Learning about ethical decision making in health care using web-based technology: A case study.

Amanda B Lees

A thesis submitted to
Auckland University of Technology
in partial fulfilment of the requirements for the degree of
Master of Health Science (MHSc)

2011

School of Public Health and Psychosocial Studies

Primary Supervisor: Rosemary Godbold

Table of Contents

List of Figures

List of Tables

Attestation of Authorship

"I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of high learning."

Signed: Amanda B Lees

Date:

Acknowledgement

Many people have contributed to me completing this thesis. In your own way you have all helped create the space for me to think. I am sincerely grateful to each of you. Firstly I'd like to acknowledge the five participants whose experience, insight and reflections shaped this research. Thank you for your time and for offering me a window into your decision making.

I am indebted to Rosemary Godbold. Through nurturing my own writing process you have given me confidence to achieve my potential. I'd also like to thank my secondary supervisor Philippa Gerbic, for your clarity of thinking and methodological knowledge. I am grateful to my AUT colleagues past and present, who have supported, listened and offered advice; I trust I can reciprocate one day.

Very special thanks goes to my husband Derek and our children; Hannah, Martha and Jonty. Together you have wholeheartedly supported me while I'm sure at times waited patiently for me to be finished. A special thank you goes to my mother-in-law and wonderful friend, Joanie for helping with the final reading, and my wider family for their constant interest and encouragement. Lastly, I'd like to acknowledge my parents, Heather and Mike. They are not here today, but I know this would have brought them great joy.

Ethical approval for this study was granted by the Auckland University of Technology Ethics Committee on 27 August, 2009, Application number: 09/189 (See Appendix A). An amendment, allowing a second stage of data collection was subsequently approved on 20 April, 2010 (See Appendix B). Permission to name AUT University was given by Geoff Dickson, Faculty of Health and Environmental Science Associate Dean (Research) by email on 26 October, 2010. Permission to name the Values Exchange was sought from Professor Seedhouse. Finally, Professor Seedhouse is an academic colleague. To avoid any perceived notion of a conflict of interest I have explicitly not involved him in this study. However, during the period from July to November 2010 Professor Seedhouse and I co-taught an undergraduate ethics paper at AUT which utilised the Vx. This teaching relationship remained independent of my research.

Abstract

Structured ethical components in tertiary health care programmes are now recognised as being essential. There are however, perceived barriers to ethics education within health related degrees. Ethics is often compulsory and sometimes unpopular. There is a need for creativity and engagement both in its delivery and content. Literature shows several teaching strategies are utilised however few studies address the use of online technologies. The Values Exchange is a web based decision making tool that offers a unique way to deliver ethics education. Not only does the software utilise a relatively untapped method of delivery, its philosophical underpinnings differ from many other ethics education strategies. Decision making in health care is underpinned by an emphasis on being evidence based. However, the Values Exchange, and a growing body of additional literature supports a more balanced framework for decision making, one that acknowledges the role of individual values within the decision making process. The rationale for this is that values are already an integral part of how one views the world and how it is socially constructed. As a result evidence is already saturated with values. An acknowledgement of values focuses on the decision making process, rather than just the decision outcome, or product. Developed in New Zealand by Professor David Seedhouse, the software has been utilised at Auckland University of Technology since 2005. It is internationally used within university and school settings as well as within health care practice. Research using the Values Exchange is limited. However, anecdotal evidence suggests that the software offers an effective way to facilitate learning and teaching and may increase student engagement. A case study design explored the ways in which the software facilitated users to think about ethical issues. It considered the role of values in the decision making process and the ways in which the software facilitated learning from others. The study found that the online medium provided a supportive environment for decision making. The software contributed to new understandings about both the product and the process of decision making. The software enabled users to recognise the complexity of health care situations. Learning about oneself and others enabled users to arrive at new ways of seeing practice based issues, and new ways of seeing themselves. The Values Exchange demonstrates an effective and creative way to deliver ethics education. It utilises unique, engaging technology encouraging thoughtful reflection that has the potential to manifest itself in benefits for both patient and practitioner.

Chapter One: Introduction

Motivation for the study

> I really like this ethics paper especially the Values Exchange because as a student in my previous discipline, I was never allowed to think for myself or to have an opinion - my previous lecturers told me that I didn't know enough to have an opinion. My mother was not happy with me pulling out of nursing but I can now look her in the eye, knowing that I have made the right choice. I can now look at all the different perspectives that I had not seen before. I now have initiative. (Mary)

This is an excerpt from a conversation I had with Mary[1] who was a student in one of the ethics classes in which I taught. Our conversation did not take place within the classroom, but by chance when I entered a shop in which she worked. On this particular day the shop was quiet and Mary was busy reading her ethics textbook at the counter. Her comments have remained with me over the years and to some degree have inspired my interest in the Values Exchange (Vx) and its potential impact on ethical thinking and decision making. For Mary also, the impact of being 'allowed to have an opinion' has given her confidence and empowerment beyond the classroom.

Since meeting Mary I have many other positive conversations with students about their experiences using the Values Exchange. In addition, motivation for this study has come from my own experience of the software, both as a student and as a teacher. I have been involved in teaching ethics at Auckland University of Technology (AUT) since 2007, and have been a student for much longer. Teaching and learning ethics has given me the opportunity to experience the Vx from a range of positions. Given that I am employed as a lecturer in health care ethics, I feel it is important to focus my masters research on an area that will enhance not only my understanding as a teacher but have the potential to contribute towards student learning within the tertiary setting.

Campbell, Gillett and Jones (2006) define ethics as "the critical scrutiny of moral thought and practice' (p.2). I have found such scrutiny a very intriguing aspect of my education, so much so that rather than continuing with my education in health

[1] Mary is not her real name. She has given permission for me to tell her story.

promotion I opted to study health care ethics. Certain people influenced this decision, not by anything they particularly said, but rather by offering me the space to think. A central focus within ethics is the consideration of questions which ask ‘what sort of person ought one to be?’ and ‘what would a good person do?’ (Pence, 2004). While ethics provides opportunities to consider what a ‘good’ person may be like, there is also merit in coming to a position of knowing who one already is; a place of self-understanding. For me ethics is not about attaining the illusive ‘goodness’ but understanding oneself so that one can better understand the world around us and the people we interact with. For me goodness infers division; some who are good and some who are not. I feel more comfortable assuming that there is no moral court. Ethics education is therefore a process of enabling individuals to better understand themselves in an effort to make justified decisions with clarity. This is the position I bring to the study and the following ideas and experiences have shaped who I am as a researcher, and as an individual. Together they shape the unique lens from which I view the research area.

- Throughout my schooling and into tertiary education, I held a preoccupation with ‘right’ answers and certainty. Studying ethics and having the space to think has helped me to come to the realisation that the things with no right answer are actually more important and interesting to me.
- I am interested in power within relationships and in particular within health care. This includes the power dynamic between patient and provider but also power within health care organisations. This encompasses issues around relationships between different professions. When one recognises that there are seldom ‘right’ answers, then this power dynamic becomes highly illuminated.
- I am interested in the impact and often hidden influence of people’s professional culture on decision making. I do not come from a clinical or professional health care background. While at times this may have created a barrier for me, not always having practice based experience to support my teaching and learning, more often than not it has enabled me to bring a different, but equally valid perspective to discussions.

In qualitative research, the researcher is the primary tool for collecting data and as such requires a certain set of skills for exploring the phenomena of interest. Miles and Huberman (1984) provide the following, as suggested skills:

- A strong interest in the research area,
- Familiarity of the setting,
- A multidisciplinary approach, and
- Good investigative skills.

Accordingly, I feel my experience as an undergraduate student having experienced the Vx software; my postgraduate education in health care ethics, as well as my current role as a tertiary ethics educator have provided me with a good foundation to explore the Vx software in more depth.

Study environment

This study examines and explores ethics education and in particular, one educational tool that assists in this field of education. Positioned predominantly within the tertiary education environment, the study also links to professional education within health care practice. The Vx is currently used as an educational tool in a variety of settings including thirteen United Kingdom (UK) universities, five health trusts within the UK's National Health Service, nine Australasian universities, sixteen Australasian schools and three Australian corporate bodies (http://www.values-exchange.com/Portfolio). Each institution has its own Vx website. This study focuses solely on the Vx used by Auckland University of Technology's (AUT) National Centre for Health Law and Ethics (http://aut.values-exchange.co.nz/).

Aim of study

The purpose of this study is to explore and describe the educational potential of the Vx, through the experiences of the participants. The study has three specific aims:

1. To explore the ways in which the Vx facilitates users to think about practice based ethical issues,
2. To explore how individual values shape the decision making process, and
3. To explore how individuals can learn about values and decision making from others.

Together these aims will inform the research question: What is the educational potential of the Vx?

Significance of the study

In many countries, including New Zealand (NZ), a number of factors have led to ethics becoming a structured component within health related tertiary degree programmes. Firstly, within health care, technology is rapidly advancing. While such advancements bring opportunity they also bring uncertainty. Not so much with *if* the technology will be successful, but whether or not the technology *ought* to be implemented. For issues such as genetic screening or xenotransplantation, a dichotomy of views exists. On the one hand biomedical science knowledge provides the foundation for such procedures to be possible. However with this knowledge come tensions between people's individual values about whether these procedures are the 'right' thing to do. Ethics provides a framework for helping to scrutinise an evolving health care system.

Secondly, NZ in particular has experienced significant events within the health care system that have resulted in harm for patients and their families. Two examples are: the activities at Auckland's National Women's Hospital (NWH) from the 1950s through to the 1980s where cervical cancer research was carried out with uninformed control groups (Cartwright, 1988). Secondly the lack of consent for neonatal chest physiotherapy at NWH in the 1990s (Cull, 1999). Both these events centred on a lack of informed consent resulting in the death of a number of patients, and lasting harm for others involved. Resulting inquiries led to a review of how decisions were made between patient and practitioner. An important outcome of the Cartwright Inquiry was the establishing, in 1994, of a patient code of rights. The Health and Disability Commissioner Code of Health and Disability Consumers Services' Rights (the Code) sets out ten rights for patients and corresponding obligations for those providing health and disability services. Specifically within Right 4 (2) of the Code is the right for patients to receive and practitioners to provide "services that comply with legal, professional, *ethical*, and other relevant standards" (Health and Disability Commissioner, n.d). Central to the Code, and the resulting changes to the delivery of health care in NZ, has been a shift away from paternalism to a more patient centred decision making paradigm. Such a shift required a greater awareness of the views of others and a move away from 'doctor knows best'. The reflective nature of ethics also raises this awareness. In addition, the Cartwright Inquiry provided guidelines for the inclusion of ethics education within health related professional degree programmes.

Despite clear rationale for ethics within health care education, ethics is not always favourably embraced by students or staff. It is often a compulsory component and not always viewed by students as being relevant. This may be because many disciplines are under increasing pressure to increase clinical hours. As a result, clinical discourse may be becoming more prominent within each discipline, with ethics becoming a competing narrative. This may impact on the way individual students and programme leaders view ethics. Recent history including the aforementioned NZ events, demonstrate that ethical decision making is essential in modern health care environments. If students are to be suitably equipped for dealing with complex situations in practice then critical inquiry into methods of ethics education is necessary.

The research setting

Understanding the research setting is essential. Bassey (1999) makes the distinction between educational research and discipline research in education. He claims that educational research aims to "inform and improve educational action" (p.59).This study is therefore not 'educational' research. As *discipline* research it aims to help build a greater understanding of the phenomena that is tertiary ethics education, within a health field. Rather than adding to educational theory, the study aims to provide a qualitative description of a web-based technology, as one aspect of health care ethics, in an educational setting. While Bassey takes the time to make this distinction, he concludes that the boundaries are blurred. My position within this study is as a lecturer in health care ethics; I do not come from an educational background. While this research has centred on an online educational tool, I do not have in-depth knowledge of e-learning. What I do possess is an increasing interest in how my discipline is taught and the implications of its content and delivery for the students I teach and ultimately, the patients they will one day help.

Methodology overview

A case study methodology was adopted to explore the educational potential of the Vx. This was because limited prior research has been conducted using the Vx. Case studies focus on the unique, the singular and although not generalisable, have the capacity for in depth understanding within specific contexts (Simons, 2009). In order for such understanding, sufficient data must be collected so that a deep exploration of the case can take place. Case study is therefore a challenging way to conduct research. It requires

creativity in the way data is collected and patience and reflectivity in the way data is analysed.

The case was constructed using three data collection methods. Firstly, participants used the Vx software to deliberate a case scenario. This was followed by a survey. Lastly, individual face to face interviews were conducted to increase understanding of the complexity of the case. A thematic analysis of these three components informed the case, resulting in three main themes.

Organisation of thesis

This first Chapter has introduced the study. It has presented my personal motivation and background which together have shaped the research process. The rationale for exploring the Vx has been presented along with the research purpose, aims and research question. A summary of the methodology was provided along with an outline how the research was conducted. The chapter will conclude with an overview of the organisation of the thesis.

In Chapter two, literature will be reviewed relating to the study's main areas of interest. Firstly this review distinguishes health care ethics from other fields of ethics. It provides the philosophical underpinnings of health care ethics informed by the writing of Fulford and Seedhouse. Secondly, literature pertaining to ethics education is presented, including a review of teaching aims and methods. In particular the use of educational technologies is presented. Chapter three provides a detailed description of the Vx and its theoretical underpinnings.

In the fourth Chapter, a description of and rationale for case study methodology is presented. The research design is explained including data collection and analysis. The importance of ethics as a central guide to the research process is outlined. In Chapter five the findings are presented. Extracts from three data collection methods informed three themes. All themes relate to decision making, but a distinction is made between the decision as a product and the decision as a process. The first theme, realising inherent tensions, relates to the decision outcome or product. The second and third themes; foundations for thinking and new ways of seeing, both relate to the decision process.

