participants in this study.

The second model identified by Ramsden, moves away from a didactic view of teaching to one in which teachers are involved in organising student activities so that students learn the same material in more exciting ways. From this pedagogical perspective, improving teaching is about extending the teacher's repertoire of techniques so that students are active, not passive, in the classroom dynamic. In this educational model student learning becomes more enjoyable and teachers are acknowledged as achieving teaching excellence when learning is exciting and innovative.

The third approach looks at teaching and learning as two sides of the one coin, with teaching focussed upon facilitating the development and extension of student understanding. In this model teachers begin with understanding students' views about the subject being taught, the discipline being studied, their ways of learning and the issues students are encountering in learning. This approach acknowledges that learning is essentially something that students do and as such teaching is about working cooperatively with students to support the development of their understanding, their ability to critically reflect and their ability to handle complexities within the body of knowledge. In view of the challenges that surround the phenomenon of westerners learning and practicing an oriental health therapy in a western context, Ramsden's third

perspective on teaching in higher education is pertinent. In the context of Chinese medical education such a pedagogy would support students in moving from surface learning approaches to deep ones (Learning Conceptions D and E) which this study has identified as desirable in undergraduate acupuncture education and lifelong learning.

From this perspective, simply changing curriculum content or imploring students to adopt deep approaches to learning does not achieve improved teaching and learning. Moreover, by expanding the ways learners experience phenomena learners can deepen the ways they go about learning and relating to phenomena (Marton & Ramsden, 1988a; Trigwell & Prosser, 1997). As such it is the role of teachers to create and involve students in learning experiences that expand their understanding of the discipline, subject or learning task as well as their approaches to learning it (Marton & Booth, 1997b). This educational perspective re-defines teaching from the perspective of student learning rather than starting with what teachers traditionally do (i.e. transfer information) and asking how teachers can do it better (Biggs, 1999; Ramsden, 1992 & 1997).

The current research, which to some extent has stepped off from the researcher's former study, has continued to focus on acupuncture education that enhances student understanding. While the previous study explored what students did in learning the acupuncture paradigm and their views about the effectiveness of varying learning strategies, this study has explored what practitioners actually do by way of learning in practice, the depth of understanding achieved with varied approaches to learning and the dissonance between the learnt theory and its use in practice. The intention of the researcher is to understand how student learning can be improved. The conclusions of this study concerning the appropriateness of higher order conceptions of acupuncture practice supported by deep approaches to learning, imply that teaching in the undergraduate program should support the development of student understanding, critical refection and proficiency in handling complex culture-bound Chinese medical knowledge in the Australian context.

It is also apparent that good teaching should enable acupuncture students to move away from thinking as the physiotherapists, nurses, naturopaths, herbalists or masseurs that many of them were on entry to the course, to conceptualising and acting from an acupuncture perspective. In other words, good teaching enables students to enter a community of practice (Dall'Alba, 1992; Lave & Wenger, 1991). While various studies in the West (Dowie, 2000; Ryan, 1995a; Terry, 1996) and in China (Farquhar, 1986; Hsu, 1999) construe acupuncture learning as entering a community of practice, there is considerable variation amongst authors about what this actually means and how students achieve this goal. If entering the community of Chinese medical practice is seen by educators as the unquestioned adoption of traditional beliefs, theories and practices, as

would appear to be the case in China (Farquhar, 1986; Hsu, 1999), then developing surface approaches to learning rather than critical reflection may be appropriate. On the other hand, because higher order conceptions of practice and deep approaches to learning have been identified in this study as optimal for practitioners in the Australian context, entering the community of Chinese medical practice requires a pedagogy that develops students' understanding of and a critical relationship to the tradition.

Looking at the same issue from a different perspective, one could ask 'Why shouldn't a vocationally orientated course such as acupuncture be taught in TAFE (Technical and Further Education) instead of in higher education? In supporting the case for locating Chinese medicine education in higher education, arguments about Chinese medicine being a profession not just an occupation and reference to the positioning of Chinese Medical education within universities in China have been advanced. However, from a pedagogical perspective the convincing reason for locating Chinese medical education within the higher education system relates to a judgement about the most conducive educational environment for developing higher order skills for effective practice. The ability to work with complex culture-bound knowledge, the ability to cross the boundaries between the dominant biomedical health care system and Chinese medicine, and the ability to exercise clinical judgement in health care provision are specific examples of higher order skills that are arguably be better developed within the higher education system.

With respect to the findings of this study, these abilities are associated with higher order conceptions of acupuncture practice and supported by deep approaches to learning. However, the apparent popularity of lower order conceptions of practice and of surface approaches to learning amongst participants in this study raises questions about the effectiveness of the pedagogy in the Chinese medicine program in supporting the development of such qualities or graduate attributes amongst students. While many Chinese medicine programs in Australia are now located within universities, it is this researcher's summation that the educational emphasis in such programs still reflects the former vocationally orientated private college programs in which the majority of current acupuncture academics received their primary training.

In order to achieve the desired learning approaches and conceptual development in students, teaching must first be aligned to learning (Prosser & Trigwell, 1999). More specifically, to facilitate the development of deep approaches to learning amongst students, teachers must first take the part of learners and understand the learning phenomenon through the eyes of the learners, becoming aware of the learners' awareness, learning approaches and learning issues (Dall'Alba & Sandberg, 1996; Marton & Booth, 1997b). By first becoming aware of the learner's awareness it is possible

for teachers to structure relevant learning experiences that will lead students to explore and challenge their relationship to phenomena (Bowden & Marton, 1998). Phenomenography asserts that there is a need to design learning situations around an architecture of variation in order to move learners beyond fixed or taken for granted views of a specific phenomenon and ways of learning it. By widening the ways in which students learn, by assisting them in handling learning situations in varied ways, students will become better equipped to face the unknown future in their area of work (Bowden & Marton, 1998).

While acupuncture teachers may hold a preference for certain views of practice and wish to impart these views and their experience to students, phenomenography asserts that it is more important for teachers to focus on processes that promote understanding, conceptual development and the advancement of students' approaches to learning (Bowden & Marton, 1998). The phenomenographic orientation provides a way of moving out of the self-perpetuating cycle between basic conceptions of acupuncture practice and surface approaches to learning found to be a dominant focus amongst participants in this study, by positioning students to challenge previously held assumptions. Furthermore, as the traditional emphasis upon content recall in assessment does not enhance conceptual development and understanding (Eizenberg, 1988; Entwistle & Ramsden, 1983; Prosser et al., 1994a), subject assessment practices need review in Chinese medicine programs.

On the basis of this study some of the foundations of an educational theory for acupuncture teaching and learning have begun to emerge. Firstly, the study suggests that in order for learners to develop critically reflective practice abilities, teachers need to create a pedagogy that is student-focussed, learning-centred and practice-oriented. The study also suggests that learning acupuncture is not just about acquiring a quite different body of knowledge/skills but also about coming to understand phenomena in different ways. In studying acupuncture both students and teachers come with prior experiences of health and illness, each knowing in their own way what it is like to be ill, healthy or somewhere on the road in between. Learning Chinese medicine challenges learners to not only understand their own experiences of these phenomena but also the varied ways in which practitioners of Chinese medicine conceptualise and relate to these phenomena.

With respect to acupuncture clinical practice this perspective accepts the diversity of theory and practice that are part of the Chinese medical tradition, acknowledging that with any one client there are valid variations in diagnosis and treatment. In acupuncture practice, variations in approach exist simply because different practitioners see the same reality in different but equally valid ways. As such acupuncture educators must acknowledge the validity of plurality of approach, leave aside any desire to distinguish between practice styles as correct or incorrect, and help students to understand the

differences in clinical reasoning which lead to different but equally valid clinical treatments.

The study has identified the need to design curricula around enhancing student learning, rather than beginning with the content which teachers believe students need to know or strategies/activities which involve students in learning the content (Biggs, 1999; Ramsden, 1992 & 1997). In promoting such a pedagogy it is essential that teachers begin with researching and reflecting upon their own styles of teaching, students' understanding of the discipline and the ways students go about learning it (Biggs, 1999).

Subject evaluation and student feedback processes in university programs may have led to improvements in the way teachers deliver the curriculum content, undertake assessment or structure the curriculum. However, in the area of Chinese medical education these processes have not shifted the pedagogical orientation to being student-focussed and learning-centred. It would appear that as the result of the course changes, the sequencing of subjects has improved and teachers have broadened the ways they deliver the content, yet acupuncture education has remained substantially teacher-directed and content-focussed. The pedagogical change proposed in this study implies a shift in teachers' understanding of their role from being knowledgeable experts and effective transmitters of knowledge, to being facilitators of learning. Furthermore, as the proposed shift is one in personal perspective, it must be made 'by teachers' not done 'to teachers'.

Without changing their awareness about learning and teaching, it is highly likely that the new ideas which teachers gain from staff development workshops will be reconstructed within pre-existing perspectives (Kember, 1998). This thesis supports the position of Biggs (1999) that teachers need to become researchers of their own teaching and learning in order to extend their understanding of learning/teaching and reorientate their pedagogical focus. Through their own research it is possible that teachers will develop the 'awareness' which Prosser and Trigwell (1999) identify as essential to teaching that facilitates effective student learning.

This thesis proposes that the pedagogy in Chinese medical education needs to be student centred, learning focussed and practice orientated. It proposes the development of a theory of acupuncture education which is practice focussed, challenges any tendency to posit knowledge in the tradition as being right or wrong, acknowledges and supports diversity in clinical practice, supports the development of evidence-based practice and promotes the accommodation of knowledge in contemporary practice. It has been argued that such a pedagogical repositioning is needed to support the development

of students' abilities in handling complex culture-bound knowledge in contemporary acupuncture practice in the West.

6.3.6 Implications for practitioner professional development

The observation that acupuncture practitioner professional development in the United Kingdom has focussed primarily upon the achievement and maintenance of standards (MacPherson, 1995) has parallels in the Australian context where efforts to develop the profession have until now placed the focus upon qualifications and standards. Harris (2001) and MacPherson (1995) both argue the need to focus practitioner professional development upon practitioners' needs, instead of the maintenance of standards to ensure practitioner competence and/or to protect the client from medical incompetence.

This study of beginner practitioners' conceptions of practice and learning found that lower order conceptions of practice and their related surface approaches to learning were apparently prevalent amongst beginner practitioners. Problematic in these lower order Practice Conceptions (1 and 2) and surface approaches to learning (Learning Conceptions A, B and C) is that these conceptions by their very nature are self-limiting and self-perpetuating. Moreover, because the vast majority of acupuncture practitioner professional development seminars in Australia are based on an information transfer model it follows that lower order conceptions of practice and surface approaches to learning are subtly reinforced in the wider profession.

In view of the findings of this study, this researcher proposes that there is a need for professional development to focus more upon learning processes and less upon the transmission of knowledge/skills. This proposition is supported by the findings of a recent survey of acupuncture practitioners in the United Kingdom which found that it was more common for practitioners to pursue their professional development through engaging in informal discussions with colleagues than by attending formal courses (White, 2002).

Coldham (1995), Fish (1995) and Moir (1995) propose that practitioners need to develop critical reflection and reflective practice qualities, so that they will be able to handle traditional knowledge in complex clinical situations. They assert that practitioners need to be able to 'think on their feet' because as practitioners of acupuncture in the West they will be challenged to re-conceptualise socio-culturally bound theory and practice within different contexts. While authors vary in their views about the extent to which acupuncture practice should or can be remoulded within a totally different socio-cultural setting (Macan, 2001; Romano, 1992; Ryan, 1995b; Seem, 1992; Shima, 1992), it is clear that every time a western practitioner attributes meaning to the client's pulse quality,

facial appearance or any other data arising from *Si Zhen* diagnosis, she or he does so through western values and beliefs.

This is not to say that practitioners are not informed by the ancient beliefs, values, theories and practices of Chinese medicine, but to state the obvious that Australian acupuncturists and their clients do not live in pre-feudal Chinese society and are not predominantly Chinese. Acupuncture practitioners in Australia walk a path between the two worlds of Eastern and Western health knowledge, and with their clients engage with many other worlds of beliefs and values. From a situated cognition perspective, because acupuncturists in the West rely upon knowledge which is highly culture-bound, knowledge and concepts are always under construction and evolving with each new use (Brown, Collins & Duguid, 1989).

While lower order conceptions of practice and surface approaches to learning provide practitioners with systematic models of practice grounded in the assumption that specific interventions will produce specific therapeutic outcomes, these models do not provide practitioners with ways of handling the complexities of the clinical encounter in the modern world. In contrast, the deep approaches to learning identified in this study (Learning Conceptions D and E) that focus on developing understanding and finding meaning through critical reflection, sharing and discussion, do provide learning approaches that are appropriate for handling the complexities associated with the use of oriental knowledge in western clinical practice. Cognisant of the benefits of the 'supervision/mentorship model' in psychology and social work, a mentorship program for beginner practitioners has been proposed as a structure for promoting deeper learning qualities and reflective practice skills (Ryan, 2002a), with the Australian Acupuncture and Chinese Medicine Association (AACMA) currently exploring the level of support for such a program amongst its members.

While it is acknowledged that the competitive nature of acupuncture clinical practice can stymie the cooperation needed for a successful reflective-practice mentorship program, Ryan (2002a) has noted that the benefits to both mentors and mentees in a 'purpose designed' mentorship program far outweigh mitigating factors. While all mentorship programs provide structures that nurture and support learning, there key differences in mentorship models with accompanying varied outcomes (Anderson & Shannon, 1995). According to Furlong and Maynard (1995) the three main models of mentorship commonly in use are: -

1. The apprenticeship model in which the beginner works alongside the experienced professional to learn from observation, experience and emulation.

2. The competency model in which the mentor is the systematic trainer of the mentee in the acquisition of competencies.

3. The reflective practitioner model in which the mentor is a facilitator of learning and co-inquirer in the learning process.

In view of the findings of this study and the need for processes and structures that promote and support critical reflective thinking (Learning Conception D) and reflective practice (Practice Conceptions 4 and 5), Furlong and Maynard's reflective practitioner model would appear to be most suited to supporting the learning needs of beginner acupuncturists. A mentoring program for beginner practitioners would provide a structure for addressing some of the major concerns identified in this study. In particular a mentoring program would:

- provide a structure for promoting lifelong learning and critical reflection, minimising the tendency to compartmentalise learning as something that occurs only in formalised education;

- provide a structure for promoting deeper approaches to learning (Learning Conception D) that support optimal styles of acupuncture practice (Practice Conceptions 4 and 5);

- provide a structure which supports beginner practitioners in entering the community of acupuncture practice, recognising that developing deep understanding is a gradual process and that there are certain levels of understanding that only come with personal practice experience; and

- provide emotional, personal and psychological support that would minimise the effect of practitioner isolation which was raised as a serious concern by some participants in this study.

Even though the establishment of a formalised mentorship program is incumbent upon professional associations that represent the interests of the acupuncture profession, this thesis proposes that undergraduate education should promote critical reflection, cooperative learning and collegial sharing amongst students as the basis for future learning in practice. In this respect, this thesis strongly supports the proposition that undergraduate education should prepare students to be effective lifelong learners (Candy, 1991; Candy, Crebert & O'Leary, 1994).

While there is a need for lifelong learning in all occupations in order to keep abreast with knowledge growth in one's field of work, in acupuncture practice in the West lifelong learning is also essential as a way of supporting the accommodation of oriental knowledge in a contemporary clinical practice. However, aspects of university education identified by Candy et al. (1994) as detrimental to the promotion of lifelong learning are quite prevalent in acupuncture curricular in Australia. These negative aspects include:

- an overloading of curriculum content;

- an over-emphasis on teaching as information transfer and learning as information acquisition;

- an overemphasis upon assessment which examines content recall; and

- an emphasis on learning tasks that promote competitive and individualistic activities rather than those that are cooperative and shared.

In optimising practice, acupuncturists in the West not only need to develop the ability to accommodate oriental knowledge to the contemporary context, but also reconceptualise western knowledge within a Chinese medical framework. Biomedical knowledge and western psychological perspectives, as well as patient presentations that have no equivalent in the body of traditional Chinese medical knowledge, present the practitioner with learning challenges that also require deep learning approaches characterised by critical reflection, investigation, discussion and sharing.

In addition to identifying these qualities as essential for lifelong learning, Candy et al. (1994) assert that lifelong learners also need to be able to locate, evaluate, decode and apply new information as it arises. With respect to acupuncture practice this signals the need for practitioners to be able to understand and apply knowledge arising from relevant research, a dimension not emphasised by participants in this study.

With respect to clinical practice, participants in this study relied upon knowledge based either in the tradition of Chinese medical practice or personal practice experience. This finding appears to be related to the orientation in the Chinese medicine curriculum where, apart from one subject in Chinese medical research, the curriculum focuses upon teaching students to understand and apply traditional knowledge and theories. This curriculum emphasis promotes the view that traditional knowledge is valid simply because it is part of the tradition.

In the West where Chinese medicine is not part of the cultural fabric of society and where there is an increasing emphasis upon evidence-based practice, there is an obvious need for research to support the development of evidence-based learning/practice. The 2003 recall of PAN therapeutic products in Australia, related to failures in quality control procedures in the manufacture of ingestible therapeutics, is a salient reminder that consumer confidence in complementary medicines is easily shaken. This event, the community reaction, and the consequent calls for more research into complementary medicines, is a timely reminder for acupuncturists to reassess their reliance upon traditional and experiential knowledge in favour of models of practice that are informed by research.

While this thesis does not discount the value of knowledge that arises from one's personal practice experience, the uncritical acceptance and application of such knowledge is problematic. In Learning Conception C it was noted that clinical practice was used as the measure for testing, retaining or discarding knowledge without exploring the possible reasons for apparent beneficial or detrimental outcomes. In contrast, Learning Conception D saw practitioners discussing, exploring and critically reflecting upon their personal practice experience in order to make sense of practice based knowledge.

Because contemporary acupuncture practice in the West requires practitioners to locate and evaluate new knowledge, engage with various bodies of knowledge, reconceptualise and accommodate both oriental and western knowledge, this study concludes that lifelong learning skills are an essential to contemporary acupuncture practice. This thesis asserts that while practitioners may develop these skills post-graduation, the initial development should occur in undergraduate education when students are first faced with the dissonance between Eastern and Western perspectives and the disjunctions between beliefs and contemporary acupuncture practice.

6.3.7   Proposals for educational change

The previous sections of this chapter have detailed the need for change in Chinese medicine education in Australia. This change involves a move away from a content focussed curriculum and an information transfer view of teaching to a learning centred pedagogy grounded in the reality of contemporary clinical practice. It has been argued that such change in the undergraduate acupuncture curriculum will not only improve student learning and understanding at the undergraduate level, but also prepare students for lifelong learning (Candy, Crebert & O'Leary, 1994). This section advances some specific suggestions on strategies for achieving the desired changes in undergraduate acupuncture education.

Developing deep approaches to learning through cooperative approaches

The findings of the study showed that while there is a place for varied and different approaches to learning, deep approaches were required to support practitioners in the use of complex culture-bound knowledge in clinical practice. In these deep approaches to learning (Learning Conceptions D and E) practitioners focussed on gaining meaning and understanding in order to use knowledge effectively in clinical practice. Moreover, it has been argued that the development of deep approaches to learning requires pedagogies that facilitate the development of students' awareness and understanding of practice and learning.

In this study, beginner practitioners reported that discussion, sharing and reflection with peer colleagues or more senior practitioners were beneficial in the development of deep approaches to learning. Learning Conceptions D and E were characterised by 'learning with others' as opposed to 'learning from others' (Learning Conception B) or 'learning by oneself' (Learning Conceptions A and C). Some participants commented that while cooperative learning was necessary to provide mutual support, university education promoted competitive and individualistic learning. Reflecting on this comment it appears that while workshop activities and student managed learning (SML) tasks in the existing curriculum promote 'learning with' others, and clinical practice components promote both 'learning with' and 'learning from' others, the subjects in which traditional didactic processes are utilised promote 'learning by oneself'. An increased use of pedagogies that promote 'learning with' others and an increased emphasis in these activities upon exploring meaning and understanding would arguably promote a culture of cooperative learning, minimise the tendency towards individualised competitive learning in undergraduate acupuncture education and develop appropriate learning perspectives for lifelong learning.

This proposal is not advanced in isolation from the findings of other studies concerning factors which contribute to the development of deep approaches to learning. It is evident that cooperative learning will not in itself significantly enhance the development of deep approaches to learning if acupuncture teaching is predominately didactic or if assessment is mainly concerned with students' ability to recall memorised information in exams.

Changing teacher pedagogy through teacher research

While this study has focussed on exploring practice related learning amongst beginner acupuncture clinicians, the research findings have definite implications for acupuncture teaching. The common occurrence of lower order conceptions of practice and accompanying surface approaches to learning amongst participants in this study raises questions about the focus of the pedagogy in undergraduate acupuncture education. The significant presence of lower order/surface perspectives of practice/learning amongst participants in this study is perhaps a consequence of an undergraduate program in which many teachers conceptualise their role as one of conveying knowledge and experience.

The previous sections of this thesis have argued the case for a pedagogy in which teaching is seen in terms of facilitating student learning. It has also been noted that in developing a student learning centred approach to teaching, teachers first need to understand how students conceptualise the subject being studied and the ways students go about learning it. As such the starting point for reconceptualising learning and teaching lies in the development of teacher awareness of these phenomena. Teacher initiated

research that provides teachers with a greater understanding of how acupuncture students view clinical practice, what students perceive they need to know to practice effectively, how students go about learning and the ways students view teaching, are key dimensions to understanding for pedagogical change.

It is the view of this researcher that while staff development workshops and challenging educational literature may lead to a questioning of current pedagogical approaches, comprehensive pedagogical change comes ultimately from a change in teachers' own awareness. From teaching and coordinating acupuncture education programs in Australia, this researcher has observed that while formal and informal student feedback processes often lead to modifications in learning objectives, subject content, assessment procedures, course structure and teaching practices, they rarely lead teachers to reconceptualise their notions of teaching. By undertaking research into their own teaching and student learning, it is more likely that teachers will develop the awareness and understanding that are the basis for pedagogical change.

Developing a culture of lifelong learning

This study has identified the need to move away from teacher centred education and an emphasis upon content transmission, to a model of education that is student centred, learning focussed and practice orientated. It has been proposed that such a pedagogical shift will see teachers supporting students in developing understanding and exploring ways of handling knowledge in clinical practice. It has been argued that by developing deep learning approaches during their undergraduate studies, students will be better positioned for the challenges of contemporary clinical practice and the accompanying lifelong learning needs.

At Victoria University academic staff who teach in the acupuncture program have introduced components of student managed learning (SML) into each subject as a method for developing a culture of learning amongst the student body. However, it is this researcher's experience that teachers often view SML sessions as opportunities for students to revise and consolidate the material from the lecture sessions, rather than being opportunities for helping students to manage their own learning and develop lifelong learning skills. Rather than seeing SML sessions as opportunities for attending to teacher-designated learning concerns, these sessions should incorporate learning activities that focus on the learning concerns of students.

Similarly, the focus in the subject 'University skills for Chinese medicine' in the undergraduate program at Victoria University is predominantly more concerned with what teachers believe students need to know than with what students want to know. A

reconceptualisation of this subject as being student learning centred, would provide an additional opportunity for supporting the development of a culture of student learning.