Chapter six discusses the findings in relation to research aims. The role of values, as revealed through the participants' use of the Vx software will be discussed. The influence of values diversity and values transparency will be explored. The potential of an online environment to support ethical decision making is considered, as well as the extent to which the Vx may contribute to ethics education. Chapter seven concludes the thesis with a summary of the findings. Implications for practice, study limitations and strengths as well as possible areas for future research are considered. A personal reflection closes the thesis.

Chapter Two: Literature Review

Positioning health care ethics

A number of different approaches to ethics have been used in health care. These include medical ethics, bioethics and health care ethics. Each has its own specific focus, but common to all is the application and examination of particular ethical issues in practice. Medical and nursing ethics are perhaps the oldest forms of ethical thinking in health care, stemming as far back as 1750 B.C with the Code of Hammurabi. Since then a series of religious or profession based ethical codes have been presented as guides for practice (Kuhse & Singer, 2001). Common to these codes seems to be a sense of respect and care for others and an attempt to define the desired traits of health professionals.

Over the past 50 years, there have been significant advancements in technology related to health care (Kuhse & Singer, 2001), as well as shifts in societal thinking on a range of issues including gender roles, reproduction, beginning and end of life decisions and research. Bioethics focuses on issues arising from the advancement of technology in health care and was borne out of a need to provide regulation and control of biotechnology to protect the vulnerable. Central to this regulatory role is the notion that particular values are promoted and upheld. Campbell et al. (2006) assert that "the law influences our common morality in that it tends to signal, especially in complex moral issues, what those who should know regard as a reasonable standard in a given area" (p.271). While regulation offers an important role in health care, the values of 'those who should know' may not always be shared by all those involved. Rather than advocating particular values, health care ethics is underpinned by an appreciation of the diversity of values (Fulford, Dickenson & Murray, 2002). It is health care ethics that forms the basis of this thesis.

Evidence and values

Values are a central part of the health care ethics on which my teaching and this study are founded. Decision making in health care is underpinned by an emphasis on evidence based practice, with a generally accepted assumption that this provide beneficial outcomes for patients (Dickenson & Vineis, 2002). Evidence Based Medicine (EBM) is the "conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett, Rosenberg, Gray, Haynes &

Richardson, 1996, p.71). EBM aims to produce beneficial patient outcomes through a stringent process of accumulating and assessing the quality of measurable cause and effect data. It uses a hierarchy of evidence ranging from the gold standard of the randomised controlled trial and systematic reviews of current research, rather than on the particular opinion of the practitioner (Hope, 1995).

Hope (1995) links the relevance of EBM to the increased significance of patient autonomy in the decision making process and suggests that being able to offer patients more robust, evidence based information means that they may be more likely to make an informed choice than if only the practitioners opinion is presented. “It is not the authority of the doctor that justifies a particular clinical intervention, but the evidence for the intervention’s effectiveness” (p.259). However, rather than conceptualising evidence and values as separate aspects of decision making, Limentani (1999) sees values as being ever present in the decisions we make, rather than some additional consideration which needs to be taken into account. As individuals we do not view the world from a purely factual perspective, but are constantly appraising our experiences in terms of the values that we hold (Rokeach, 1979). Despite this emphasis on evidence, there is a growing body of literature that supports a more balanced framework for decision making, one which acknowledges and implements individual values within the decision making process (Dickenson & Vineis, 2002; Fulford et al., 2002; Godbold, 2007; Hope, 1995; Mills & Spencer, 2005; Newcombe, 2007; Petrova, Dale & Fulford, 2006; Seedhouse, 2001).

Fulford (2004a) has proposed an evidence + values approach to decision making which he calls Values Based Medicine (VBM). He sees the two approaches (EBM and VBM) as complimentary, both representing a response to increased complexity in health care decisions. In addition, Fulford identifies a dichotomy between what bioethics offers medical decision making as opposed to what analytical philosophy offers. While bioethics relies on ethical analysis to provide ‘correct outcomes’ to regulate and guide technological advancements in health care, philosophical value theory focuses on the ‘process’ of deciding upon a course of action, rather than sanctioning any particular action.

Hope (1995) goes further, recognising that evidence, whether it is from a randomised controlled trial or a systematic review is not value free. Not only are decisions a mix of

evidence and values, but the evidence itself is influenced by the values of those involved in its discovery and use. These influences might include a bias toward what is researched or a particular methodology. For example, the ease at which pharmaceutical treatments can be measured for effectiveness as opposed to alternative treatment options which may be more difficult to measure. While this argument claims that evidence cannot be totally objective, Petrova et al. (2006) stress that this in no way undermines the role evidence plays or its contribution to decision making. Instead, there is a need to more fully acknowledge the existence and contribution that values make to evidence and decision making. Values are already an integral part of how one views the world and how it is socially constructed and as a result evidence is already saturated with values (Limentani, 1999).

The main assumption underpinning VBM is that decisions are a mix of evidence and values. Not only has evidence been seen to be of more importance, it has simply, been 'seen' more. Fulford (2004b) suggests that when values are shared, they remain invisible and that within the realms of medical decision making, many decisions stem from shared values and so there is the propensity to assume that values do not exist or play a less significant part in the decision making process. For example, treatment options for a closed fracture of the tibia appear to be limited, and standardised by medical practitioners.

> The standard treatment of stable closed tibial shaft fractures involves closed reduction, cast application, and subsequent functional bracing. There also seems to be generalized agreement that closed tibial shaft fractures that are displaced or that result from high-energy trauma should be treated with intramedullary nailing. (Nassif, Gorczyca, Cole, Pugh & Pienkowski, 2000, p.554)

Values are an integral part of this treatment decision. For example physicians value patient beneficence, they value rehabilitation over amputation and they value the elimination of pain and discomfort. With consensual agreement on treatment, these values are not necessarily visible, yet are an integral component of decisions to treat in this way. Instead they remain hidden and the treatment is seen as entirely evidence based.

Fulford (2004b), using Hare's 1952 example of a strawberry provides further clarification. Hare argued that a strawberry is considered 'good' if it is red, sweet and juicy. While this is a value description, because there is consensus that a 'good'

strawberry exhibits these characteristics, the evaluative description because shared, becomes a factual assessment of a 'good strawberry'. Hence, shared values can easily be interpreted as fact and as Hare concludes it becomes a 'matter of fact', that a good strawberry is one that is red, sweet and juicy (as cited in Fulford, 2004a). This 'factual' value based meaning has the added effect of misrepresenting values as evidence and promotes the illusion of a value-free basis for clinical based decision making.

Following this notion of shared and therefore less visible values, Hare importantly argues that values are illuminated when they conflict (as cited in Fulford, 2004a). In many instances, health professionals will find themselves in situations where there may be no clear choice of action, or where several options appear plausible. Using the tibial example, how might one proceed when two or more patients have tibial fractures but there are only resources to attend to one patient? Perhaps one patient is an esteemed medical professor, the other a drunk. It is in these instances where values will become more explicit.

Suicide is another health care issue that is value laden. Purtilo (1999) reviews several interpretations of suicide stemming from psychiatry, religion and sociology. These different value sets respectively consider suicide as; an act of insanity, an evil act and a socially disgraceful act. Bostwick, Brendel, Hicks and Steinberg (2009) suggest there is a common assumption that any patient with suicidal tendencies must be reported. While the rationale is often underpinned by legal obligations, of stronger influence is value laden assumption that such thinking is 'irrational' and the patient is likely suffering from a mental illness. Bostwick et al. discuss the need for acceptance of 'rational' suicide. However, acceptance may be challenging for many health professionals. Like Hare's 'good strawberry', irrationality may have become a 'factual' assessment of the patient because of the shared interpretation of suicide held by practitioners. As with the tibial fracture, the values associated with the decisions, are not always visible.

The proliferation of choice

Literature on the role of ethics, both in ethics education and in health care practice, has proliferated during the latter part of the twenty first century. Beauchamp and Childress (2001) suggest that up until the middle of the last century, ethics "enjoyed a remarkable degree of continuity" (p.1) with Fulford et al (2002) describing the current climate as reflecting a dramatic change to "an age of ethics with everything" (p.1). What then has contributed to this proliferation of ethics? Several authors have examined this question,

suggesting a variety of explanations. Petrova et al. (2006) offers three plausible reasons for this apparent increased complexity. Firstly, there has been an increase in ethnic and cultural differences due to globalisation, secondly consumers have become more knowledgeable due to increased focus on autonomy and increased access to information and thirdly there has been a shift in emphasis from treatment to prevention which has been accompanied by an increased interaction between practitioner and patient. Fulford (2004a) adds that scientific progress is often used to explain increasing complexity, while Bertolami (2004) sees a general dilution in the influence of traditional sources of values such as churches, community and family resulting in more acceptable diversity.

Fulford (2004a, 2004b) concludes that what these reasons have in common is that they offer alternatives. Sources of ethical issues in today's health care environment can really be attributed to increases in choice for both practitioner and for patient. Inextricably linked to choice are values and when one chooses between different options available, whether it be in treatment, prevention, policy etc, evidence plays a part, but so do values. There is a clear need to not only acknowledge the role of both evidence and values in our practice but to make values transparent and extend these ideas to the education of health care decision makers. A greater awareness of values and their role in decision making will contribute to more openness, understanding and clarity about the choices made. Seedhouse (2005) argues that with this insight the decision maker will "better understand his colleagues' reasoning processes and motivations" and will "very likely work more effectively and openly with them" (p.135).

What are values?

Fulford (2006) considers values as "needs, wishes and expectations" of an individual (p.704), along with "principles, standards, virtues and social norms 'owned' by individuals, groups and societies" (p.705). While Fulford extols the diversity of values, his list of descriptors also captures the diversity of terms used to define the concept. Other writers also demonstrate difficulties in pinpointing the exactness of the term. "What is it, then, to value something?" asks Harman (2000, p.135), concluding that it relates in some way to desire, "but I am unable to say more about what kind" (p.135).

Rokeach (1979) also acknowledges the range of terms used to describe values: "The term values has been used variously to interests, pleasures, likes, preferences, duties, moral obligations, desires, wants, goals, needs, aversions and attractions, and many

other kinds of selected orientations" (p.16), concluding that the notion of preference underpins these variations. Preference is also central to Seedhouse's (2005) definition of values: "a value is a human preference for a thing, a state or a process" (p.xxiii).

Conway (2007) sees the term as a "catch all " phrase (p.71), depicting what is both seen as a priority, that is, "things that matter to any one of us" (p.71), but also something that is diverse; something that can offer guidance and continuity in different personal and professional situations. While Conway sees values as a sort of benchmark to guide one through uncertainty, both Rokeach and Seedhouse recognise that for most of us, our values are less concrete and more open to change dependent upon the context in which we find ourselves (Rokeach, 1979; Seedhouse, 2005). It is in this light that Rokeach (1979) describes values as "not epiphenomenal" (p.23).

Quasi-legal and process orientated perspectives of values

Not everyone agrees on the role of values in health care decision making. Savulescu, while discussing conscientious objection decisions, appears to argue that doctor's individual values should play no role in the delivery of medical care to patients and that the existence of such values amounts to paternalism (Savulescu, 2006). He describes the main determinants of medical care as;

- Law,
- Just distribution of finite resources,
- Patient's informed desires,
- Not doctors' values (Savulescu, 2006, p.295).

Savulescu's argument is that doctors should be guided in terms of treatment by what is legally permissible and any role of individual values should be limited to policy decisions around what sort of health service will exist. Savulescu infers that values are somehow damaging to the overall goal of health care which is to "protect the health of its recipients" (p.296). Using emotive phrases such as "[doctor's]…values have crept into clinical decisions" (p.295), he describes moral values in terms of their potential to "corrupt" the delivery of health care (p.295) and concludes that value-driven medicine has the potential to create "bigoted, discriminatory medicine" (p.297). It is inferred that once policy is implemented, medical practice takes place in a value-free environment and that this is a desired climate for good practice. However, the notion of being 'value free' is a philosophical mismatch and promotes an inaccurate view that values can be

eliminated. It is more appropriate to acknowledge that values cannot be eliminated, but will often remain hidden.

Of further concern is that if practitioners base their provision of care on what is legal and just, then they are making decisions based on someone else's values. While these values may represent the majority or represent what is valued by the policy makers in health care, they may not always be valued by the patient. For example, health care today is generally underpinned by autonomy and patient choice but these values are not necessarily held by all patients, especially those from non-Western societies (Berghan, 2007).

Savulescu's (2006) perspective highlights the differences earlier identified between bioethics and analytical philosophical ethics. In essence this is a difference between outcome and process. Fulford (2004a) describes bioethics as adopting a quasi-legal form where there is an "assumption of right values" (p.218). Today it still offers an important regulatory role but some critics claim it has adopted a 'quasi-legal' position which may at times restrict good practice (Fulford, et al., 2002). Examples of this apparent over regulation include stringent consent practices within research. In some instances certain patient groups are excluded from participation due to vulnerability even if this particular population group could benefit from the research findings, for example psychiatric patients (Osborn, 1999), and some groups with HIV (Smith, 1997). These examples claim that full disclosure can be seen as needlessly cruel and can jeopardise beneficial research outcomes.

Another example of regulation by 'those who should know' concerns antenatal screening for Down syndrome in New Zealand. Screening as a public health measure can offer benefit through early detection and treatment (Bradley & Burls, 2000). However, benefit from screening in pregnancy for conditions such as Down syndrome is less clearly defined and more ethically complex. Despite no national screening programme in New Zealand, the medical values associated with technological advancements in screening appear to have created a quasi-legal 'standard of care' with more than 85% of pregnant women taking up screening opportunities (Antenatal Down Syndrome Screening Advisory Group, 2007).