Developing practice based learning

The literature review revealed that in spite of post 1949 attempts to standardise Chinese medical education and practice, historical research and current indicators show a broad diversity of theory and plurality of practice. The findings of this study also showed variations in practitioners' notions of clinical practice which, while being a source of tension within the community of practice, also provide insight into ways in which practice can be accommodated to clinical context.

It is the proposition of this researcher that by being exposed to varied experiences and provided with opportunities to reflect critically upon those experiences, students will be better placed to respond to contextually specific practice demands. With reference to the phenomenographic pedagogy, it was argued that teachers needed to provide students with varied learning experiences so that they could broaden their awareness and understanding of theory and practice, and through this become better equipped to respond appropriately in the many unpredictable clinical situations that lie outside the known body of Chinese medical knowledge.

The existing acupuncture curriculum at Victoria University which is built upon a model of teaching as information transfer, assumes the position that there is a seamless link between theory and practice with effective practice an assumed consequence of a correct understanding of the tradition. However this study has shown that while in some instances practitioners can successfully operate from such a model (Practice Conceptions 1 and 2), at other times they cannot (Practice Conceptions 4 and 5).

This study identified and analysed the broad variations in conceptions of practice within the group, but it did not focus on exploring the different ways in which practitioners understood and applied specific theories, or the ways in which they interpreted pertinent biomedical and western psychological knowledge within a Chinese medical framework. Exploration of the ways in which practitioners reconstruct knowledge in practice, would provide students with insight into how they might also negotiate this difficult territory.

A pedagogy based upon an understanding of what practitioners do in practice would better position students for the uncertainties and complexities of clinical practice. Learning tasks that are not limited to promoting student understanding but also challenge students to explore how different practitioners understand and apply theories in practice contexts, accompanied by teacher facilitated reflection to tease out conceptual differences, assumptions and implications, is one strategy for achieving this gaol. In

accord with this proposed change, clinical case discussion will need to shift away from the current emphasis upon identifying the causal links between diagnosis, therapeutic intervention and clinical outcomes to case discussions which also explore differences in the ways practitioners understand the same clinical presentation, differences in clinical reasoning and differences in therapeutic interventions.

In medical education, problem based learning (PBL) is now widely used to enhance the development of clinical reasoning, problem solving skills, information literacy skills and evidence-based practice, suggesting that PBL may be appropriate in Chinese medicine education. At the same time there are clear difficulties associated with the use of PBL in acupuncture education.

The first difficulty relates to the limited amount and specific nature of documented Chinese medical information in English. Because available resource materials are predominantly concerned with the explanation and application of untested traditional theories, reliance upon these in PBL activities would do little to develop learning/practice perspectives which were evidence-based or grounded in the realities of contemporary acupuncture practice in Australia. On the other hand reliance upon practitioners' personal clinical experience for information in PBL structured activities could lead to the promotion of untested idiosyncratic views.

The researcher is also concerned that the use of PBL in Chinese medicine education could unintentionally advance the simplistic view, evident in many Chinese medical texts, that there is a seamless link between theory and clinical practice. If PBL was adapted to Chinese medical education it would be necessary to ensure that it assisted students in exploring ways practitioners accommodated Chinese medical knowledge in contemporary western contexts and how they reconstructed western health knowledge within an oriental framework.

Reassessing the knowledge base in the curriculum

The conceptions of acupuncture practice and learning identified in this study show a high reliance upon traditional and experiential knowledge as the basis for clinical practice. At the same time participants showed no apparent interest in research based knowledge that had relevance to clinical practice. It was noted that one possible reason for the apparent lack of interest in evidence-based knowledge was because the dominant emphasis in acupuncture research has been one of proving what practitioners already know from experience. While this observation points to the need to reassess the focus of acupuncture research, it is also apparent that there are clinically relevant areas of research based knowledge outside the body of Chinese medicine, that are being overlooked by practitioners.

In shifting the knowledge base to more sustainable grounds it will be necessary to reassess the importance accorded to unproven 'traditional' knowledge and knowledge that is based solely upon the practitioner's personal clinical experience. Without reflection, discussion and critique, personal clinical experience remains highly subjective and traditional knowledge remains in the realm of belief. This researcher proposes that acupuncture knowledge that has no basis in reason or research should be treated as tentative and accorded only secondary importance in acupuncture education.

Designing practice focussed curriculum

It is the experience of this researcher that acupuncture curriculum design in Australia has progressed by modifying the curriculum structure and content of programs in China, by modelling curriculum upon knowledge/skills prescribed by regulatory bodies and by focussing upon the knowledge/skills teachers believe practitioners need to know. In view of the findings of this study it would appear that these notions of curriculum design have resulted in teacher-driven content-focussed curricular that do not adequately prepare students for the challenges and uncertainties of contemporary clinical practice.

In contrast, initial discussions concerning the design of a joint 'Victoria University – China' masters program in Chinese medicine, are focussing upon developing curriculum on the basis of what practitioners actually do in practice. This approach to curriculum design, while not ignoring benchmark standards, is less concerned with what Chinese medical theory asserts and more concerned with how practitioners understand and accommodate theory in clinical practice. A similar approach to curriculum design is proposed for the major revision of the undergraduate Chinese medical curriculum at Victoria University in 2005 when the initial cohort of students in the current program have graduated and student feedback on the entire four years of the undergraduate program will be possible.

6.4   Reflections and suggestions

6.4.1   Reflections on the phenomenographic method

Phenomenography was chosen for this study on the basis of the 'appropriateness of fit' and the successful use of the phenomenographic orientation in similar health science research by Dall'Alba (1995 & 2002); Barnard, McCosker and Gerber (1999); Bendz (1995); Eklund-Myrskog (1997); Forbes, Duke and Prosser (2001); Ramritu and Barnard (2001); Takman and Severinsson (1999) and Taylor (1993).

The findings of this study show that in accord with the phenomenographic stance, the method was an effective tool for uncovering, exploring and analysing group conceptions

of acupuncture practice and of learning in relation to practice (Brew, 1998; Trigwell, 2000). In accord with the aims of the study, the phenomenographic method enabled the researcher to focus upon the experience of the group in relation to the two phenomena rather than focussing upon particular individuals within the group or acupuncture in itself.

By defining categories of description in terms of structural and referential axes, the study found that it was possible to map the qualitative differences between each conception of practice and of learning. In doing so the study accorded with the more structured approach to phenomenography evident in the works of Crawford et al. (1994); Prosser et al. (1994a); Tempone (2001) and Trigwell (2000). The structured phenomenographic approach employed in this study provided a process for mapping group conceptions of practice and learning, and identifying the logical associations across the two conceptual maps. The study provided significant insight into the relationship between these two phenomena and signalled the need for further research in this field to inform undergraduate acupuncture education and practitioner professional development.

As a distinctively 'second order' approach that relied substantially upon semi-focussed interviews for the collection of data, the interview questions and the quality of the interviews *per se* were seen as critical to the research and its outcomes (Dall'Alba, 2000; Entwistle, 1997b). This study employed interview questions that engaged participants in reflecting upon their personal clinical experiences and argued that this provided data that reflected participants' experience of the phenomena of practice and learning. While the researcher and cojudge were satisfied with the quality of the data and the resulting analysis in this study, questions have been raised about the extent to which phenomenographers can be assured that the data provides a truly second order account of the participants' experiences.

The study was informed by the critique of Jamieson (1998), Patrick (1998) and Sandberg (1997) regarding cojudge procedures in crosschecking the analysis. Validity was achieved through the use of accepted phenomenographic protocols (Neuman, 1987; Prosser, 1990) which were detailed in section 3.5.1 of the thesis. With respect to reliability some phenomenographers attempt to quantify the level of cojudge agreement with the provisional analysis, however this study adopted the more general position of Marton (1994b) that a high degree of cojudge agreement should be achieved to ensure reliability (see section 3.5.1). Overall, the method proved most appropriate in achieving the aims of the study, providing support to the view that there is a considerable potential for its use in health science research.

6.4.2 Reflections on the research design

The study was grounded in accepted phenomenographic protocols with some design features that were specific to this project. The added design features included:- the two-phase interview structure; the measurement and analysis of frequency of occurrence of conceptions in relation to gender and age/experience; the inclusion of major themes in the analysis; and the categorisation/analysis of Practice Conceptions as lower, middle or higher order conceptions. The inclusion of these additional factors, while not exclusive to the design of this study, were seen to be useful in strengthening the analysis and extending the findings.

The two-phase interview structure

In this study of beginner acupuncture practitioners' conceptions of practice and of learning 'beginner acupuncture practitioners' were identified as those who were in the final stages of clinical internship studies or who had recently graduated and were now in clinical practice. As it was not known whether practitioners' conceptions of these phenomena differed from when they were intern-practitioners to newly graduated practitioners, the study employed a two-phase interview approach which provided two sets of data as a basis for the final analysis. The use of a second round of interviews was particularly useful as a means of clarifying with participants issues arising from the first round interview data and of strengthening the database used in the analysis.

Analysis in terms of frequency of occurrence

The analysis of the conceptions and themes held by the group in relation to the specified phenomena were also analysed for frequency of occurrence. Frequency of occurrence was defined in terms of the number of participants who reported a specific conception, rather than the number of times the item had been reported. The analysis of these indicators was undertaken to detect possible trends, rather than draw conclusions that could be generalised to a wider population.

It was found that in proportion to the number of interviewees in each round, each conception of practice and of learning occurred in relatively similar frequency in both rounds (Tables 4c & 5e). This finding assured the researcher of the stability of the collective conceptual maps displayed in outcome space table format. The distribution of the conceptions in terms of frequency of occurrence also provided a basis for extending the surface/deep metaphor for approaches to learning and the 'lower, middle, higher' analysis of conceptions of practice. Identified conceptions were also analysed for frequency of occurrence with respect to gender and age/experience to detect any trends.

Analysis in terms of levels of complexity

In accord with the phenomenographic orientation, conceptions of learning were analysed as either surface or deep approaches (Marton et al., 1997a). As phenomenography proposes that one's conception of a phenomenon influences how one goes about learning that phenomenon (Marton & Booth, 1997b), it is arguable that more complex conceptions of phenomenon are likely to relate to more complex or deeper approaches to learning that phenomenon.

This study identified criteria for categorising conceptions of practice as lower, middle or higher order conceptions, on the basis of related complexity. The analysis of conceptual complexity provided a basis for a detailed examination of the relationships between conceptions of acupuncture practice and conceptions of learning in terms of levels of complexity. By including an analysis of this dimension in the design of the study, it was possible to explore whether or not the findings of this study supported the phenomenographic view about patterns of relationship between conceptions and actions.

The inclusion of major themes

The study identified a number of major themes which related to participants' experience of acupuncture practice but were not specific to any one particular conceptual category. While such themes are rarely reported in phenomenographic research, they were included for analysis in this study because they arose from the research design, were relevant to the aims and focus of the study, provided additional insight into participants' experience of acupuncture practice and added to knowledge in an area in which research was lacking. The researcher decided upon a way of managing these themes, however it would be useful to explore other ways of handling such themes in phenomenographic research.

6.4.3   Future research suggested by this study

Based in the phenomenographic orientation, this study explored practitioners' experience of practice and learning from the perspective of their relationship to the phenomena. The study identified conceptual positions representative of the collective experience of the group in relation to the phenomena of acupuncture practice and learning. It was concluded that while higher order conceptions of practice and deep approaches to learning appeared to be more appropriate in terms of the challenges of practising acupuncture within the Australian context, lower order conceptions of practice and surface approaches to learning could not be dismissed as these were the basis for more complex positions. It was also noted that acupuncture practice has been and continues to be characterised by

diverse models of practice that include some apparently reductionist perspectives (Birch, 1998a; Dale, 1997b; Eckman, 1997; Parker, 1998; Unschuld, 1987).

The study identified three practice related themes which, while discussed in relation to the identified conceptions of practice, remained as areas in need of further investigation. In particular, the significance that a number of participants placed upon 'intuition' and 'spirituality' in acupuncture practice is worthy of further investigation. It is also apparent that understanding what acupuncture clinicians actually do in practice would be enhanced by longitudinal studies of practitioners to determine how conceptions of practice and learning continue to change over the years and how these affect practice.

The finding that practitioners' conceptions of practice not only influenced how they practised but also how they viewed learning in relation to practice, led the researcher to propose that there is a need for educationalists to assist learners in identifying, understanding and exploring different conceptual positions and the implications of these conceptions for practice and learning. In advancing this constructivist position the researcher proposes that acupuncture educators need to see themselves primarily as facilitators of conceptual awareness and change, rather than as knowledgeable experts who interpret and convey Chinese medical knowledge/skills. In tandem with this view the study concluded that teachers also needed to see themselves as facilitators in the development of students' lifelong learning skills. In achieving this pedagogical shift it was proposed that teachers needed to be researchers of their own educational practice.

The research also identified apparent variations in conceptual preference associated with gender, but was unable to detect any pattern or draw any conclusions as to the possible reasons for the variations. The research acknowledged that while Chinese medicine was historically male dominated, the espoused theory was not apparently laden with male values. Moreover, the observation that in Australia there tends to be an increasing number of women studying and practising Chinese medicine, signals the need for research to explore gender related conceptions and issues in this domain.

In the course of the study it became apparent that while considerable phenomenographic research had been undertaken in the area of teaching and learning, which amongst many other outcomes had developed the discourse on the professional practice of teachers, there were many discipline areas in which phenomenography had not been applied. This study found that phenomenography provided a useful approach for identifying and exploring conceptions of acupuncture practice and therefore suggests that studies of practice in other disciplines could advance the development of a phenomenographic discourse on professional practice. With respect to Chinese medicine, further exploration into

practitioners' use of the terms 'patient' or 'client' and the implications in this distinction, could advance discourse concerning practitioners' perceptions about their role.

The study noted that the participants in the study showed a preference for experience-based knowledge and knowledge drawn from the Chinese medical tradition. There was an apparent lack of interest in evidence-based knowledge that arose from acupuncture clinical trial research. Various reasons were advanced in explanation of this curious position which has implications for undergraduate education and points to the need to identify practitioners' interests as a basis for research undertakings.

The study found a level of dissonance between the espoused theory of Chinese Medicine and certain conceptions of acupuncture practice although on the basis of the data and analysis in this study it was not possible to be conclusive as to the reasons for the apparent disjunction between beliefs and practices in certain conceptions of acupuncture. Questions were raised about the validity of interpreting such dissonance in a manner similar to that of Argyris and Schön (1974) in their studies in other practice professions. Given the importance accorded to espoused theory in Chinese medical discourse, this study suggests that there is a need for research to explore the exact nature of the dissonance and the various ways practitioners handle this phenomenon in practice.

In view of the specific aims of the study, the specified phenomena were explored from the perspective of acupuncture practitioners rather than acupuncture clients. At the same time it was acknowledged that phenomenography was an effective approach for exploring clients' perceptions in health science research (Barnard, McCosker & Gerber, 1999). In view of this and in order to explore the level of agreement/disagreement between the experience of practitioners and clients in the clinical encounter, the study proposed the need for research that would explore clients' experiences of acupuncture therapy.

6.4.4   Reflections on the research journey

In addition to being a study with a specified purpose, method, structure and findings, the study has also been a learning journey for the researcher. As an acupuncture practitioner and educator, I began the study with certain beliefs and assumptions about the nature of acupuncture practice and learning, yet in the course of the study I found that my personal awareness of acupuncture practice and learning was challenged and expanded. Experiencing the research process as a learning journey was, on reflection, due to the adopted phenomenographic

orientation which positioned me to gain insight and understanding from the perspective of the participants in the research rather than my own perspective.

Prior to commencing the study, I was aware that in spite of the espoused theory, practitioners were at times less than holistic in their approach to treatment. However I was surprised to find that the conceptions of practice which were most reductionist, least holistic and least 'client centred' (Practice Conception 1 and 2) were also quite apparent in the group. This finding was unexpected, as the group of participant practitioners had recently completed four years of training in the perspective, theories, principles and practice of traditional Chinese medicine. I reflected that the presence of lower order Practice Conceptions within the group might have related to the fact that as beginner practitioners, the less complex typically reductionist styles of practice were easier to master than the more complex holistic ones (Practice Conceptions 4 and 5).

I thought that the presence of lower order Practice Conceptions with their focus on problem-resolution had resulted in part from curriculum and textbook emphasis upon theories of diagnosis and clinical decision-making that were highly systematic and easily adapted to a reductionist outlook. I wondered whether more experienced practitioners adopted similar reductionist styles of practice and if so whether this was indicative of a reshaping of acupuncture practice in the West

From the outset I questioned attempts to define Chinese medicine in juxtaposition to Western biomedicine on the basis of philosophical differences, asserting the need to explore practice from the perspective of what clinicians actually do rather than what the theory or common beliefs propose that they are supposed to do. The study found an unexpected level of dissonance between the espoused theory and a number of the Practice Conceptions held by the group of beginner practitioners. While it was difficult to be conclusive about the reasons for this apparent dissonance, it appeared to be related to practitioner views about the nature and role of traditional knowledge in practice. While some Practice Conceptions viewed traditional Chinese medical knowledge as essentially factual, some adopted a totally atheoretical position, and others viewed traditional knowledge as informing practice but not determining it. These varied views may well represent different ways of handling complex culture-bound knowledge in contemporary acupuncture practice in Australia. Furthering understanding in how students and practitioners view traditional acupuncture knowledge is pivotal in developing understanding of acupuncture practice and learning in Australia.

I had commenced the study with the view that the spiritual dimension was of significant importance in the practice of Chinese medicine. However this dimension of practice, while not excluded from any of the Practice Conceptions

identified in this study, was evident only in Practice Conception 3 and one practice related theme. On reflection the significance I attached to the spiritual dimension in practice probably resulted from me seeing the phenomenon of acupuncture practice through my own conceptual filter rather than the experience of others.

In this study I traversed the familiar ground of acupuncture practice and education that I had experienced many times before. From my knowledge and experience I knew what these beginner practitioners were supposed to do, but chose to focus instead on understanding what they actually did. By developing my understanding of the phenomena from the perspective of others, my familiarity with the territory was drawn into question and I came to know it in a different way. My view of teaching changed from being an essentially teacher-centred and student-directing activity to one which is more student-centred and learning–focussed. In all, the research journey was not simply a study of other peoples' experience of phenomena but a learning process for the researcher - a journey in which the teacher/practitioner became the learner and his former students became the teachers.

6.5   Chapter summary

The study signalled a departure from the clinical trial research focus in Chinese medicine, in the belief that there are many important issues requiring understanding that lie beyond the dominant interest in proving clinical efficacy. The study focussed upon understanding qualitatively different ways in which practitioners experienced clinical practice and learning, and advanced understanding in an area not previously explored. The study utilised a methodology not previously applied in Chinese medicine research, to advance knowledge that would contribute to the development of health care education and practice.

The study identified a variety of qualitatively different conceptions of practice and of learning which ranged from basic to complex. While it was argued that the higher order conceptions of practice and deep approaches to learning were more appropriate in providing ways of handling complex culture-bound knowledge in clinical practice, the study found that lower order conceptions of practice and surface approaches to learning were quite evident amongst participants. This finding raised questions about the nature of the pedagogy in acupuncture education and the appropriateness of the pedagogy in developing skills for lifelong learning. The study concluded that teachers needed to see themselves as facilitators of student learning and awareness rather than transmitters of knowledge and experience, in order to assist students in becoming adept at handling various bodies of knowledge in contemporary western practice.

The study identified an unexpected level of dissonance between beliefs and practice, which was thought to be related to differences in the ways practitioners viewed the role of traditional knowledge in practice. In studying and practising Chinese medicine these beginner practitioners struggled with the tension between Eastern and Western priorities as well as the use of complex culture-bound knowledge in contemporary Western society.

In view of these difficulties and the lack of roadmaps through this maze, the research suggested the need for teachers to assist learners in developing their understanding of clinical practice and the various ways practitioners handled the complexities of practice. It was argued that the acupuncture curriculum should place a greater emphasis upon 'theory in use' and practice related evidence-based knowledge from a variety of sources.

In engendering educational change and developing a pedagogy of awareness, the study proposed that teachers needed to be researchers of their own teaching. It was argued that in order to create change teachers needed to first undergo change. It was argued that teachers needed to understand their students' views about teaching, learning and acupuncture practice in order to develop pedagogies that were solidly 'student focussed' and 'learning centred'.

CONSENT FORM

I,

of

certify that I am at least 18 years old and that I am voluntarily giving my consent to participate in the study entitled:

A phenomenographic study of beginner acupuncture clinicians' conceptions of practice and learning

being conducted at Victoria University of Technology by Damien Ryan under the supervision of the School of Education.

I certify that the objectives of the study, together with any possible risks to me associated with participation in the audiotaped interviews have been fully explained to me by Damien Ryan, and that I freely consent to participation in the interviews.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way.

I have been informed that the information I provide will be kept confidential.

Signed: .... **Date**: ....

Witness other than the researcher: .... **Date**: ....

Any queries about your participation in this project may be directed to the researcher (Damien Ryan Ph 93652709). If you have any queries or complaints about the way you have been treated, you may contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box 14428 MCMC, Melbourne, 8001 (telephone no: 03-9688 4710).

Interview Questions employed in the substantive study

Q1   Scenario One: I would like you to think of a client you have treated where everything went quite smoothly. The diagnosis and treatment were not too difficult and the client's response to your treatment was good. Could you please describe the consultation in detail, commencing with the client's arrival?

Q2   Scenario Two: I would like you to think of an instance when you had a client with a presenting condition that was not 'straightforward'. For example she/he may have had symptoms which were not easily classified within a Chinese medical framework; or you had little knowledge/experience of the specific condition from a Chinese medical perspective; or you had to needle points or employ techniques with which you were not comfortable. Could you please describe the consultation in detail, commencing with the client's arrival?

Q3   Scenario Three: I would like you to think of a client you treated where the treatment has not gone as expected. They may have reported an unexpected negative reaction to the treatment, or they may have simply reported no improvement. Could you please describe the consultation in detail, commencing with the client's arrival?

APPENDIX C

COJUDGE INSTRUCTIONS

In crosschecking the 'core' analysis, the following procedural steps are suggested:

1. Read document the proposed analysis of neophyte acupuncture practitioner's conceptions of practice and learning

2. Working with the coded interview transcripts (with written notation indicating particular conceptual categories) the summary of transcript references for each category, cross check that the conceptual categories accurately represent the interviewee's conceptions of practice outlined in the analysis.

3. Repeat the process outlined in step two with regard to cross checking the categories of learning.

4. While crosschecking of the conceptual analysis, note any criticisms, points for clarification, or nuances of meaning that have been overlooked.

5. Cross check that the outrider themes which have been listed, accurately reflect the views expressed in the transcripts.

6. In the crosschecking of the themes, note any criticisms, points for clarification, or themes that have been overlooked. Please note that only outrider themes which pertain to the research topic [neophyte acupuncture practitioner's conceptions of practice and learning] are listed.

REFERENCES

AHS (1983). *Australian Health Survey.* Australian Bureau of Statistics, Australian Government. Canberra.

NHS (1990). *National Health Survey.* Australian Bureau of Statistics. Australian Government. Canberra.