Literature and guidelines are dominated by an emphasis on procedural benefit such as most efficient screening methods and appropriate gestational guidelines. Such guidance is overly orientated toward outcome, rather than on process. There is no debate on the values underpinning these outcomes. What are the underlying assumptions and purpose of screening for Down syndrome? The values of the medical profession remain implicit, as if screening is value free.

Fulford (2004a) provides the term "a space of values" (p.219) to signify the role of process, where reasoning is used to explore diversity and difference as opposed to bioethics where reasoning determines what is 'right'. The quest for objectivity and the 'right answer' is persuasive. The bioethical desire to have in place a national screening programme would indeed help ensure screening was safe and efficient but firstly there needs to be space for everyone to debate the purpose of the screening itself and recognise diversity of views and values.

Relying on regulation by 'experts' and a formulated 'set' of values has the potential to create a workforce that becomes so reliant on rules and laws that when a situation arises when no law or rule exists practitioners may be unable to make reasoned decisions. As Dickenson and Vineis (2002) argue "EBM may contribute to a cognitive style that lessens the physician's crucial capacity to think in terms of variety and fuzzy situations" (p.245). Savulescu (2006) does discuss areas of health care where such uncertainty exists, for example legal gestation dates for termination. However, his solution is to "urgently clarify the law" (p.296). Perhaps a more lasting solution would be to focus instead on the reasoning process. Rather than seeing values as a damaging aspect needing eliminated, value recognition and transparency can only increase the possible outcomes available in any given situation (Seedhouse, 2005).

Clarifying Values Based Decision Making

Not only is there a lack of clarity about the role of values, the literature also identifies a lack of clarity around the term 'values-based decision making' (VBDM). Contradictory interpretations exist. In an essay by Mills and Spencer(2005) on governance and management, the importance of VBDM is indeed central, but their thesis rests upon the definition of VBDM as "decision making based on the values of the organization and the goals these values support" (p.18), where a value is "something the organization considers important to its function and success"(p.18). This perspective masks a quasi-

legal position. It suggests that values exist objectively, independent of the individuals operating within any particular organisation and that once identified and regulated, they can be accepted as given. Given that literature on values based decision making is not prolific, caution needs to be used when using the term 'VBDM'. In this thesis the term VBDM will refer to a decision making 'process' similar to Fulford's (2004a) perspective which places emphasis on the acknowledgement and exploration of value diversity and difference, focussing on using these differences as a resource for action, rather than for establishing any one right way to act.

Seedhouse's philosophy

Seedhouse (2005) has given considerable attention to practical philosophy and in particular health care ethics. He argues that the aim of philosophy is "to improve our lives by bringing about increased clarity of understanding" (p.101). He notes that in healthcare, evidence is visible while values are not visible, not transparent, or even recognisable (2009). Despite this lack of transparency, Seedhouse strongly asserts that all aspects of health care, whether it be policy, planning or practice is influenced by values (2009).

Another important element to Seedhouse's philosophy is that all decisions, in all aspects of our lives have an ethical component (Seedhouse, 2005). Rather than ethics pertaining to situational dilemmas that stand apart from everyday life such as whether to withdraw life support or whether euthanasia should be legalised, Seedhouse advocates an everyday ethics whereby alternative courses of action can be considered for any situation. Every decision will impact to some degree on others**.** Ethical dilemmas and moral conflicts are therefore an everyday reality in modern health care practice. Seedhouse (2009) argues that ethics can be seen as pivotal in issues concerning, for example;

- Informed consent,
- Privacy and confidentiality,
- Resource allocation,
- Rights and interests,
- Duties and obligations and
- Research.

Seedhouse (2009) presents an overview of what he describes as ethical myths, myths which at present are a barrier to ethical reasoning being central to health care decisions.

- Ethics is a field confined to ethics experts or ethics committees,
- Ethics is concerned only with 'tip of the iceberg' or 'dramatic ethics',
- Ethics is simply resolvable by recourse to rules or laws,
- Ethics is purely objective.

Using comparisons of these purported myths, Seedhouse (2009) provides an overview of how he views ethics within health care.

- Ethics is the concern and within the capability of all health professionals,
- Ethics is about thinking,
- Ethics is about using reasoning to explain why actions are right or wrong (including laws and rules when they apply),
- Ethics is dependent on individual values.

Using the most common of everyday actions, such as sitting in a chair, Seedhouse (2009) outlines the relevance of ethics, especially when one considers the alternative activities one could be undertaking. Whilst Seedhouse agrees that this example doesn't reflect a "depth of immorality" (p.23), its simplicity is effective in demonstrating his position. Pertinent to the argument is that alternative courses of action exist. For example, by sitting in a chair one is perhaps choosing not to help take the rubbish out or respond to the crying child. It is values that have determined some situations to be more ethical than others. To summarise Seedhouse's position, values influence all aspects of health care; all aspects of health care have an ethical component. Therefore values underpin all health care decisions.

Within our Western society, some decisions are made by a select few 'experts' and this is certainly the case with health policies such as rationing and also with bioethics 'experts' who guide the rightness of technological advancements. Seedhouse (2009) reminds us that "there are no objectively right answers to be found" (p.xli). Despite the power bestowed to ethics experts, everyone is able to deliberate the alternative choices before them and by "comprehensively deliberating the pros and cons of action" (p.xliii) we can all become more thoughtful health practitioners.

Ethics requires one to pose the question: How do we make everyday decisions in our health care practice? Rather than being a formulaic guide to practice, ethics is about process. By examining a range of considerations and possible outcomes, it is therefore possible to raise an opinion to a well reasoned argument with one's rationale fully justified through thorough and thoughtful deliberation. Rather than being restricted to ethics experts or committees, ethical decision making can be undertaken by everyone involved in the delivery of health care. The idea of everyday ethics has been developed further giving rise to the notion of an ethics toolkit (Seedhouse, 2009; Weston, 2001). This may include tools such as experience, values, rules, theories and one's individual capacity and ability to reason. Given the everydayness of Seedhouse's ethics vision, it is quite plausible that most people already posses the toolkit with the necessary resources to undertake ethical deliberation. Ethics education may then be about assisting people to realise the existence of such resources and providing them with an environment where familiarity with its use can be developed and values transparency can be optimised. Adding to this toolkit, Seedhouse has developed 'The Values Exchange'. Reflecting his philosophical and ideological position, the system makes values transparent decision making more accessible. The software will be discussed in more depth in Chapter three.

Why teach ethics?

A strong philosophical stance within this thesis is that ethics and values are inextricably intertwined with evidence. Positioning ethics education firmly at the centre of all health care education can provide health professionals with a realistic and accurate model of decision making which redresses the balance of EBM to VBM. This is particularly important for degree programmes which offer students no alternative to EBM and portray their clinical decisions inaccurately, as purely objective. By doing this, educators are raising awareness of student's personal values and how they are a crucial part of everyday health care decisions. For example, will I work in private practice, and if so, how much will I charge?

There are other justifications for teaching ethics. Today, the health care environment in NZ is more consumer focused and patient autonomy is valued more than the traditional paternalistic position of health professionals (Paterson, 2002) . Structured ethical components in tertiary health care programmes are now recognised as being essential (Bridgeman, Collier, Cunningham, Doyal, Gibbons & King, 1999; Lofton, 2004) and in NZ, acknowledgement of ethical standards is a legal requirement for registered health

professionals under the Health Practitioners Competence Assurance Act, 2003 (New Zealand Legislation, 2003).

Technological advances in health care mean that today there are many more options for treatment and patients have significantly greater access to health information (Campbell, Chin & Voo, 2007). The practitioner is no longer the exclusive expert. This new paradigm means that where once medical values dominated, now there needs to be a more democratic acceptance of people's individual values. Practitioners, patients and students all need to be more aware of the role of values and recognise the influences of their own, as well as the values of those they are working to help (Fulford, 2004a, 2004b).

Dewey (1948) proposes that ethical deliberation and education are inextricably linked. He supports his claim that "the educative process is all one with the moral process" (p.183) by explaining that both moral deliberation and education both rely on an experience related journey of improvement. Not only does ethics education illuminate the role that values play in the decision making process, ethics equips students with reasoning skills to enable them to be more aware of situations within their practice, to consider a range of possible courses of action and to confidently justify the particular action taken.

Ethics education potentially helps students better understand themselves, helps them to express their decision making processes more clearly and helps individuals to hold themselves to moral account. I believe that by valuing and recognising the role of values in decision making one can help create a more autonomous and empowering decision making process for all decision makers; consumer and health professional alike. Ethics education also assists students in gaining the capacity for moral reflection. Campbell et al. (2007) stress the importance of not only having ethical awareness, but through education and experience students gain the ability to take with them into the future the ability to continually analyse and critique one's practice, which they describe as a "habit of constructive analysis"(p.432).

Ethics education

Overview

The inclusion of ethics in the education of health professionals either in the tertiary setting or as part of on the job training is increasingly prevalent. However there is variation in content, depth and approach taken (Campbell, Chin & Voo, 2007). The delivery of such courses ranges from one off guest lectures to the delivery of entire courses and there is a current drive, especially within medical schools, to structure ethics education in a horizontal manner by providing ethics education throughout each year of education, rather than at just one point (Goldie, Schwartz, McConnachie, & Morrison, 2001). However, research is scarce as to the educational effectiveness or student experiences of specific teaching strategies, with no clear consensus as to the most effective method.

There is a general acceptance that ethics education is both difficult to teach and to assess (Bertolami, 2004; Campbell et al., 2007; Singer, Pellegrino & Siegler, 2001; Wong & Chung, 2003). This is in part due to an increased emphasis on providing outcome based courses in what is often seen as an intangible subject area (Wong & Chung, 2003). Variation in teaching ideology exists. Three main examples include ethics education where students are taught objectively 'right' answers, taught from a predominantly theoretical perspective, or education based on understanding ethical 'process'.

Teaching ethics as objective knowledge

A number of studies utilise some form of objective measurement or test for assessing ethics education. Crisham's (1981) study developed a 'Nursing Dilemma Test', measuring responses to recurrent nursing dilemmas in an attempt to verify taught ethical material. McAlpine, Kristjanson and Poroch (1997) develop the Ethical Reasoning Tool to identify learning/reasoning deficiency that can be addressed by educational interventions, while Green, Miller and Routh (1995) established'gold standard' for marking medical students' appraisals of ethical vignettes. In a more recent study by Goldie et al. (2002), medical student's responses to ethical vignettes were judged on their consensus with responses given by "specialists in medical ethics" (p.492).

Solving ethical issues requires critical thinking skills rather than just learning to match correct responses. Not only do these methods of teaching and learning suppose that ethics is something that can be objectively taught, but they worryingly remove thinking and the individual's own capacity to reason. Not only does this limited style of education rule out helping students to better understand themselves and their own decision making processes it could reinforce professional values devoid of any sort of scrutiny and removes the potential for students to adopt the "habit of constructive analysis" that Campbell et al. (2007, p.432) stress is so important.

A theoretical basis for ethics education

Ethics education is often based on knowledge and application of traditional ethical theories such a utilitarianism and deontology. Several limitations exist with this approach. A study by van der Burg and van de Poel (2005) found that students often find it difficult to apply knowledge gained in class to real situations in practice. While knowledge of ethical concepts and theories can be objectively measured, application of this knowledge in actual practice is more challenging to assess. Campbell et al (2007) and Bertolami (2004) even suggested that ethics education may have little effect, given that behaviours may be clearly established by the time the student enters tertiary education.

A study by Parsons, Barker and Armstrong (2001) looked at students' responses to being taught ethics in this knowledge based manner. While some students found the courses favourable, others considered the content 'heavy going' with one participant claiming that "health care ethics is generally not enjoyed by students" (p.51). Parsons et al. (2001) conclude that higher education lecturers are being pressured to demonstrate their competence with the implementation of innovative teaching methods.

Hattab (2004) found that ethics teachers are often from philosophy departments and may not always have firsthand experience of the specific health care setting. The terminology used is also contentious. Cowley (2005) argued that within ethics education, the use of unfortunate esoteric sounding theory names does little more than alienate students and that there is a need for more ordinary language. Gillon (2003) agreed stating that 'ethics is there for everyone, not just people with a PhD in philosophy" (p.311). Together these findings suggest that the theory-practice gap is

problematic within ethics education. Effective teaching methods need to be developed that aid the student to make the transition from what is learnt in class to what is needed in practice (Bertolami, 2004; Wong & Chung, 2003).

Process orientated learning

Rather than ethics being about the transference of knowledge, a process orientated view recognises that the decisions we make are subjective and in many instances there will not be a 'right' answer. Bertolami (2004) sees a more effective way to deliver ethics education is through a self-reflective curriculum whereby students come to better understand themselves and learn how to make decisions in line with their own beliefs. He argues that "the content of a lesson may be the least important part about learning" (p.423). Such programmes often utilise case study discussion, critical analysis and self reflective journals. There are advantages for this approach. For example, Hattab (2004) found that quiet students or those from different cultures or who are speaking a second language could feel intimidated by a theoretical format and may have a more positive experience learning in this way. Many courses in ethics now include an amalgamation of theory based knowledge as well as a more interactive reflective approach.