Allen, J. (1995). *The nature of significant experience.* Unpublished M. ed., La Trobe, Melbourne.

Anderson, E. & Shannon, A. (1995). Towards a conceptualization of mentoring. In T. Kerry & A. Mayes (eds.) *Issues in mentoring.* London. Routledge.

Andrews, B. (1996). *The making of Chinese medicine.* Unpublished PhD, University of Cambridge, Cambridge.

Argyris, C., & Schön, D. (1974). *Theory in practice: Increasing professional effectiveness.* San Francisco: Jossey-Bass.

Baer, H., Jen, C., & Tanassi, L. (1998). The drive for professionalization of acupuncture: a preliminary view from the San Francisco Bay area. *Social science and medicine, 46*(4-5), 533-537.

Balla, M., Patrick, K., Ramsden, P., & Dall'Alba, G. (1992). *The role of lectures in curriculum: differences in understanding and interpretation.* Paper presented at the AARE / NZARE Conference, Geelong.

Barnard, A., McCosker, H., & Gerber, R. (1999). Phenomenography: a qualitative research approach for exploring understanding in health care. *Qualitative Health Research, 9 (2),* 212-226.

Baum, M. (1998). What is holism? The view of a well-known critic of alternative medicine. *Complementary Therapies in Medicine, 6,* 42-44.

Beaty, E., Dall'Alba, G., & Marton, F. (1990). Conceptions of academic learning. *ERADU Occasional Paper 90.4.*

Beinfield, H., & Korngold, E. (1991). *Between heaven and earth.* Toronto: Random House.

Bendz, M. (1995). *Knowledge in practice: how nursing students conceive of clinical situations and how their conceptions change during and after training.* Lunds Universitet (Sweden).

Bensoussan, A., & Myers, S. (1996). *Towards a safer choice.* Sydney: UWS.

Biggs, J., & Telfer, R. (1987). *The process of learning.* (2nd ed.). Australia: Prentice-Hall Australia.

Biggs, J. (1999). *Teaching for quality learning at university: what the student does.* Buckingham. SRHE and Open University Press.

Binswanger, C. (1983). Eastern and western medicine. *American Journal of Acupuncture, 5*(2), 34 - 38.

Birch, S. (1998a). Diversity and acupuncture: acupuncture is not a coherent or historically stable tradition. In A. Vickers (Ed.), *Examining complementary medicine.* Cheltenham: Stanley Thornes.

Birch, S. (1998b, Nov. '98). *Acupuncture research.* Paper presented at the TCM Research Conference, UTS. Sydney.

Birch, S., & Sherman, K. (1999). Zhong Yi acupuncture and low-back pain. *Journal of Alternative and Complementary Medicine, 5*(5), 415-425.

Booth, J., Flower, A., Lampert, N., & Bhoga, B. (1993). The spirit: some practitioner viewpoints. *European Journal of Chinese medicine, 1*(1), 19-25.

Booth, S. (1997). On phenomenography, learning and teaching. *Higher Education Research and Development, 16*(2), 135-158.

Bowden, J. (1990a). Curriculum development for conceptual change learning: phenomenographic pedagogy. *ERADU Occasional Paper 90.3.*

Bowden, J. (1994). The nature of phenomenographic research. In J. Bowden, & Walsh, E., (Ed.), *Phenomenographic research: variations in method - the Warburton symposium* (1-16). Melbourne: RMIT.

Bowden, J. & Marton, F. (1998) *The University of Learning.* London. Kogan Page.

Bowden, J. (2000a). The nature of phenomenographic research. In J. W. Bowden, E. (Ed.), *Phenomenography* (1-18). Melbourne: RMIT University Press.

Bowden, J. (2000b). Experience of phenomenographic research: a personal account. In J. W. Bowden, E. (Ed.), *Phenomenography.* Melbourne: RMIT Publishing.

Bowden, J., & Dall'Alba, G., et al. (1990b). Phenomenographic studies of understanding in physics: displacement, velocity and frames of reference. *ERADU Occasional Paper 90.6,* 1-15.

Bowers, J., Hess, J. & Sivin, N. (Ed.). (1988). *Science and medicine in twentieth-century China: research and education.* Michigan: Centre for Chinese Studies.

Brew, A. (1998). *Research as it is experienced: Implications for higher education.* Paper presented at the HERDSA Conference, Auckland.

Brew, A., & Boud, D. (1995). Teaching and research: establishing the vital link. *Higher Education, 29,* 261-173.

Brown, J., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, Jan-Feb.,* 32-42.

Bruce, C. (1994a). *Reflections on the experience of the phenomenographic interview.* Paper presented at the Phenomenography Philosophy and Practice Conference, QUT. Brisbane.

Bruce, C. & Gerber, R. (1994b). *Towards university lecturers' conceptions of student learning.* Paper presented at the Phenomenography Philosophy and Practice Conference, QUT Brisbane.

Burns, J. (1994). *Extending critique within phenomenography.* Paper presented at the Phenomenography: Philosophy and Practice Conference, Brisbane.

Campbell, A. (1998). A critique of assumptions made about complementary medicine. In A. Vickers (Ed.), *Examining Complementary Medicine* (pp. 147-155). Cheltenham: Stanley Thornes.

Candy, P. (1991). *Self-direction for lifelong learning.* San Francisco. Jossey-Bass Publishers.

Candy, P., Crebert, G. & O'Leary, J. (1994). *Developing lifelong learners through undergraduate education.* Canberra. Australian Government Publishing Service.

Capra, F. (1991). *The tao of physics.* Boston: Shambhala Publications.

Cassidy, C. (1998a). Chinese medicine users in the United States: Part 1. *Journal of Alternative and Complementary Medicine, 4,* 17-27.

Cassidy, C. (1998b). Chinese medicine users in the United States: Part 2. *Journal of Alternative and Complementary Medicine, 4,* 189-202.

Cervero, R. (1988). *Effective continuing education for professionals.* San Francisco: Jossey Bass.

CGAWG (2003). *Core Graduate Attributes Implementation Plan.* Melbourne. Victoria University

Chen, J., & Wang, N. (Ed.). (1988). *Acupuncture case histories from China.* Seattle: Eastland Press.

Cheng, X. (Ed.). (1987). *Chinese acupuncture and moxibustion.* Beijing: Foreign Languages Press.

Chi, L. (1979). *Acupuncture in clinical practice.* Hong Kong: The Commercial Press.

Chu, T. (Trans). (1970). *Tao Te Ching: Lau Tzu.* London: Mandala Books - Unwin.

Chuang, Y. (1982). *The historical development of acupuncture.* Los Angeles: Oriental Healing Arts Institute.

Churchill, W. (2000). Creative interchange. *European Journal of Oriental Medicine, 3*(3), 41-47.

CMRB. (2002). *Chinese Medicine Registration Board of Victoria.* Melbourne.

Cochran, W. (1995). The religious dimensions of healing: the Buddo-Daoist legacy. *Pacific Journal of Oriental Medicine, 12,* 8-12.

Cohen, L., & Manion, M. (1989). *Research methods in education.* London: Routledge.

Cohen, M. (1992). Eastern and Western Medicine: Complimentary in practice, equal in status. *American Journal of Acupuncture, 20*(4), 137 - 142.

Coldham, S. (1995). A curriculum for practitioner development. *European Journal of Oriental Medicine, 1*(6), 10-15.

Cook, A., & Stir, J. (1994). *Conceptions of maintenance.* Paper presented at the Phenomenography Philosophy and Practice Conference, QUT. Brisbane.

Cox, K., & Ewan, C. (Eds.). (1988). *The medical teacher.* (Second ed.). Edinburgh: Churchill Livingstone.

Crawford, K., Gordon, S., Nicholas, J., & Prosser, M. (1994). Conceptions of mathematics and how it is learned: the perspectives of students entering the university. *Learning and Instruction, 4*, 331-345.

Dahlgren, L. (1997). Learning conceptions and outcomes. In F. Marton (Ed.), *The experience of learning* (2nd. ed.). Edinburgh: Scottish Academic Press.

Dale, J. (1997a). Acupuncture practice in the UK. Part 1: report of a survey. *Complementary Therapies in Medicine, Vol. 5*, 215 - 220.

Dale, J. (1997b). Acupuncture practice in the UK. Part 2: making sense of diversity. *Complementary Therapies in Medicine, Vol. 6*, 221 - 225.

Dall'Alba, G. (1992). The role of teaching in higher education: enabling students to enter a field of study and practice. *ERADU Occasional Paper 92.5*.

Dall'Alba, G. (1994). Reflections on some faces of phenomenography. In J. Bowden & E. Walsh (Eds.), *Phenomenographic research: variations in method* (73-88). Melbourne: RMIT.

Dall'Alba, G. (1995). *Learning to be a medical doctor: orientations when starting out* (No. Rapport NR 60). Stockholm: Karolinska Institutet.

Dall'Alba, G. & Sandberg, J. (1996). Educating for competence in professional practice. *Instructional Science, 24*(6), 411-437.

Dall'Alba, G. (2000). Reflections on some faces of phenomenography. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (83-101). Melbourne: RMIT Publishing.

Dall'Alba, G. (2002). Understanding medical practice: different outcomes of a pre-medical program. *Advances in Health Sciences Education: Theory and Practice, 7*(3), 163-177.

Dall'Alba, G., Walsh, E., Bowden, J., Martin, E., Masters, G., Ramsden, P., et al. (1991). Textbook treatments and students' understanding of acceleration. *ERADU Occasional Paper 91.3, Melbourne, RMIT*.

Davis, T. (1991). Diabetes mellitus. *Australian Journal of TCM, 6*(1), 23-32.

de Courcy, M. (1994). *The Chinese puzzle: learning experiences of five adult beginners.* Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

de Graaff, E., & Bouhuijis, P. (Ed.). (1993). *Implementation of problem-based learning in higher education.* Amsterdam: Thesis Publications.

Deadman, P. (1992). A reply to Bob Flaws. *Journal of Chinese Medicine, 38* (January), 12-17.

Deadman, P., & Al-Khafaji, M. (1995). The treatment of psychoemotional disorders by acupuncture with particular reference to the du mai. *Journal of Chinese Medicine, 47*, 30-34.

Dean, G. (1994). *A phenomenographical investigation of policing by consent.* Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Denzin, L., & Lincoln, Y., (Eds.). (1994). *Handbook of qualitative research.* London: Sage.

Desser, A., Baker, K., Ellis, N., Turner, R., & White, A. (1998). What is an acupuncturist? - five differing views. *European Journal of Oriental Medicine, Vol. 2*(No. 6), 18 - 31.

Diaz, M. (1993). Acupuncturist meets Curandera. *American Journal of Acupuncture, 21*(1), 41 - 50.

Dixon, J. (1986). Social Development Committee: Inquiry into Alternative Medicine and the Health Food Industry. (Vol. 1, 160 -162). Melbourne: Government Printer.

Dowie, S. (2000). The personal and professional maturation of acupuncture students - the lived experience. *European Journal of Oriental Medicine, 3* (4), 38-42.

Dunkin, R. (2000). Using phenomenography to study organisational change. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (137-152). Melbourne: RMIT Publishing.

Eckman, P. (1990). Testing Knowledge and Skills in Traditional Oriental Medicine: A report on the development of the California Examination for Licensing Acupuncturists. *American Journal of Acupuncture, 18*(1), 61 - 64.

Eckman, P. (1997). Tracing the historical transmission of traditional acupuncture to the West: In search of five element transfer lineage and a higher vision. *American Journal of Acupuncture, 25, No.1*, 59-69.

Eizenberg, N. (1988). Approaches to learning anatomy: Developing a program for medical students. In P. Ramsden (Ed.), *Improving learning: new perspectives.* London: Kogan Page.