The Values Exchange is an example of a process orientated approach to ethics education. It reflects the view that a good decision is one that is robustly justified, rather than matching any desired right or wrong response (Seedhouse, 2009). Using everyday language the software incorporates traditional theoretical positions. By not specifically labelling these theories it enables the ideas to be considered, but does not impose intellectual authority. Not only does this make the software more attractive to a wider group of people, but it potentially allows ethical deliberation with little or no knowledge or understanding of ethical theory, which can be seen by some as challenging and by others as liberating. It seems fitting that this modernisation and adaptation of ethical education is presented through a modern, technological method.

Insufficient research has been done into learning and teaching methods(Goldie et al., 2001), but it is clear that more innovative methods are required (Parsons et al., 2001; Campbell et al., 2007). The use of educational technologies and the development of the internet for ethics education appears limited but is worthy of further research (Loui, 2005; Singer et al., 2001).

Educational technologies

Computers and information technology (IT) have been used to teach health care subjects for a number of years. They allow extensive interactivity between the user and the software, resulting in the student being able to explore the subject at his or her own pace (Ellenchild Pinch & Graves, 2000). Teaching in any field requires the use of the best methods available and to reflect current trends in wider society. There has been a rapid increase in the use of IT in society in general and within education there is a need to come to a better understanding of educational technologies and their impact (Naidu & Cunnington, 2004). The use of educational technologies to bring ethics into everyday discourse is a fundamental innovation with widespread implications for equipping more people with tools for robust ethical deliberation. Few studies however address the possible use of educational technologies for facilitating ethical decision making.

From the available literature computer based ethics programmes have been developed within the academic disciplines of engineering, computer science, business and health care. One of these computer based tools is *PETE* (Professional Ethics Tutoring Environment), which provides a structured framework of engineering ethics to augment classroom teaching methods (Goldin, Ashley & Pinkus, 2001). The system is based on a very structured step by step method and while it offers less in the way of free investigation of the specific issue under analysis, it does allow users to compare their responses with others. Used predominantly for class preparation, the system allows views to be challenged and so does not promote objective 'correct' responses.

Another highly structured computer framework is *Dioptra*; a decision making computer programme designed for business environments (Mathieson, 2007a). This system helps users structure their decision making and is based on theoretical perspectives from the behavioural sciences. Mathieson explains that the software can "help ethically motivate decision makers to consistently behave ethically" and can be used to address "dysfunctional group behaviour" (p.3).The designer claims that it only has uses in organisations that already have an ethical culture, suggesting that it may not be directly aimed for use within education.

Agora, a web-based computer programme was developed for an engineering setting (http://www.ethiekentechniek.nl/site/). In part as a response to growing numbers of students taking compulsory ethics courses, the programme aimed to overcome identified

shortcomings within their applied ethics courses. Aims included the desire to instil more creativity from both student and teacher, and to encourage students to engage with, and reflect more with ethical theories (van der Burg & van de Poel, 2005). The software, based on Western philosophical perspectives was primarily used to prepare students for lectures and tutorials. It provided varied exercises aimed at training students in a range of competencies. These included recognition of ethical issues, thinking creatively, supporting judgements with ethical theory, reflecting and discussing decisions with others. In addition, the software was used to streamline student assessment and feedback processes. Interestingly the software had a "correction function" (p.295) which allowed teachers to correct student's work. In addition samples of "particularly good or particularly bad answers" could be fed back to the class (p.295). To date, van der Burg and van de Poel's descriptive account of *Agora* does not appear to have been followed up with any evaluative research into its use.

Both *Agora* and *Dioptra* programmes focus on the decision making process. However, terms such as 'dysfunctional' and 'bad answers' infer that both *Dioptra* and *Agora* may be used as a way to ensure certain sorts of ethical behaviour are learned, rather than being entirely process oriented. This demonstrates the complexity of ethics education where the process may be highlighted as primary, yet the impact of the decision outcome or product actually dominates.

Programmes that have been developed specifically for use within the health care environment are scarcer. Fleetwood, Gracely, Vaught, Kassutto, Feldman and Novack (2000) attempted to bridge the gap between theory and practice with their *MedEthEx* computer based learning programme. The essence of the software was to provide a vehicle for gaining ethical communication skills and incorporated conversations with online virtual patients. Focusing on issues around confidentiality and suicide, their findings showed that students valued responding in their own time, that software programmes helped to avoid peer pressure to respond in a certain moral way, also providing personalised, instant feedback. However in multi choice tests, the results for students using the software were not significantly different from the students assigned to small group discussions.

Aspects of the study appear problematic. Using multi choice questions as a means of evaluation supposes that ethics is something entirely knowledge based, assuming that there is a 'correct' response for any given scenario. In addition, students using the computer programme were able to access "expert" advice from a range of virtual consultants (p.97). These 'experts' included an ethicist and an attorney or mental health professional. Responses given were then rated against a list of responses compiled by ethicists and other health related specialists. Again this apparent requirement to produce 'correct' responses is troubling as it supposes that in any given situation there is always a right way to act. Although professionals will have guidelines, for example codes of ethics, such emphasis on getting things right detracts from any goal of producing critically thinking health professionals. Ethics education needs to facilitate students to make justifiable choices of action, rather than just knowing what someone else says is right.

Ellenchild Pinch and Graves (2000) recognised such issues in their examination of a web based discussion forum where a class of 29 nursing students engaged in dialogue around topical ethical case studies. The authors clearly stated that "bioethics education is not a process of memorisation or the development of the ability to respond 'correctly'; values, beliefs, and traditions need to be recognized, shared, and possibly defended" (p.705). The main goal was to facilitate discussion through student interaction. Their study found that the online medium encouraged quiet students to participate and students were able to expand upon the discussions outside of the classroom. Hearing from all the class was seen as a real advantage.

While Ellenchild Pinch and Graves (2000) focussed solely on nursing students, they did discuss the importance of interdisciplinary learning in ethics education and the potential role that educational technologies may have for facilitating such learning.
Interestingly, both Fleetwood et al. (2000) and the Ellenchild Pinch and Graves studies used participants who were also current students of the researchers. This was identified as a limitation (Fleetwood et al., 2000) as it may have provided some form of bias, given that participants rated the software using their real names. Given the stringent nature of university protocol regarding research ethics in New Zealand, studying current students is problematic and has been a significant factor in the design of this proposed study. Issues relating to this will be expanded upon within the methodology section.

What is the aim of ethics education?

Ethics education faces many challenges including differing philosophical perspectives around what ethics means in education, and how it is best taught, assessed and evaluated. At the heart of any education programme is its aim and the literature suggests several, interconnected aims of ethics education. These relate to;

- meeting professional standards (Ellenchild Pinch & Graves, 2000),
- improving patient care (Singer et al., 2001; Campbell et al., 2007; McAlpine et al,. 1997),
- improving health professional's capacity to deal with uncertainty (Culver, Clouser, Gert, et al., 1985 (as cited in Fleetwood et al., 2000); Williams & Dewett, 2005),
- accumulating wisdom (Mathieson, 2007b).

Each aim has merit. As educators how do we reach these aims? Singer et al. (2001) observed that a particular issue for ethics education focussed on whether or not it was effective and made any difference to improving the quality of care given to patient; a goal they saw as central to the quest of education in this field. It would appear that while ethics education has come a long way (Campbell et al, 2007), the need to improve insight into effectiveness remains paramount (Singer et al., 2001). While ethics education is becoming more widespread and a range of teaching methods are now used, for those who will be working within a clinical setting, more focus needs to be directed to the evaluation of these methods. Singer et al suggest that internet based methods of teaching clinical ethics had the potential to reach more clinicians. As a self-directed form of learning, these methods would go some way to meet the needs for clinicians with continuing professional development requirements. It is therefore vital to be able to assess in some way the impact of the internet as a teaching method. As a web-based educational technology, gaining insight into the Vx is an important step in understanding its role within ethics education.

Concluding comments

In the field of health there are many lenses through which ethics is viewed and taught. This thesis focuses specifically on health care ethics. On a practical level this approach better suits my specific academic teaching environment. The classes I am involved with include students from several health related disciplines. Health care ethics recognises this diversity as opposed to the more specific field of medical ethics. Of particular relevance is that health care ethics recognises the role of both evidence and values

within decision making. The values associated with our decisions are often difficult to identify. Because they are important, health care ethics places particular emphasis on decision making process, rather than just an outcome based perspective.

Literature stemming from the main value theory theorists has been presented. The notion that all aspects of health care (and everyday life) have an ethical component has been discussed. This position was seen as central to the review of methods of teaching ethics in a tertiary setting. The literature shows that methods are variable. A notable dividing factor was the difference between outcome and process based teaching examples. New ways of teaching ethics involving educational technologies were presented. They were limited in number. While most were from tertiary education, few related specifically to education within health related degree programmes.Further understanding of the role of educational technologies in ethics education is important, given the positive findings of early research into their use. Revealing the potential of the Vx will contribute to this understanding and is key to this study. To enhance understanding of the software itself Chapter three will provide a comprehensive overview of the Vx decision making tool. Using screen shots of the software, a descriptive account of how the participants used the Vx to deliberate the case scenario will be presented.

Chapter Three: The Values Exchange

Background information

This chapter will introduce the Vx decision making software. With exemplars, it will systematically describe how the Vx is used to deliberate case scenarios. There are many versions of the Vx, which can be tailored to the specific needs of the specific organisation. For example AUT has several Values Exchanges specific to nursing, business, journalism and health. This study focuses on AUT's National Centre for Health Law and Ethics' Vx, which is predominantly used for the teaching of ethics to undergraduate students in health related degree programmes. This AUT Vx is publically available. The reader is welcome to experience the AUT Vx and can access it at www.aut.values-exchange.co.nz .Simply register, logon and use this chapter as guidance.

The Vx is a web based technology, providing users with a framework for thinking and justifying decisions. It is internationally used within university settings as well as being used by an increasing number of health care institutions (The Values Exchange, n.d). Developed by AUT Professor of Health and Social Ethics David Seedhouse, the software programme has been used by health science students at AUT since 2005 (Auckland University of Technology, 2007) and has recently been adopted by teaching staff in other AUT programmes including business and journalism. With an initial focus in tertiary and professional health settings, it has more recently been implemented in over 12 Australian and New Zealand schools as a way to facilitate the thinking and decision making skills of children, mainly in the 9-11 year age group (http://aut.values-exchange.co.nz/Portfolio).

The software is an evolution of over twenty years of thinking by Professor Seedhouse and has evolved from a wooden puzzle board through various software versions. As a web-based technology users can access the software from any location. Once logged on they are offered a range of scenarios to consider. Examples of current proposals include mandatory influenza vaccinations for health care workers, confidentiality issues in counselling, considering discharge options for post surgery patients and fast food sponsorship in children's sports (http://aut.values-exchange.co.nz).

What is the aim of the Vx?

As an internet based educational technology, the primary goal of the Vx is values transparency. It is underpinned by Seedhouse's theory of decision making explained within Chapter two.

> The Values Exchange promotes ethical analysis by offering self-awareness and choice – there are no binding principles or rules or laws in it - just the possibility of reflection and learning – about oneself, about the world at large, and about your place in it. (p.196)

In addition, "The Values Exchange enhances our understanding of different points of view, it fosters deeper and deeper communication between people who would never otherwise encounter each other" (Seedhouse, 2005, p.xii). The transparency of being able to 'see' one another's perspectives, thoughts, ideas and arguments is considered a necessity by Seedhouse, especially "where people in positions of authority claim to be making decisions in the interests of people subject to that authority…and where technical evidence and expertise is not decisive" (p.124).

How does the Vx work?

Software administrators select cases of interest and present the scenario as a 'case'[2] for users to deliberate (see Figure 3.1 for home page). Users are also encouraged to submit ideas for cases and now many Values Exchange sites include user generated case situations. In some instances practice based teams will use the software to consider real work place situations that require either resolution or retrospective analysis. Under the 'Secure' tab on the home page specific case scenarios can be assigned to particular groups of users. Access to other users is denied. This allows for a more controlled use of the software for example research or assessment purposes. The case scenario in this study was located under this 'secure' tab (Figure 3.2). For illustrative purposes a member of the pilot study has agreed for me to use their Vx responses. They have used a pseudonym. This will demonstrate how the software can be used to consider practice based health care issues and in particular, to deliberate the study case scenario.

[2] The Vx uses the term 'case'. Because this thesis already uses the term 'case' in relation to case study methodology, 'case scenario' will be used when referring to the Vx case.