Ekeblad, E. (1997). On the surface of phenomenography: A response to Graham Webb. *Higher Education, 33*, 219-224.

Ekeblad, E., & Bond, C. (1994). *The nature of a conception: questions of context.* Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Eklund-Myrskog, G. (1997). The influence of educational context on student nurses' conceptions of learning and approaches to learning. *British Journal of Educational Psychology, 67 (3)*, 371-381.

Ellis, A., & Wiseman, N. (1985). *Fundamentals of Chinese medicine.* Brookline: Paradigm Publications.

Ellis, A., Wiseman, N. & Boss, K. (1988). *Fundamentals of Chinese acupuncture.* Brookline: Paradigm Publications.

Entwistle, N. (1997a). Reconstituting approaches to learning: A response to Webb. *Higher Education, 33*, 213-218.

Entwistle, N. (1997b). Introduction: Phenomenography in Higher Education. *Higher Education Research and Development, 16*(2), 127-134.

Entwistle, N., & Ramsden, P. (1983). *Understanding student learning.* London: Croom Helm.

Entwistle, N., Skinner, D., Entwistle, D., & Orr, S. (2000). Conceptions and beliefs about 'Good teaching': an integration of contrasting research areas. *Higher Education Research & Development, 19*(1), 5-26.

Eraut, M. (1992). Developing the knowledge base: A process perspective on professional education. In R. Barnett (Ed.), *Learning to effect*. Buckingham: SHRE and Open University Press.

Evans, J. (1988). Medical education in China. In N. Sivin, Hess, J., & Bowers, J. (Ed.), *Science and medicine in twentieth-century China: research and education*. Michigan: University of Michigan.

Evans, S. (2000). The story of naturopathic education in Australia. *Complementary Therapies in Medicine, Vol. 8*, 234 - 240.

Fairbank, J., & Reischauer, E. (1986). *China: tradition and transformation*. London: Allen and Unwin.

Farquhar, J. (1986). *Knowledge and practice in Chinese medicine*. Unpublished Doctoral Thesis, University of Chicago, Chicago.

Farquhar, J. (1987). Problems of knowledge in contemporary Chinese medical discourse. *Society of Scientific Medicine, 24*(12), 1013 - 1021.

Farquhar, J. (1994). *Knowing practice: The clinical encounter of Chinese medicine*. Boulder: Westview Press.

Farquhar, J. (1996). Market magic: getting rich and getting personal in medicine after Mao. *American Ethnologist, 23*(2), 239-257.

Ferrigno, P. (1996). *He Gu: adjoining valleys - notes on the acquisition of knowledge in Chinese medicine*. Paper presented at the Second Australasian Acupuncture and Chinese Herbal Conference, Melbourne.

Ferris, J. (1994). *Searching for conceptions of quality in student learning in TAFE*. Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Fish, D. (1995). Preparing professional practitioners: two approaches. *European Journal of Oriental Medicine, 1*(6), 44-47.

Flaws, B. (1989). *Sticking to the point*. Boulder: Blue Poppy Press.

Flaws, B. (1991). American acupuncture education: Has a wrong turn been taken? *American Journal of Acupuncture, 19*(1), 63-71.

Flaws, B. (1992a). *Before completion - essays on the practice of TCM*. Boulder: Blue Poppy Press.

Flaws, B. (1992b). The importance of spirit in prognosis: what this means in clinical practice. *Australian Journal of Acupuncture, 18*, 11-14.

Forbes, H., Duke, M., & Prosser, M. (2001). Students' perceptions of learning outcomes from group-based, problem-based teaching and learning activities. *Advances in Health Sciences Education: Theory and Practice, 6 (3)*, 205-217.

Fordham, B. (1998). Principles or practice? An exploration of the role of theory in homeopathy. In A. Vickers (Ed.), *Examining complementary medicine* (pp. 98-109). Cheltenham: Stanley Thornes.

Franz, J. (1994). *Managing intricacy in phenomenographic inquiry*. Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Freedman, J., & Combs, S. (1996). *Narrative therapy: the social construction of preferred realities*. New York: W. W. Norton.

Freeland, D. (1990). Images and metaphors - a view of the thinking behind acupuncture. *Australian Journal of Acupuncture, 13*(August), 23 - 27.

Freeland, D. (2002). Another slant on acupuncture. *Pacific Journal of Oriental Medicine, 20*, 11-24.

Furlong, J., & Maynard, T. (1995). *Mentoring student teachers: the growth of professional knowledge*. London: Routledge.

Garvey, M. (1996). Theory and practice. *European Journal of Oriental Medicine, 2*(1), 6-15.

Gerber, R., Lankshear, C., Svensson, L., & Larsson, S. (1994). *Self-directed learning in a work context*. Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Gould, A., & MacPherson, H. (2001). Patient perspectives on outcomes after treatment with acupuncture. *Journal of Alternative and Complementary Medicine, 7*(3), 261-268.

Guba, E. & Lincoln, Y. (1985). Naturalistic and rationalistic enquiry. In T. Husen & Postlethwaite (Eds.), *International Encyclopedia of Education* (Vol. 9, 5051 - 5055).

Habermas, J. (1972). *Knowledge and human interests*. London: Heinemann.

Hale, A. (2002). 2002 survey of ATMS acupuncturists, herbalists and naturopaths. *Journal of the Australian Traditional Medicine Society, 8*(4), 143-150.

Hammer, L. (1990). *Dragon rises, red bird flies*. New York: Station Hill Press.

Hammer, L. (1991). Dueling needles - reflections on the politics of medical models. *American Journal of Acupuncture, 19*(3), 261 - 266.

Hammer, L. (2002). Tradition and revision. *Clinical Acupuncture and Oriental Medicine, 3*(1), 59-70.

Harris, G. (2001). A continuing professional development program. *European Journal of Chinese Medicine, 3*(5), 17-24.

Hasselgren, B., & Beach, D. (1997). Phenomenography - a 'good-for-nothing-brother' of phenomenology? *Higher Education Research and Development, 16*(2), 191-202.

Hazel, E., Conrad, L., & Martin, E. (1997). Exploring gender and phenomenography. *Higher Education Research and Development, 16*(2), 213-226.

Heinke, W. (1990). A modern approach to traditional Chinese acupuncture. *International Journal of Clinical Acupuncture, 1*(1), 83 - 86.

Henkel, M. (1995). Conceptions of knowledge and social work education. In M. H. Yelloly, M. (Ed.), *Learning and Teaching in Social Work* (67-82). London: Jessica Kingsley.

HERDSA. (1997). *Special issue: phenomenography in higher education*. Oxfordshire: Wace journals.

Higgs, J. (1992). Developing clinical reasoning competencies. *Physiotherapy, 78*(8), 575-581.

Higgs, J., & Titchen, A. (1995). Propositional, professional and personal knowledge in clinical reasoning. In J. Higgs & M. Jones (Eds.), *Clinical reasoning in the health professions*. Oxford: Butterworth-Heinemann.

Higgs, J., & Edwards, H. (1999b). Educating beginning practitioners in the health professions. In J. Higgs & H. Edwards (Eds.), *Educating beginning practitioners*. Melbourne: Butterworth-Heinemann.

Higgs, J., & Hunt, A. (1999a). Rethinking the beginning practitioner: introducing the 'Interactional Professional'. In J. Higgs & H. Edwards (Eds.), *Educating beginning practitioners* (10-17). Melbourne: Butterworth -Heinemann.

Hopwood, A. (1997). The social construction of illness and its implications for complementary and alternative medicine. *Complementary Therapies in Medicine, 5*, 152-155.

Hsu, E. (1989). Outline of the history of acupuncture in Europe. *Journal of Chinese Medicine, 29*(January), 28 - 32.

Hsu, E. (1999). *The transmission of Chinese medicine*. Cambridge: Cambridge University Press.

Huang-fu, M. (1994). *The systemic classic of acupuncture and moxibustion*. Boulder: Blue Poppy Press.

Huberman, A., & Miles, M. (1994). Data management and analysis methods. In L. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research*. London: Sage.

Hycner, R. (1985). Some guidelines for the phenomenological analysis of interview data. *Human Studies, 8*, 279-303.

Jamieson, P. (1998). *How university teachers experience teaching by cross-campus video conferencing: a phenomenographic study*. Unpublished PhD, RMIT, Melbourne.

Jarrett, L. (1998). *Nourishing destiny: the inner tradition of Chinese medicine*. Massachusetts: Stockbridge.

Jarrett, L. (1993). Constitutional type and the internal tradition of Chinese medicine. Part 1: The Ontogeny of Life. *American Journal of Acupuncture, 21*(1), 19 - 32.

Johansson, B., Marton, F., & Svensson, L. (1985). An approach to describing learning as change between qualitatively different conceptions. In L. West & A. Pines (Eds.), *Cognitive structure and conceptual change* (25-43). Orlando: Academic Press.

Jones, S., & Joss, R. (1995). Models of professionalism. In M. Yelloly & M. Henkel (Eds.), *Learning and teaching in social work* (15-33). London: Jessica Kingsley.

Kailin, D. (1983). On the mastery of acupuncture: perspectives on training American professionals. *American Journal of Acupuncture, 11*(2), 157 - 161.

Kaptchuk, T. (1986). *The web that has no weaver*. London: Rider Press.

Kaptchuk, T. (1987). The culture, history and discourse of oriental medicine. *Journal of Oriental Medicine, 24*(May), 7 - 17.

Karsten, P. (1995). Bringing back clinically based education. *European Journal of Oriental Medicine, 1*(6), 6-9.

Kember, D. (1998). Teaching beliefs and their impact on students' approach to learning, in B. Dart & G. Boulton-Lweis (eds.) *Teaching and learning in higher education.* Camberwell. Australian Council for Educational Research.

Kenner, D. (1997). Clinical science and laboratory science. *Pacific Journal of Oriental Medicine, 10,* 16-18.

Keogh, J., Cook, A. & Bruce, C. (1994). *Science students' and science teachers' conceptions of learning.* Paper presented at the Phenomenography Philosophy and Practice Conference, Brisbane.

Klate, J. (1980). *The Tao of acupuncture: the study and practice of traditional Chinese acupuncture as a self-developmental process of personal integration and spiritual realisation.* Unpublished PhD, The union for experimenting colleges and universities.

Kvale, S. (1983). The qualitative research interview - a phenomenological and hermeneutical mode of understanding. *Journal of Phenomenological Psychology, 14,* 171-196.

Larre, C., & Rochat de la Valle, E. (1995). *Rooted in spirit: the heart of Chinese medicine.* New York: Station Hill Press.

Larre, C., Schatz, J., & Rochat de la Vallee, E. (1986). *Survey of traditional medicine.* Cumberland, Maryland: Traditional Acupuncture Institute.

Larson, J. (1996). The World Health Organization's definition of health: social versus spiritual health. *Social Indicators Research, 38,* 181-192.

Lau, D. (1988). *Tao Te Ching.* London: Penguin Books.

Lave, J., & Wenger, E. (1991). *Situated learning: legitimate peripheral participation.* New York: Cambridge University Press.

Lawson, K., Armstrong, R., & Van Der Weyden, M. (1998). A sea change in Australian medical education. *Medical Journal of Australia, 169,* 653 - 658.

Lee, J. (1995). *Acupuncture in motion: a survey of traditional practitioners' approach to clinical acupuncture in Sydney.* Unpublished Independent Research Project, Acupuncture Colleges Australia, Sydney.

Lewith, G. (1982). *Acupuncture: it's place in western medical science.* Northamptonshire: Thorson's Publishing.

Lewith, G. & Aldridge, D. (Eds.). (1993). *Clinical research methodology for complementary therapies.* London: Hodder & Stoughton.

Liu, F., & Liu, Y. (1980). *Chinese medical terminology.* Hong Kong: Commercial Press.

Long, A., Mercer, G., & Hughes, K. (2000). Developing a tool to measure holistic practice: a missing dimension in outcomes measurement within complementary therapies. *Complementary Therapies in Medicine, 8,* 26-31.

Long, Z. (1998). *Diagnostics of traditional Chinese medicine.* Beijing: Academy Press.

Lybeck, L., Marton, F., Stromdahl, H., Tullberg, A. (1988). The phenomenography of the 'mole concept' in chemistry. In P. Ramsden (Ed.), *Improving learning: new perspectives* (81-108). London: Kogan Page.

Macan, J. (2001). Reconstructing the change process. *Pacific Journal of Oriental Medicine* (June), 46 - 50.

Maciocia, G. (1989). *The foundations of Chinese medicine*. Edinburgh: Churchill Livingstone.

MacLennan, A., Wilson, D., & Taylor, A. (1996). Prevalence and cost of alternative medicine in Australia. *Lancet, 347*, 569-573.

MacPherson, H. (1995). Great talents ripen late. *European Journal of Chinese Medicine, 1*(6), 35-39.

Magner, L. (1992). *A history of medicine*. New York: Marcel Dekker.

Mann, F. (1992). *Reinventing acupuncture*. Oxford: Butterworth-Heinemann Ltd.

Martin, E., & Milton, J. (1992). *Role of the computer in the teaching of design ERADU Occasional Paper 92.3*. Melbourne. RMIT

Martin, E., Trigwell, K., Prosser, M., & Ramsden, P. (1999). *The perceptions of those who lead and the experience of those being led: some empirical relationships*. Paper presented at the 1999 HERDSA Conference, Melbourne.

Marton, F. (1981). Phenomenography - describing conceptions of the world around us. *Instructional Science, 10*, 177-200.

Marton, F. (1988b). Phenomenography - a research approach to investigating different understandings of reality. *Journal of Thought, 21*, 28-49.

Marton, F. (1994a). On the structure of awareness. In J. Bowden & E. Walsh (Eds.), *Phenomenographic research: variations in method*. Melbourne: RMIT.

Marton, F. (1994b). *The idea of phenomenography*. Paper presented at the Phenomenography: Philosophy and Practice Conference, Brisbane.

Marton, F. (2000). The structure of awareness. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (102-116). Melbourne: RMIT Publishing.

Marton, F., & Booth, S. (1997b). *Learning and awareness*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Marton, F., Dall'Alba, G., & Lai Kun Tse. (1993). The paradox of the Chinese learner. *ERADU Occasional Paper 93.1*. Melbourne. RMIT

Marton, F., Hounsell, D., & Entwistle, N. (Eds.). (1997a). *The experience of learning*. (2nd. ed.). Edinburgh: Scottish Academic Press.

Marton, F., & Ramsden, P. (1988a). What does it take to improve learning. In P. Ramsden (Ed.), *Improving learning: new perspectives*. London: Kogan Page.

Marton, F., & Säljö, R. (1976). On qualitative differences in learning. *British Journal of Educational Psychology, 46*, 4-11; 115-127.

Massey, G. (1995). *Seven conceptions of CD-ROM information resources*. Unpublished M.Ed., Queensland University of Technology, Brisbane.

Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard Educational Review, 62*(3), 279-300.

Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: a philosophic and practical guide.* London: Falmer Press.

McCutcheon, R. (1997). Diagnosis - a lateral approach. *European Journal of Oriental Medicine, 2*(3), 38-43.

McDonald, J. (1994). *Zang Fu syndromes.* Toluca Lake, California: Lone Wolf Press.

Milburn, M. (1994). Emerging relationships between the paradigm of oriental medicine and the frontiers of western biological science. *American Journal of Acupuncture, 22*(2), 145 - 157.

Miles, M., & Hubermann, M. (1984). *Qualitative data analysis.* London: Sage Publications.

Milton, J. (1999). *Interpreting competence differently: lessons for education.* Paper presented at the 1999 HERDSA Conference, Melbourne.

Moir, F. (1995). Reflective students, reflective teachers. *European Journal of Oriental Medicine, 1*(6), 40-43.

Mosey, A. (1992). *Applied scientific inquiry in the health professions; an epistemological orientation.* Maryland: American Occupational Therapy Association.

Mugler, F., & Landbeck, R. (1997). Learning in the South Pacific and phenomenography across cultures. *Higher Education Research and Development, 16*(2), 227-240.

Murphy, H. (1998). *Student's conceptions of and approaches to learning in business law.* Unpublished M. Ed, Deakin University, Geelong.

Nanke, L., & Canter, D. (1991). Treatment recommendation in complementary medicine: a selective network. *Complementary Medical Research, 5,* 1-7.

NASC. (2001). *Australian guidelines for traditional Chinese medicine education.* Brisbane: AACMA.

Neame, R., Murphy, B., Stitt, F., & Rake, M. (1999). Universities without walls: evolving paradigms in medical education. *British Medical Journal, 319,* 1269 - 1277.

Needham, J. (1969). *Science and civilization in China - Vol.2.* London: Cambridge University Press.

Needham, J., & Lu, G. (1986). *Celestial lancets.* Taipei: Caves Books.

Nester, B. (1997). *The role of theory in traditional Chinese medicine.* Paper presented at the Third Australasian Acupuncture and Chinese Herbal Medicine Conference, Sydney.

Neuman, D. (1987). *The origin of arithmetic skills.* Gothenburg, Sweden: Vasastadens Bokbinderi AB.

NHMRC. (1974). *Acupuncture - a report to the National Health and Medical Research Council.* Canberra: Australian Government.

NHMRC. (1988). *Acupuncture - A NHMRC working party report.* Canberra: Australian Government.

O'Connor, J., & Bensky, D. (1987). *Acupuncture - a comprehensive text.* Chicago: Eastland Press.

Ogden, L. (1997). *A model for spiritual health care in the practice of acupuncture.* Unpublished Independent Research project. UTS, Sydney.

Papier, A. (1988). Social and cultural factors affecting Chinese medicine. *Journal of Chinese Medicine, 27,* 26-29.

Parker, M. (1996). *But how is Chinese medicine different? Medical models and paradigmatic purity.* Paper presented at the Second Australasian Acupuncture and Chinese Herbal Medicine Conference, Melbourne.

Parker, M. (1998). Of paradigmatic purity and muddled models. *Pacific Journal of Oriental Medicine, 11,* 34-39.

Paterson, C. (1997). Complementary practitioners as part of the primary health care team. *Family Practice, 14*(5), 347-354.

Patrick, K. (1998). *Teaching and learning the construction of an object of study.* Unpublished PhD, University of Melbourne, Melbourne.

Patrick, K. (2000). Exploring conceptions: Phenomenography and the object of study. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (117-136). Melbourne: RMIT Publications.

Perry, W. (1970). *Forms of intellectual and ethical development in the college years.* Orlando, Florida: Holt, Rinehart and Wilson.

Perry, W. (1988). Different worlds in the same classroom. In P. Ramsden (Ed.) *Improving learning: new perspectives.* London: Kogan Page.

Peters, D. (1998). Is complementary medicine holistic? In A. Vickers (Ed.), *Examining complementary medicine* (138-146). Cheltenham: Stanley Thornes.

Piaget, J. (1973). *The child's conception of the world.* St. Albans: Paladin.

Pietroni, M. (1995). The nature and aims of professional education for social workers: a postmodern perspective. In M. Yelloly & M. Henkel (Eds.), *Learning and teaching in social work* (34-50). London: Jessica Kingsley.

Pirog, J. (1996). *Meridian style acupuncture.* Berkeley, California: Pacific View Press.

Pirotta, M., Cohen, M., Kotsirilos, V., & Farish, S. (2000). Complementary therapies: have they become accepted in general practice? *Medical Journal of Australia, 7. 172 (3),* 105-109.

Porkert, M., & Ullman, C. (1982). *Chinese medicine.* New York: Henry Holt & Co.

Powney, J., & Watts, M. (1987). *Interviewing in educational research.* London: Routledge & Kegan Paul.

Prosser, M. (1990). *Conceptual knowledge development and approaches to study.* Unpublished PhD, University of Sydney, Sydney.

Prosser, M. (1993). Phenomenography and the principles and practices of learning. *Higher Education Research and Development, 12* (1).

Prosser, M. (1994b). Some experiences of using phenomenographic research methodology in the context of research in teaching and learning. In J. Bowden, & Walsh, E., (Ed.), *Phenomenographic research: variations in method - the Warburton symposium* (31-43). Melbourne: RMIT.

Prosser, M. & Trigwell, K. (1999) *Understanding Learning and Teaching: The experience in Higher Education*. Buckingham. SRHE and Open University Press.

Prosser, M. (2000). Using phenomenographic research in the context of research in teaching and learning. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (34-46). Melbourne: RMIT Publishing.

Prosser, M., & Martin, E. (2000). Assisting learning in the disciplines by highlighting how and what is taught. *Higher Education Research and Development, 22* (1), 5-6.

Prosser, M., & Trigwell, K. (1997). Relations between perceptions of the teaching environment and approaches to teaching. *British Journal of Educational Psychology, 67*, 25-35.

Prosser, M., Trigwell, K., & Taylor, P. (1994a). A phenomenographic study of academics' conceptions of science learning and teaching. *Learning and Instruction, 4*, 217-231.

Ramritu, P., & Barnard, A. (2001). New nurse graduates' understanding of competence. *International Nursing Review, 48*(1), 47-58.

Ramsden, P. (Ed.). (1988). *Improving learning - new perspectives*. London: Kogan Page.

Ramsden, P. (1992). *Learning to teach in higher education*. London. Routledge.

Ramsden, P. (1997). The context of learning in academic departments. In F. Marton, D. Hounsell & N. Entwistle (Eds.), *The experience of learning: Implications for teaching and study in higher education* (2nd ed.). Edinburgh: Scottish Academic Press.

Ramsden, P., Whelan, G., & Cooper, D. (1989). Some phenomena of medical students' diagnostic problem-solving. *Medical Education, 23*, 108-117.

Resnick, J. (1990). The poetics of Chinese medicine. *Australian Journal of Acupuncture, 13*, 19-21.

Richardson, J. (1999). The concepts and methods of phenomenographic research. *Review of Educational Research, 69*(1), 53-82.

Rogers, C. (1983). The case for traditional acupuncture education. *American Journal of Acupuncture, 11*(3), 243-248.

Rogers, C. (1998). Recent studies in clinical education and their implications for acupuncture. *Meeting Point, 7*, 7-16.

Romano, A. (1992). Toward your own style of acupuncture. *American Journal of Acupuncture, 20*(2), 123-127.

Ross, J. (1987). *Zang Fu: the organ systems of traditional Chinese medicine*. Edinburgh: Churchill Livingstone.

Ross, J. (1995). *Acupuncture point combinations: the key to clinical success*. Edinburgh: Churchill Livingstone.

Rossi, E. (2000). The space shared between patient and acupuncturist. *European Journal of Oriental Medicine, 3*(2), 43-52.

Russell, A. & Massey. G. (1994). *Comparison of three data collection methods for phenomenographic analysis*. Paper presented at the Phenomenography: Philosophy and Practice Conference, Brisbane.

Ryan, D. (1995a). *The educational ramifications of the traditional acupuncture paradigm in the Australian context.* Unpublished survey and interview, UTS, Sydney.

Ryan, D. (1995b). *The enculturation of acupuncture in Australia.* Paper presented at the UTS College of Acupuncture - Research and Education Conference, Sydney.

Ryan, D. (1995c). Models for acupuncture education and practice. *Meeting Point, 5,* 11-13.

Ryan, D. (1996a). *Where there is a dichotomy between belief and practice.* Paper presented at the Second Australasian acupuncture and Chinese Herbal Medicine Conference, Melbourne.