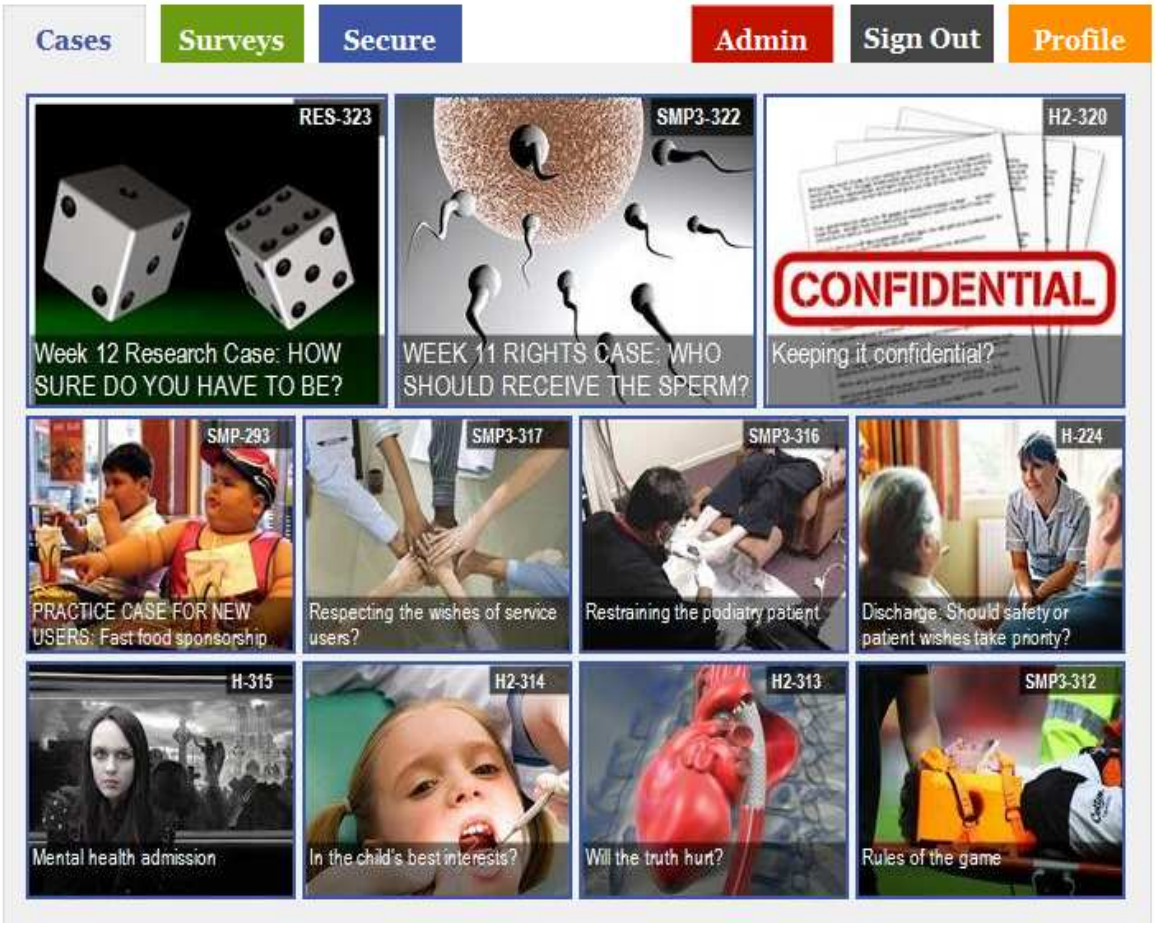


Figure 3.1: AUT Values Exchange home page.

Figure 3.2: Case H-233 participant case study.

As can be seen in Figure 3.3, each case scenario presents a descriptive account of a situation with a case proposal to consider.

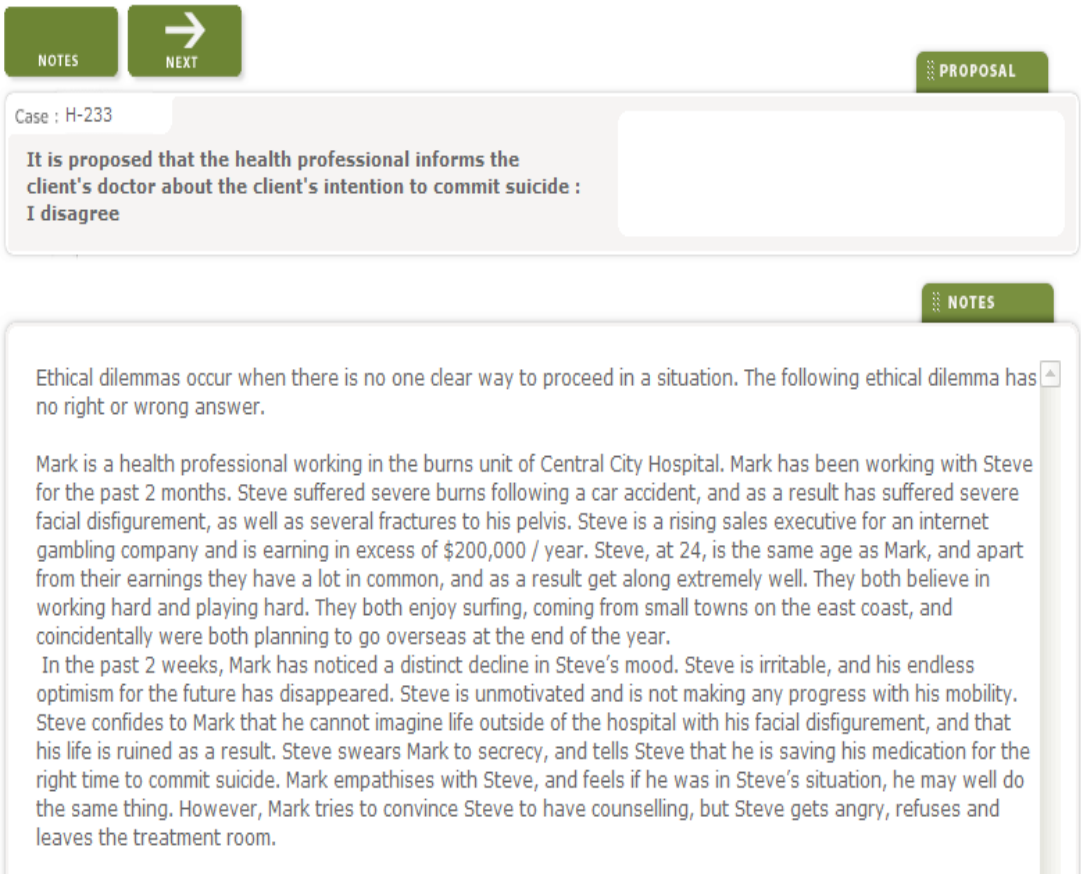


Figure 3.3: Case information and proposal.

Upon reading the available information the software user must respond to three fixed questions as seen in Figure 3.4.

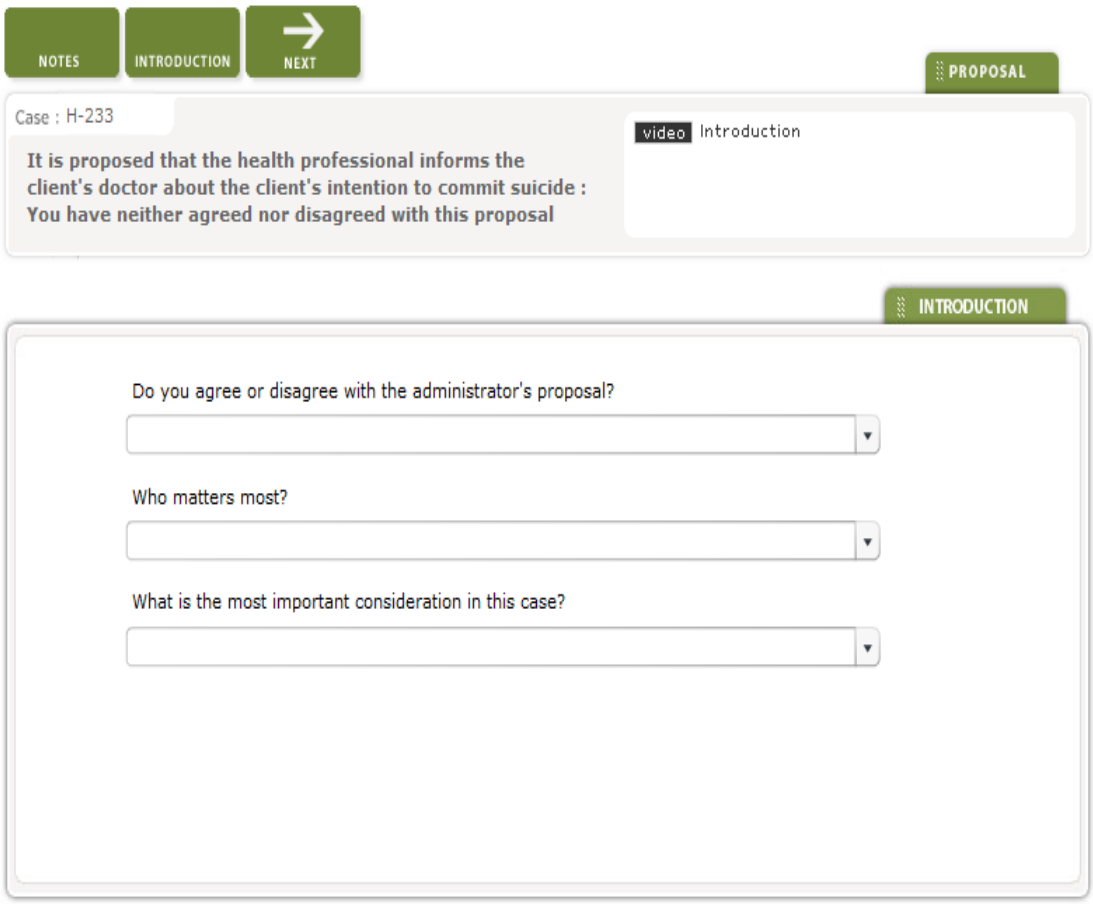


Figure 3.4: Proposal position and initial focus questions.

The user is first required to consider the case proposal and take a position from which to view the case scenario. Every case proposal has the same four positions to select from, namely *Disagree*, *Strongly Disagree*, *Strongly Agree*, *Agree*, as seen is Figure 3.5.

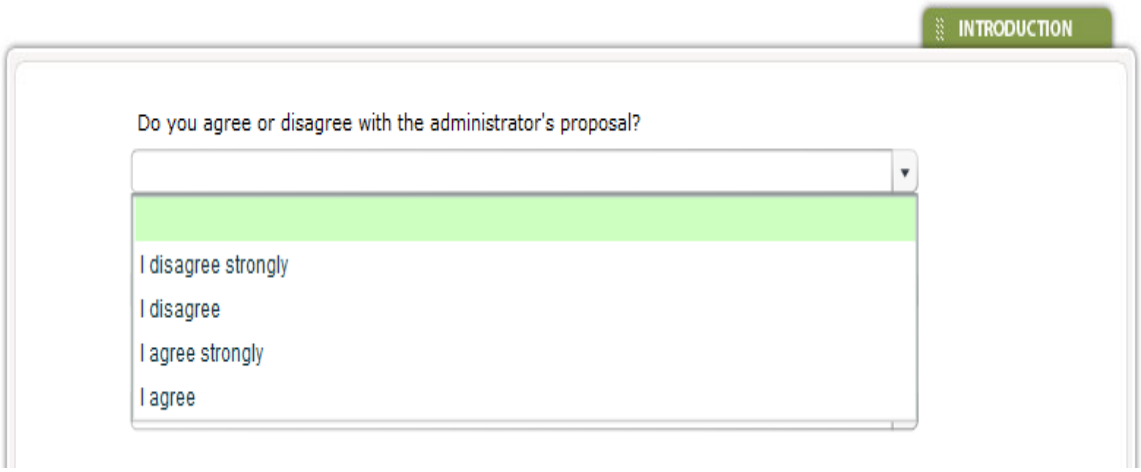


Figure 3. 5: Agree / disagree options.

Following this initial response, two questions with pre-determined response options are posed which establish and help to develop the user's focus. These questions and response options relate to the selection of who matters most in the case scenario (see Figure 3.6) and the most important factor of consideration in the case (as presented in Figure 3.7).

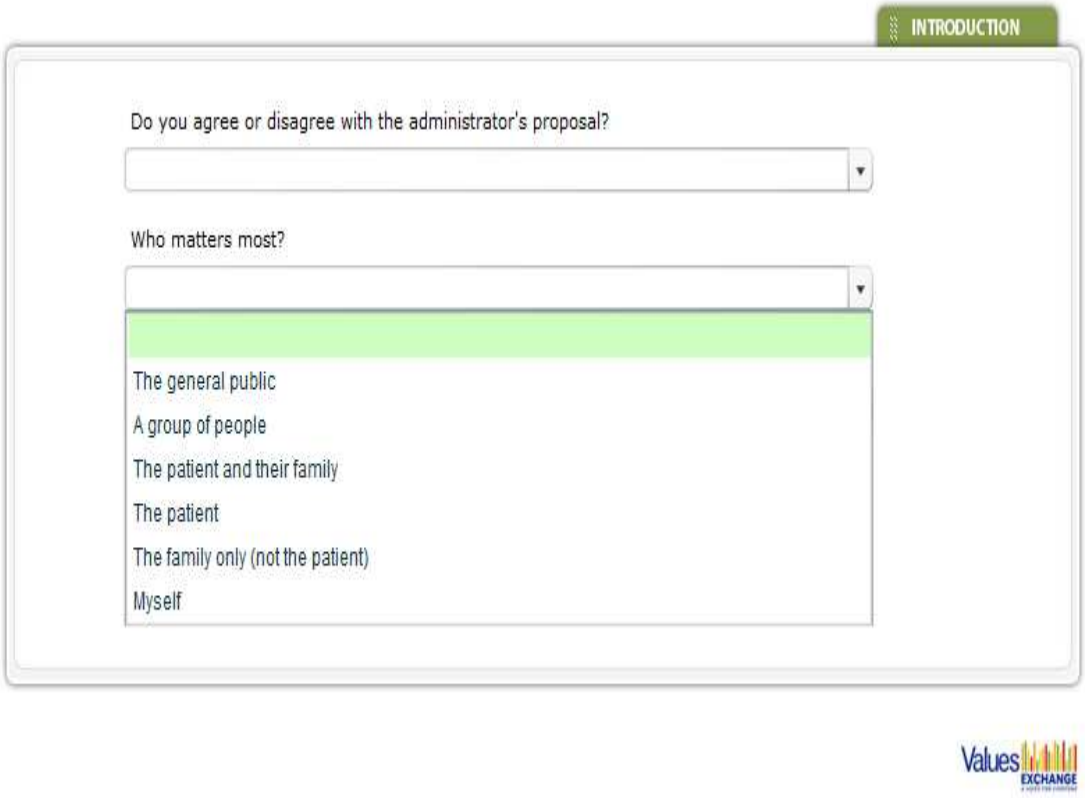


Figure 3.6: 'Who matters most?' response options.