Ryan, D. (1996b). The logic of acupuncture. *Pacific Journal of Oriental Medicine, 8,* 24-27.

Ryan, D. (1996c). *Practitioner survey report.* Melbourne: Victoria University.

Ryan, D. (1997). *The effect of spirituality upon health.* Paper presented at the Third Australasian Acupuncture and Chinese Herbal Medicine Conference, Sydney.

Ryan, D. (1999). Practitioner focussed research. *Pacific Journal of Oriental Medicine, 14,* 6-7.

Ryan, D. (2001a). *Clinical practice - a solitary affair.* Paper presented at the AACMA Symposium, Melbourne.

Ryan, D. (2002). *Developing a professional mentoring program for neophyte Chinese medicine practitioners.* Paper presented at the AACMA Symposium, Adelaide.

Ryan, D., & O'Brien, K. (2001b). *Factors which inform Chinese herbal medicine research design. VIC*-CAM. Melbourne.

Saks, M. (1995). Educational and professional developments in acupuncture in Britain. *European Journal of Oriental Medicine, 1*(6), 32-34.

Säljö, R. (1975). *Qualitative differences in learning as a function of the learner's conception of the task.* Gothenburg University. Gothenburg.

Säljö, R. (1988). Learning in educational settings: methods of inquiry. In P. Ramsden (Ed.), *Improving learning: new perspectives.* London: Kogan Page.

Säljö, R. (1997). Talk as data and practice - a critical look at phenomenographic inquiry and the appeal to experience. *Higher Education Research and Development, 16*(2), 173-190.

Samuelowicz, K. (1999). *Academics' educational beliefs and teaching practices.* Unpublished PhD, Griffith University, Brisbane.

Sandberg, J. (1991). Competence as intentional achievement: a phenomenographic study. *ERADU Occasional Paper 91.4.* RMIT. Melbourne.

Sandberg, J. (1997). Are phenomenographic results reliable? *Higher Education Research and Development, 16*(2), 203-211.

Scheid, V. (1994). Orientalism revisited - reflections on scholarship, research and professionalism. *European Journal of Oriental Medicine,* 23-33.

Scheid, V. (2002). The future of Chinese medicine. *European Journal of Chinese Medicine, 4*(1), 50-57.

Scheid, V., & Bensky, D. (1998). Medicine as signification. *European Journal of Oriental Medicine, 2*(6), 32-40.

Scheid, V., & Bensky, D. (2000). Pluralism or plurality. *European Journal of oriental medicine, 3*(2), 63-68.

Schön, D. (1983). *The reflective practitioner.* New York: Basic Books.

Schön, D. (1988). *Educating the reflective practitioner.* San Francisco: Jossey-Bass.

Schwab, J. (1983). The practical 4: Something for curriculum professors to do. *Educational Record, 13*(Fall), 239-266.

Seem, M. (1992). Integrationist acupuncture: plurality in the practice of American acupuncture. *American Journal of Acupuncture, 20*(1), 229-236.

Seem, M. (1993). *A new American acupuncture.* Boulder: Blue Poppy Press.

Shao, J. (1999). *Hospitalising traditional Chinese medicine: identity, knowledge and reification.* Unpublished PhD, University of Chicago, Chicago.

Shima, M. (1992). Getting acupuncture education back on track. *American Journal of Acupuncture, 20*(1), 33-41.

Sivin, N. (1987). *Traditional medicine in contemporary China.* Ann Arbor. Michigan.

Sivin, N. (1990). Traditional medicine in contemporary China. *American Journal of Acupuncture, Vol.18* (No. 4), 325 - 339.

Sivin, N. (1995). *Medicine, philosophy and religion in ancient China.* Brookfield. Aldershot.

Stein, S. (1996). *Students' conceptions of science across the school years.* Unpublished M.Ed., Queensland University of Technology, Brisbane.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research. Grounded theory procedures and techniques:* Newbury Park: Sage.

Svensson, L. (1977). On qualitative differences in learning III. Study skill and learning. *British Journal of Educational Psychology, 47,* 233-243.

Svensson, L. (1994). *Theoretical foundations of phenomenography.* Paper presented at the Phenomenography: Philosophy and Practice Conference, Brisbane.

Svensson, L. (1997a). Skill in learning and organizing knowledge. In F. Marton, Hounsell, D., & Entwistle, N. (Ed.), *The experience of learning.* Edinburgh: Scottish academic press.

Svensson, L. (1997b). Theoretical foundations of phenomenography. *Higher Education Research and Development, Vol.16. No.2,* 159-172.

Svensson, L., & Hogfors, C. (1988). Conceptions as the content of teaching: Improving education in mechanics. In P. Ramsden (Ed.), *Improving learning: new perspectives.* London: Kogan Page.

Tai, D. (1987). *Acupuncture and moxibustion.* Hong Kong: Imago publishing.

Takman, C., & Severinsson, E. (1999). A description of health care professionals' experiences of encounters with patients in clinical settings. *Journal of Advanced Nursing, 30*(6), 1368-1375.

Tang, K., & Easthope, G. (2000). What constitutes treatment effectiveness? The differential judgments of Australian patients and doctors. *Complementary Therapies in Medicine, 8,* 241-247.

Taylor, C. (1993). *A phenomenographic investigation of how speech-language pathology students construe their clinical experience.* Unpublished PhD, University of Oregon.

Tempone, I. (2001). *Variation in student learning in accounting.* Unpublished PhD, Swinburne University, Melbourne.

Terry, J. (1996). Learning in traditional acupuncture: the view as paradigm change and implications for management. *Meeting Point, 6.*

Thompson, R. (1998). *Appraising beginning teachers: Principals' conceptions of competence.* Unpublished PhD, Queensland University of Technology, Brisbane.

Tiquia, R. (1997). *Theory as practice in TCM.* Paper presented at Third Australasian acupuncture and Chinese Herbal Medicine Conference, Sydney.

Trigwell, K. (1994). The first stage of a phenomenographic study of phenomenography. In J. Bowden & E. Walsh (Eds.), *Phenomenographic research: variations in method the Warburton symposium.* Melbourne: RMIT.

Trigwell, K. (2000). A phenomenographic interview on phenomenography. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (62-82). Melbourne: RMIT Publishing.

Trigwell, K., & Prosser, M. (1997). Towards an understanding of individual acts of teaching and learning. *Higher Education Research and Development, 16*(2), 241-252.

Tyler, R. (1949). *Basic principles of curriculum and instruction.* Chicago: University of Chicago Press.

Unschuld, P. (1985). *Medicine in China.* Berkeley: University of California Press.

Unschuld, P. (1987). Traditional Chinese medicine: Some historical and epistemological reflections. *Social Science and Medicine. 24,* 1023-1029.

Veith, I. (1972). *The Yellow Emperor's classic of internal medicine.* Berkeley: University of California Press.

Vickers, A. (1998). Criticism, skepticism and complementary medicine. In A. Vickers (Ed.), *Examining complementary medicine* (1-13). Cheltenham: Stanley Thornes.

Vincent, C., & Richardson, P. (1986). The evaluation of therapeutic acupuncture: concepts and methods. *Pain, 24,* 1-13.

Wadlow, G. (1995). Consistency, internal coherence and systematic practice. *European Journal of Oriental Medicine, 1*(5), 38-43.

Walsh, E. (1994). Phenomenographic analysis of interview transcripts. In J. Bowden & E. Walsh (Eds.), *Phenomenographic research: variations in method - the Warburton symposium* (17-30). Melbourne: RMIT.

Walsh, E. (2000). Phenomenographic analysis of interview transcripts. In J. Bowden & E. Walsh (Eds.), *Phenomenography* (19-33). Melbourne: RMIT Publishing.

Wang, B. (1997). *Yellow Emperor's canon of internal medicine*. Beijing: China Science and Technology.

Wang, C. (1973). *History of Chinese medicine*. New York: AMS Press.

Wang, Z. (1999). *History and development of traditional Chinese medicine*. Beijing: Science Press.

Waterhouse, F., & Prosser, M. (2000). *Student's experiences of understanding university physics*. Paper presented at the Australian Association for Research in Education Conference, Sydney.

Watson, K. (1991). The philosophical basis of traditional Chinese medicine and the implications for its clinical evaluation. *Journal of Chinese Medicine, 36*, 14-17.

Watson, K. (1995). Definition of traditional acupuncture. *Meeting Point, 5*, 13.

Webb, G. (1997a). Deconstructing deep and surface: Towards a critique of phenomenography. *Higher Education, 33*, 195-212.

Webb, G. (1997b). Contesting learning theory: a response to Entwistle and Ekeblad. *Higher Education, 33*, 225-230.

Whelan, G. (1988). Improving medical students' clinical problem solving. In P. Ramsden (Ed.), *Improving learning: new perspectives*. London: Kogan Page.

White, A. (2000). *Teacher action theories in upper primary mathematics classroom*. Unpublished PhD, University of Sydney, Sydney.

White, E. (2002). Continuing professional development: a pilot study. *European Journal of Chinese Medicine, 3*(6), 31-41.

Wilhelm, R. (1990). *Lao Tzu: Tao Te Ching*. London: Arkana Paperback.

Williams, V. (2002). *Why do students choose to study Traditional Chinese Medicine at Victoria University? An analysis of the course in TCM and its structure*. Unpublished M. HSci., Victoria University, Melbourne.

Willmont, D. (1998). Traditional Oriental Medicine: A historical perspective. *American Journal of Acupuncture, Vol. 26, No.2/3.*, 189-197.

Wiseman, N., & Boss, K. (1990). *Glossary of Chinese medical terms and acupuncture points*. Brookline, Massachusetts: Paradigm Publications.

Wiseman, N., & Ellis, A. (1995). *Fundamentals of Chinese medicine*. Brookline, Massachusetts: Paradigm Publications.

Worsley, J. (1982). *Traditional Chinese acupuncture*. Wiltshire: Element Books.

Yoshida, M. (1998). *The conceptual foundation of physicans' use of acupuncture*. Unpublished PhD, Columbia University.

Zang, H., & Rose, K. (1999). *Who can ride the dragon?* Massachusetts: Paradigm Publications.

Zaslawski, C. (1995a). *Applying the Kuhnian model to traditional Chinese medicine.* Paper presented at the Australian Acupuncture Research and Education Conference, UTS. Sydney.

Zaslawski, C. (1995b). Clinical reasoning in acupuncture. *Meeting Point, 5,* 14-18.

Zaslawski, C. (1995c). Clinical training for the acupuncturist. *European Journal of Oriental Medicine, 1*(6), 48-50.

Zaslawski, C. (1996a). *The concept of practical knowledge and its importance in traditional Chinese medicine.* Paper presented at the Second Australasian Acupuncture and Chinese Herbal Medicine Conference, Melbourne.

Zaslawski, C. (1996b). Inquiry and its role in the clinical reasoning in acupuncture. *Meeting Point, 6,* 5-8.

Zaslawski, C. (1997). Aspects of clinical reasoning in the practice of traditional Chinese medicine. *European Journal of oriental medicine, 2*(3), 8-14.

Zaslawski, C. (1998). Narrative aspects of clinical reasoning in traditional Chinese medicine. *Meeting Point, 7,* 2-5.

Zhang, E. (1990). *Chinese Qigong.* Shanghai: Shanghai University of TCM.

Zhang, J., Bai, Y., & Chen, L. (1993). *Integrating Chinese and western medicine.* Beijing: Foreign Languages Press.

Zhou, C., & Han, Y. (1997). *The illustrated Yellow Emperor's canon of medicine.* Beijing: Dolphin Books.

Zhu, M. (2001). *The medical classic of the Yellow Emperor.* Beijing: Foreign languages Press.

Zipf, T. (2002). Higher and lighter. *Pacific Journal of Oriental Medicine, 20,* 5-10.