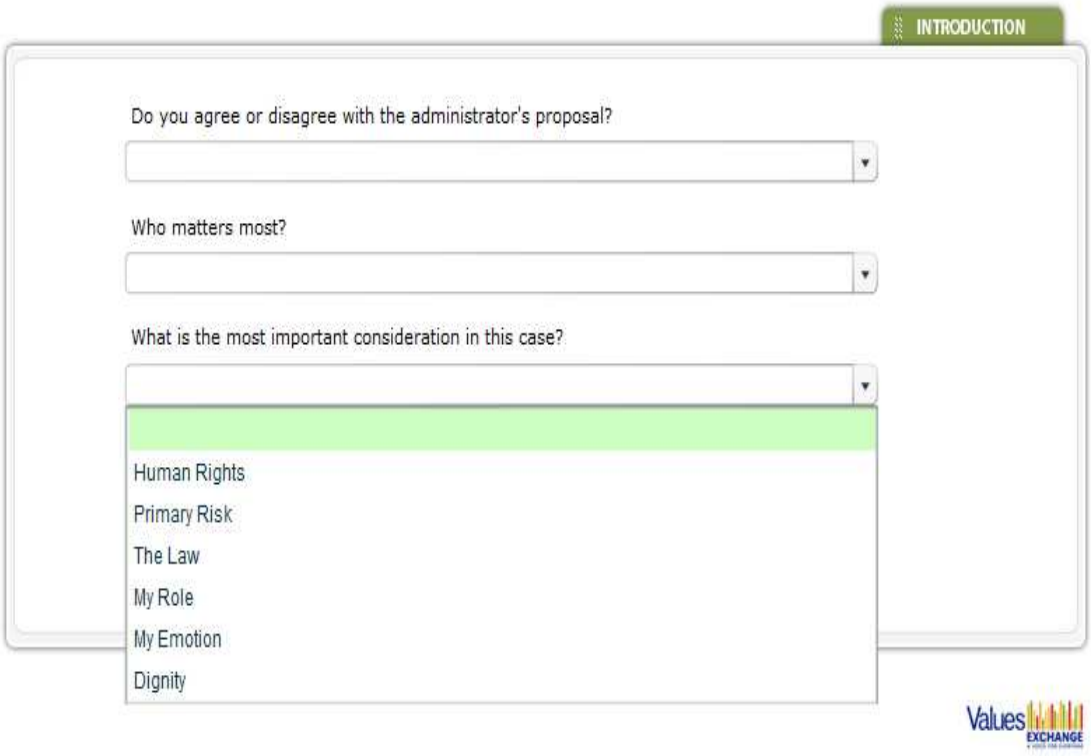


Figure 3.7: 'What is the most important consideration?' response options.

In order to allow comparisons between users and identification of decision making patterns within individual users, set frameworks are used which offer specific response options to these questions. Examples of set frameworks include health, journalism, and research. The case scenario used for this study has employed the health framework with the response options summarised below.

Table 3. 1.

Primary questions and responses for the health framework.

	Primary questions	
	Who matters most?	**What is the most important consideration in this case?**
Response options	*The patient*	*Dignity*
	The patient and their family	*My emotions*
	The family only (not the patient)	*My role*
	A group of people	*Law*
	The general public	*Primary risk*
	Myself	*Human rights*

Once these initial responses have been made the software is used to expand possible courses of action by exposing the user to aspects of the situation that one may not have considered before. Interactive screens use coloured grids and segments that allow thinking to be conceptualized on the screen. Figure 3.8 below illustrates the Rings section of the software where important considerations of the case are depicted in pie chart form. The software automatically apportions the largest ring segment to the factor chosen by the user in the previous screen as being of most importance. In this illustrative example Carol had chosen ‘Human Rights’ as having most importance to the case and this is displayed in the Figure 3.8.

Figure 3.8: The Rings screen, showing most important considerations in pie chart form.

Within the Rings screen the user has several opportunities to consider the proposal. The rings are able to be adjusted to better reflect the degree of importance of each consideration. Not only can each ring segment be changed in size but segments can be removed if not seen to be essential to the case. For instance, in the illustrative case Carol had removed ‘Emotion’ and ‘Law’ as she may have decided that those factors were less relevant to the way she felt about the case. In addition Carol adjusted the remaining ring segments to more accurately reflect her thinking. For each ring segment responses to questions are required that again help the user to think in more depth. There is also a free text area offering an almost limitless word space for considering the scenario in more depth (see Figure 3.9).

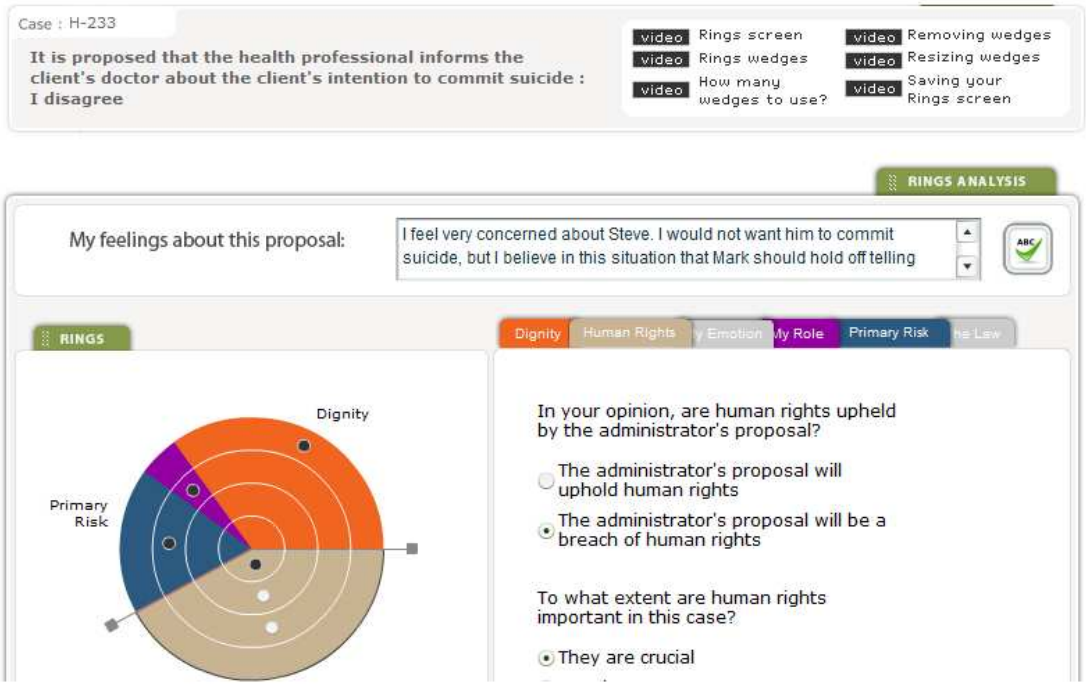


Figure 3.9: The Rings screen, depicting adjusted ring segments, compulsory responses and free text.

Once this Rings screen has been completed, users are directed to the Grid screen where reasoning can be given for the position taken. Grid tiles include a range of important considerations specific to the chosen Vx framework, which in this case include principles of relevance to health work (see Figure 3.10).

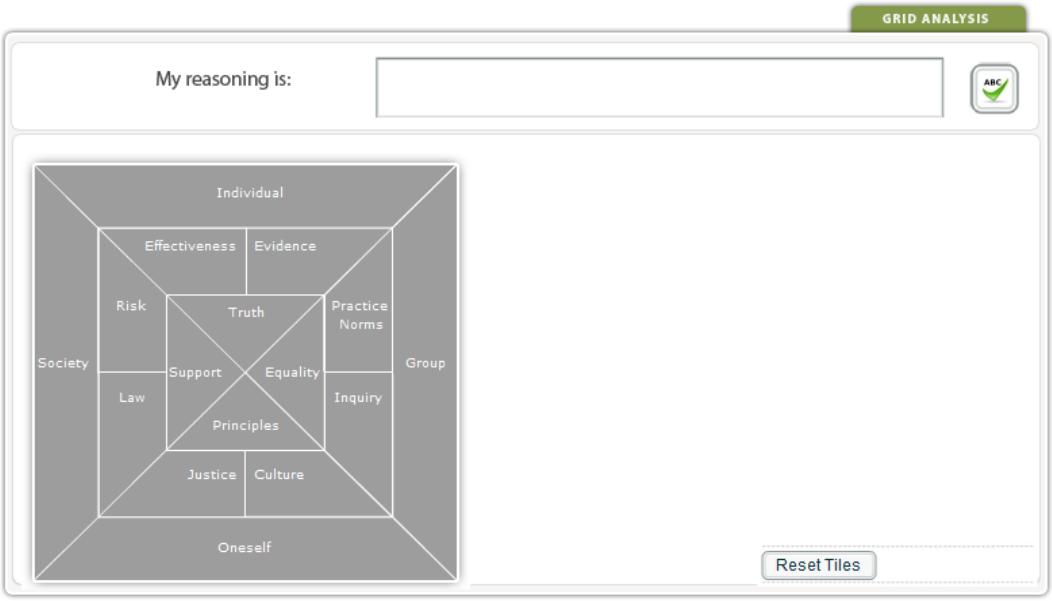


Figure 3.10: The Grid screen.

For each selected tile corresponding responses are required, each with several response options. While all tiles may have some degree of relevance to the case Seedhouse (2009) suggests that only 3-5 tiles be selected to enable clarity of argument (although it is totally permissible to choose fewer or more depending on one's reasoning). Again as with the Rings screen a free text area allows for reasoning to develop and decisions to be justified (see Figure 3.11).

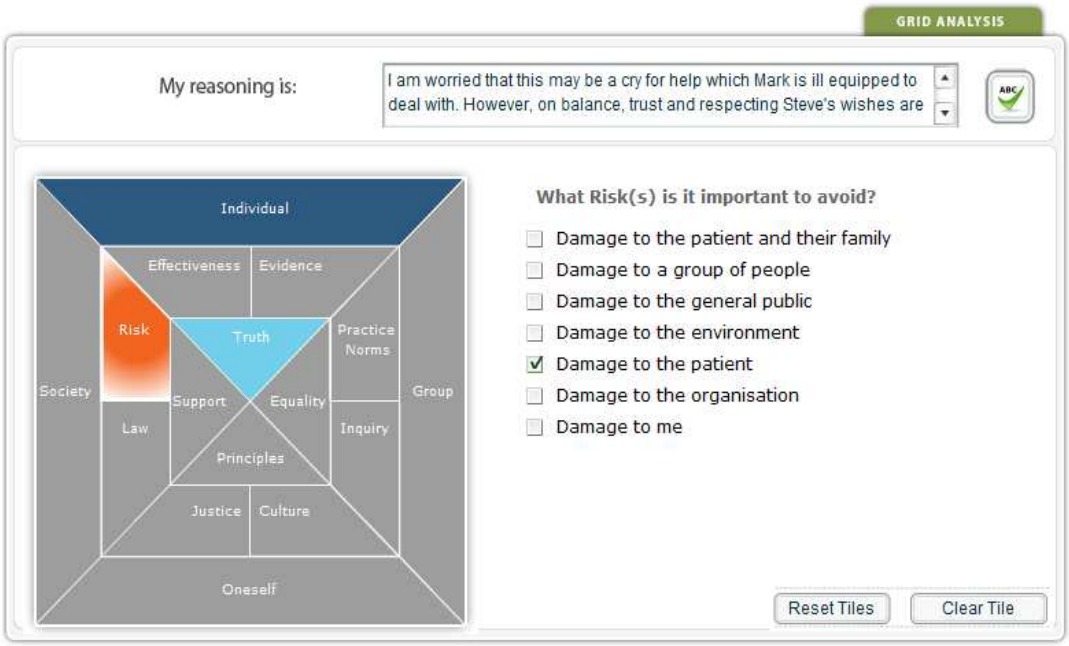
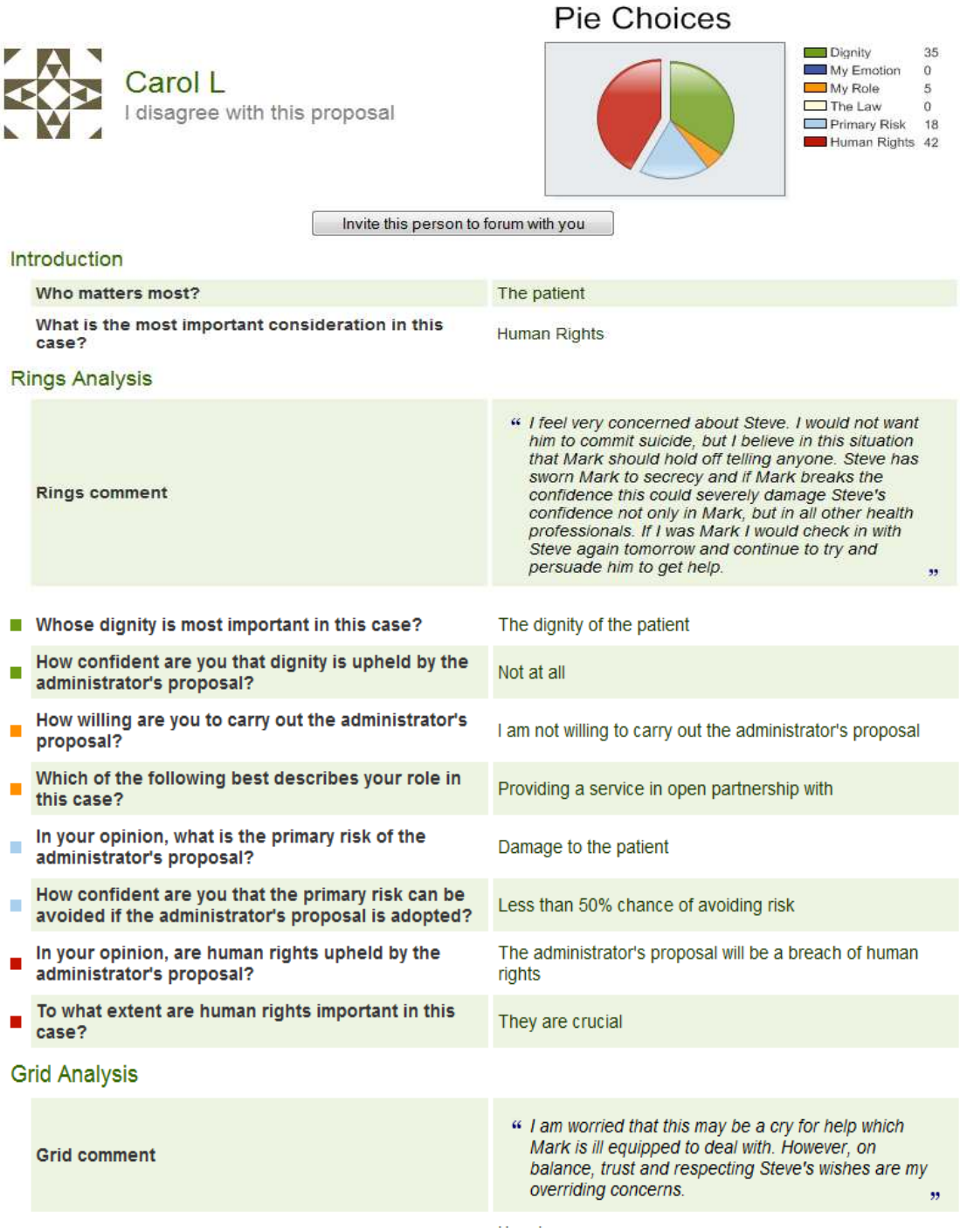


Figure 3.11: The Grid screen, showing selected tiles, check box responses and free text.

Once completed, the software generates individual reports which present the user's thinking and justifications. It is not possible for a user to see what others have written until that user has completed the case herself. However once a group of users have submitted the same case it is possible to access reports of any user. This offers a rich window into one's own thought processes as well as the deliberations of others. An individual Vx report for the illustrative case is presented in Figure 3.12.



Carol L

I disagree with this proposal

Pie Choices

Invite this person to forum with you

Introduction

Who matters most?	The patient
What is the most important consideration in this case?	Human Rights

Rings Analysis

Rings comment	*" I feel very concerned about Steve. I would not want him to commit suicide, but I believe in this situation that Mark should hold off telling anyone. Steve has sworn Mark to secrecy and if Mark breaks the confidence this could severely damage Steve's confidence not only in Mark, but in all other health professionals. If I was Mark I would check in with Steve again tomorrow and continue to try and persuade him to get help. "*
Whose dignity is most important in this case?	The dignity of the patient
How confident are you that dignity is upheld by the administrator's proposal?	Not at all
How willing are you to carry out the administrator's proposal?	I am not willing to carry out the administrator's proposal
Which of the following best describes your role in this case?	Providing a service in open partnership with
In your opinion, what is the primary risk of the administrator's proposal?	Damage to the patient
How confident are you that the primary risk can be avoided if the administrator's proposal is adopted?	Less than 50% chance of avoiding risk
In your opinion, are human rights upheld by the administrator's proposal?	The administrator's proposal will be a breach of human rights
To what extent are human rights important in this case?	They are crucial

Grid Analysis

Grid comment	*" I am worried that this may be a cry for help which Mark is ill equipped to deal with. However, on balance, trust and respecting Steve's wishes are my overriding concerns. "*

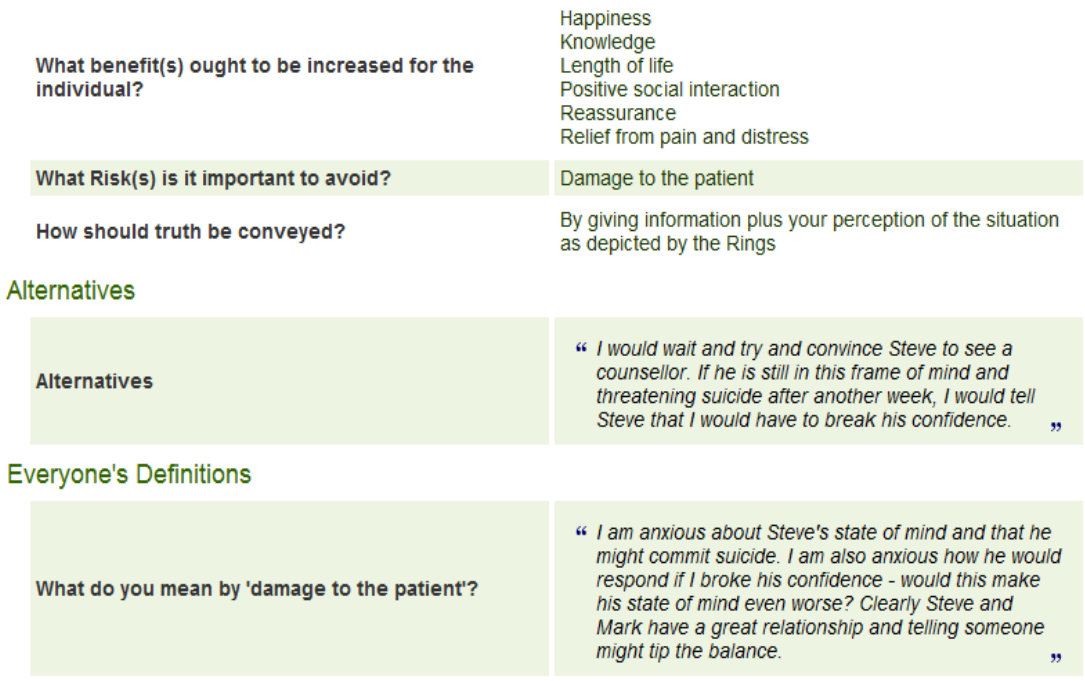


Figure 3.12: Example of individual user report.

The software also has a survey feature whereby users are invited to participate in online questionnaires that may relate to specific cases, teaching topics, or to gauge views on any important issue. The software facility allows for both open and closed questions to be posed. A range of survey response styles are available including drop down menus, radio buttons and continuum slides. As with the case scenarios, the surveys generate a rich source of data for research and discussion (Figure 3.13). Depending on the target audience, case scenarios and surveys can be made freely available to all registered software users or alternatively, access can be limited within a ‘secure’ area. Through this feature, software administrators can restrict access, for example for assessment purposes or protecting a specific research group.

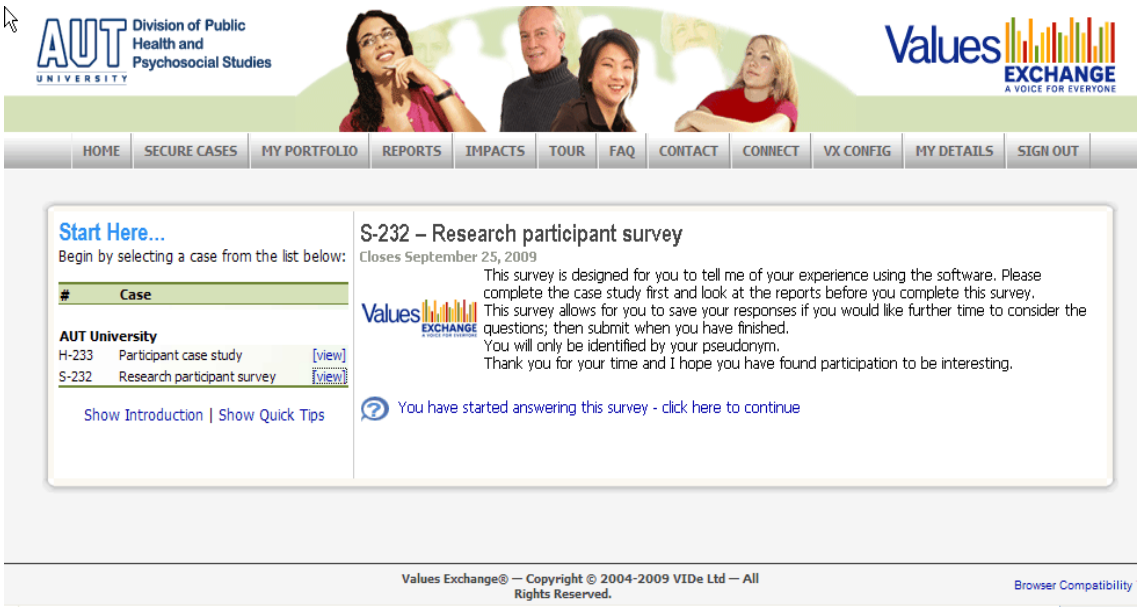


Figure 3.13: Vx survey facility.

This chapter has introduced the Vx software and described its major components. The Vx facilitates working through ethical issues by providing a semi-structured framework. The reports generated by the software enable an additional level of thought and analysis based on the exploration of one's own report or the reports of others. Anecdotally, access into the thinking of others has the potential for students to gain new insights into decision making. In order to more fully explore the educational potential of the Vx, case scenario reports will be analysed along with participants' reflections of their experience using the Vx for deliberation. The following chapter will outline the research design.

Chapter Four: Methodology and Method

Overview

In this chapter the methodological framework for the study will be outlined. The design of the study will be described to explain the ways in which the research questions were considered. Specific details relating to the use of a case study strategy will be presented including a description of the case, the data collection methods and an overview of thematic analysis as the method of data analysis. Validity and trustworthiness will be evaluated and specific ethical issues identified and considered.

Theoretical underpinnings

All research aims to methodically inquire and investigate phenomena of interest in order to expand knowledge (Merriam, 2009). Rather than there being any single objective meaning, this study takes the ontological position that multiple socially constructed realities exist (Patton, 2002). This research focuses on exploring and describing participants' experiences within the specific context of the Vx decision making software. As the researcher I have interpreted the ways in which the participants have constructed their own worlds; realising that my interpretation may not necessarily be the same as the participants' reality. Bassey (1999) made the point that by asking the research question, the researcher becomes a variable and the researcher's reality of the research situation is constructed.

The role of the researcher is a key characteristic of qualitative inquiry; they are interactive with, and inseparable from the participants (Lincoln & Guba, 1985). They are the research instrument for the study. There is an acknowledgement that the researcher is not impartial; they are personally involved in the research process. Other characteristics of qualitative research include its nature as an inductive process where findings from multiple data methods are collected and analysed textually, rather than numerically, to come to new understandings about the phenomenon (Merriam, 2009).

Patton (2002) advised that there is no consensus about which theoretical framework will provide the 'right' outcomes and that there is an astonishing diversity of what actually constitutes a qualitative inquiry. For example he presents sixteen perspectives and outlines specific sets of theoretical perspectives posited by various qualitative academics, all of which differ from one another. Much of the historic debate around

paradigms has centred on the dichotomy between quantitative and qualitative research. Patton (2002) suggests that that if we look carefully under the vast umbrella of qualitative research, there exists much diversity and a distinct lack of unity. He argues that this methodological dichotomy has only created biased perspectives. A more pragmatic approach is needed where the focus of any research should be on "methodological appropriateness" (p.72) and flexibility rather than any blinkered loyalty to a particular world view.

Merriam (2009) offers a helpful and unique interpretation of the relevance of theoretical frameworks. Rather than focusing on epistemology and methodology, Merriam sees more relevance in focusing on the concepts and models within one's literature review and the theories within one's specific discipline to identify the research purpose and shape the research process. Further, no researcher enters a study "with a blank mind, with no notion of what to think about or look for" (p.70). Rather than any specific theoretical drivers, the study was underpinned by the work of Yin (1994), Stake (1994) and Bassey (1999). The study was located within the ideological framework of the software (see Chapter 2, p.16-18).

Research design

The research employed a case study design. Case study has been interpreted and implemented by researchers in a variety of ways and while there appears to be a body of consensual knowledge around what case study usually entails, there is also an acknowledgement that there is no one clear definition; no one prescriptive way to conduct case study research. There is also a lack of consensus of its value. Flyvbjerg (2006) suggests that there are misunderstandings about case study which result in it being undervalued as a research perspective. By contrast, Cresswell (1998) described case study as one of the five main qualitative traditions. Debate exists as to whether the case study is considered a strategy, a method, a methodology or an approach; there is however a sense that the case itself is all important and is not defined by any particular method (Chamberlain, Camic & Yardley, 2004; Simons, 2009; Stake, 1995; Yin,1994).

The work of each case study theorist has provided a unique methodological lens to this study. Both Yin and Stake offer categorisations for case studies while Bassey presents a detailed description of what constitutes an educational case study. An overview of these perspectives grounds the particular way in which I implemented this research strategy.

Case study perspectives

The main purpose for conducting a case study is to explore the uniqueness and the singularity of a case (Simons, 2009). Among the various forms of qualitative research, the case study is often used to study innovative programmes (Adelman, Jenkins & Kemmis, 1976; MacDonald & Parlett, 1973; Merriam, 1988). Newcombe (2007), reflecting on her own Vx research, suggests a case study design may be particularly well suited to studying this software. She argues that a case study would enable in depth engagement with the participants. In addition, through viewing the reports of others, more opportunities may arise for reflection and learning. Her rationale has been taken into account when planning this study. Common to case study examples is the notion that the case can be viewed as a contained unit; a situation described by Smith (1978) as a bounded system. Underpinning all case studies is a desire to gain an understanding of a complex, contemporary social phenomenon.

Positioning case study more toward a positivist paradigm, Yin (1994) describes three main types of case study:

1. Exploratory, where a specific hypothesis is explored.
2. Explanatory, whereby cause and effect relationships are investigated
3. Descriptive, where the case is described, possibly as a precursor to future research.

This study has no hypothesis nor does it aim to explain any cause and effect. This study aims to describe the experience of Values Exchange software users. While future research is likely, the primary aim is to build a clearer picture of what the software offers this specific group of participants. This study will create an independent piece of research which will illuminate participants' experiences of the software programme. Therefore, this study fits best with Yin's descriptive case study category.

Stake (1994) identifies three main types of case study:

1. Intrinsic – to understand the actual case rather than for gaining information to apply to outside, wider issues,
2. Instrumental – using the examination of the case to help understand something beyond the case and
3. Collective – where a number of separate cases form a wider understanding of the overall case issue.

This study is intrinsic as the aim is to come to a better understanding of the software's use at this time with this group of participants rather than considering any broader issues, although it is possible that wider issues may arise which could inform future research.

Bassey (1999) outlines three sorts of case studies:

1. Theory-led or theory-generating. Theory-led cases study a specific case from a known theoretical perspective, whereas theory-generated case studies look to the data for the interpretation of theory as is the case in a grounded theory approach such as those put forward by Glaser & Strauss (1967).
2. Story-telling and picture drawing where cases are presented as descriptive narratives.
3. Evaluative case studies which attempt to assess effectiveness of the case, usually referring to educational programmes and projects.

The descriptive picture drawing that Bassey (1999) outlines accurately represents this case study. While a particular education programme is being studied, the primary aim is not to evaluate the programme but to present a descriptive account of the programme as experienced by the participants. Further, the study is neither theory led nor theory generating.

Simons (2009) focuses specifically on case studies implemented for evaluative purposes, where the worth of a programme is explored. Stressing the political influences present in such evaluations, she outlines the need for researchers to have an awareness

of who the stakeholders are and the need to provide balanced perspectives. While this study is not an educational evaluative case study, the work of Simons will still influence this study. Her academic commentary of case studies, now spanning several decades, provides depth and experience beyond that of educational evaluation.

Defining this case study

Therefore, by drawing on the writings of Yin (1994), Stake (1994) and Bassey (1999) this *intrinsic* case study will create a *descriptive picture* of the Values Exchange programme as used by this particular group of participants. This *picture drawing* will describe; the ways in which the software facilitates users to think about ethical issues, how individual values shape the decision making process and how individuals can learn about values and decision making from others. From this description, the uniqueness of the Vx, as experienced by these participants, will be better understood.

Justification for a case study strategy

There appears to be questions around the rigour of case study research. Fyvbjerg (2006) found that case study was seen by some researchers as too subjective, having been "relegated…to the methodological trash heap" (p.220). Walker (1983) claims that such research offers only uncontrolled intrusions in people's lives. However, by contrast, Simons (1996) argues that by focusing on the unique, tensions will always arise with those that seek wider generalisations. Using an educational setting, Bassey (1999, p.58) provides a comprehensive description of a case study. This is reproduced in Figure 4.1.

An educational case study is an empirical enquiry which is:

- **Conducted within a localized boundary of space and time (ie a singularity),**
- **Into *interesting* aspects of an educational activity, or programme, or institution, or system,**
- **Mainly in its natural context and within an ethic of respect for persons,**
- **In order to inform the judgements and decisions of practitioners or policy-makers,**
- **Or of theoreticians who are working to these ends, and**
- **Such that sufficient data are collected for the researcher to be able:**
    a) **To explore *significant* features of the case,**
    b) **To create *plausible* interpretations of what is found,**
    c) **To test for the trustworthiness of these interpretations,**
    d) **To construct a *worthwhile* argument or story,**
    e) **To relate the argument or story to any relevant research in the literature,**
    f) **To convey *convincingly* to an audience this argument or story, and**
    g) **To provide an audit trail by which other researchers may validate or challenge the findings, or construct alternative arguments.**

Bassey states that italics signify terms that involve value judgements by the researcher.

Figure 4.1: Bassey's educational case study framework.

This framework has guided my study as follows:

The focus is the Vx software programme. It is the case. The conclusions drawn about the software reflect a single data point; one possible set of research outcomes. The participants are the vehicle through which the researcher will explore the impact of the software on decision making.

The Vx clearly sits within the bounds of an educational activity or programme. The interest in the study lies in the fact that very little research has been done using the Vx (one unpublished Masters Dissertation by Newcombe, 2007). Anecdotal evidence

suggests that it helps students consider the role of ethics and values in their decision making. In addition, students appear to find it an interesting medium within which to learn.

Research needs to reach its intended audience. Adelman, Jenkins and Kemmis (1976), claim that case study research is more able to reach a broad range of audiences, mainly due to its use of everyday language. As such it contributes to the "democratisation" of research (p.149). Democracy is also central to the philosophy underpinning the Vx software. Seedhouse (2009) considers that any system (whether it be a research methodology, an institution or an educational programme) is only moral if it allows for all individuals to have value and to be valued. The Vx software achieves this position by being accessible to all members of an organisation or institution and allowing all users to access summaries that map the thinking and decision making of everyone. This helps to reiterate the importance of everyone's voice and personal values, rather than traditional institutional decision making which is often restricted to technical experts.

Seedhouse (2009) constructs a strong argument in favour of this democratic decision making process, pointing out that while technical experts have obvious expertise in their respective knowledge fields, this does not logically correlate with an inherent ability to reason in an ethical manner. This position is succinctly portrayed by Dewey (1948) when he states that

> The shoemaker is a judge of a good pair of shoes, but he is no judge at all of the more important question whether and when it is good to wear shoes; the physician is a good judge of health, but whether it is a good thing or not to be well or better to die, he knows not. (p.15)

If decision making by all is to be valued, then research into such democratic processes should not be limited to the annals of academic journals or university commons, but should be of use, be accessible and be *interesting* to those all affected by its findings.

Common to case study commentators is the idea that research needs to take place within a naturalistic setting. Simons (2009) affirms Yin's (1994) position that case study research takes place within a real life context, while Bassey (1999) suggests that it be "conducted mainly in its natural context" (p.47). Terms such as 'real life' and 'natural context' relate to a holistic, non-controlling ways of collecting data from a non-experimental environment.

An argument for pragmatics

Patton (2002) suggests that while the naturalness of case study research is accepted by most, in some instances the researcher may need to employ pragmatic strategies to ensure the research is achievable by "incorporating both inductive and deductive approaches and "even manipulating something to see what happens" (p.253). Along with Patton, I do not see this as incongruent with qualitative research and the case study methodology, especially if this manipulation is underpinned by an ethic of respect for the participants (see Bassey, 1999, p. 58). Flexibility and creativity should not be interpreted as inferior; in fact Patton suggests that focus needs to always remain on making the best use of the methods that will illuminate the research questions, rather than on any judgment of methodological superiority (Patton, 2002).

Pragmatics has been an important factor in shaping this research strategy. Patton (2002) argues that "situational responsiveness" (p.72) allows research to take place in light of the specific context of the study. He suggests that lofty theoretical descriptions of research methodologies seldom transfer smoothly into the field. In this study a potential conflict of interest existed which centred on my role as ethics lecturer and my interest in students' experiences of using the Vx software. Flexibility and creativity were required to minimise the power differential between myself and the participants. This impacted on the study design.

The Vx software has been used in teaching at AUT since 2005 with limited formal research into its use. It would have been of immense interest to explore the experiences of those currently or recently using the software. A substantial portion of course content is apportioned to using the Vx. In addition students have significant opportunities to use the software to deliberate practice specific case situations and to reflect on their experiences. However a conflict of interest existed. At the time, I was involved in both AUT's Faculty of Health and Environmental Science papers that utilised the Vx software. In addition, I also taught in another, compulsory, shared paper delivered across the faculty. Although in a different subject field, its compulsory nature meant that it was highly likely that I would have had ongoing teaching relationships with many participants. Unequal power has the potential to influence research findings with the researcher's position and presence ultimately influencing research outcomes (Finlay, 2002; Patton, 2002). The importance of dealing responsibly with this issue of power

imbalance was important for me. Not solely for its influence on research outcomes but for its impact on the potential participants.

I elected to recruit the most suitable participants that were available. I chose to focus on postgraduate students, with whom I had no existing or likely ongoing teaching relationship. At that time, the Vx was not being used within postgraduate health related degree programmes. Therefore the participants were asked to consider a learning tool that was not a part of their normal education. This could be interpreted as not within their natural context. It could be seen as manipulating the participants. However the software was still being considered within *its* own natural context. Its use within the tertiary setting, as a tool to learn about decision making was still being explored. In addition, the Vx is used within health care organisations. These participants also had the opportunity to take their experience of the Vx back into their health related places of work.

Every researcher must address the context and setting in which they conduct their research and the ensuing issues that arise. The potential conflict of interest provided a unique opportunity to reflect upon my role in the research process. In particular, I had to balance the requirements of case study strategy with the obligation to consider the research participants within an ethic of respect. This resulted in me adopting a more fluid perspective of case study research. Pragmatics enabled me to see terms such as ‘real life’ and ‘natural context’ as occurring on a continuum.

Research ethics

Within his framework Bassey (1999) calls for conducting research “within an ethic of respect for persons” (p.58). Case study research employs eclectic methods of collecting data. Bassey encourages researchers to be creative and rather than being influenced by established notions of research, to make research ethics the central guiding focus of one’s case study. This notion offers a synergistic link to the philosophy of Seedhouse (2009) in which every decision made is seen as having an ethical component. Therefore the role of ethics is fundamental to every decision within the research process. Bassey focuses on a set of specific research ethics. These are respect for democracy; truth, persons, and respect for educational research itself. Along with these, I propose this study is grounded in ethical principles specific to research within a New Zealand context.

With no constitution, the Treaty of Waitangi has found status as a founding document of New Zealand (Orange, 1987). There is more than one interpretation of this treaty. Under the Treaty of Waitangi Act 1975 (New Zealand Legislation, 1975), contemporary interpretation has been assigned to the Waitangi Tribunal. Dynamic principles have emerged and continue to be shaped by the Tribunal processes. Some in New Zealand share the opinion that the Treaty, signed in 1841 by both Crown and native tangata whenua (people of the land), should now be seen as a plausible framework for not only these two groups to work and live together, but as a philosophy to underpin all relationships (Auckland University of Technology Ethics Committee, n.d; Cole, 2000). AUT University's ethics committee requires all researchers to consider the role of these Treaty principles, namely partnership, participation and protection. Incorporating these specific principles ensures this research is conducted within an ethic of respect for persons and thus, in line with Bassey's (1999) working definition. I will now consider each principle in turn.

Partnership

Participation in the study offered mutual benefit to both researcher and participant. The researcher gained from the insights provided by the participants. However, in return the participants were given opportunities to reflect on their decision making. Critical reflection inherent in ethical deliberation can give rise to deeper understanding both of the situations under consideration but also of oneself and one's professional culture. The study potentially offered reciprocity between researcher and participant. Therefore there was the potential for participants to not only contribute to research outcomes but also to gain insight into their own decision making. This has benefits both in practice based settings but also in everyday life.

Participation

Participants were invited to use the Vx software to think about ethical issues based on practice based scenarios. The researcher provided the specific scenario. Participants used the software to think about the scenario and to complete a Vx generated survey. This provided data for the researcher to analyse. Given that there was no published research on the programme's use, the responses of the participants guided the subsequent interview process. While participants were not invited to approve research outputs, they had instant access to the Vx reports summarising their decision making responses. They were also able to access the reports of others. The Vx and the ideas of

democratic, transparent decision making are of great interest to me as an academic and as an educator. A consequence of participation is that their experience may have provided new understanding of ethical decision making to bring to their practice.

Protection

It is vital in our interactions with others that the vulnerable are protected from harm. Vulnerability exists where there is any imbalance of power and the nature of research imposes such a dynamic (Grinnell, 2004). Participants needed to feel free to participate but at the same time they needed to feel able to stop their involvement at anytime. This was emphasised throughout the study. In addition, participants were asked to choose a pseudonym to use throughout the research. This protected their privacy. Participants were also reminded throughout the study that ethical deliberation was not designed to be judgemental. There were no moral truths; their deliberations were not being assessed in any terms of right or wrong. These steps attempted to protect the participant, alleviate any anxiety and minimise any possible power imbalance between researcher and participant.

Implementing the study

Recruitment and participants

Initially, participants involved in postgraduate education at AUT were invited for this study. As discussed earlier a potential conflict of interest existed if I had pursued researching my own students. Instead with approval I approached paper leaders of several postgraduate health related courses and obtained permission to speak to their classes about my proposed study (none of whom were my own students). Once ethics approval was granted, participants were sought using two recruitment methods. In the first instance I returned to previously visited classes, as well as speaking to additional postgraduate classes. Secondly, an advertisement was placed on the student online notice board on AUT's online platform. Interested individuals were forwarded a Participant Information Form (Appendix C) and Consent Form (Appendix D). From these strategies, three participants were recruited.

Snowballing was used as additional recruitment strategy whereby study participants used their knowledge to inform others who they felt would be interested in the research. Patton (2002) describes snowballing as a purposeful way to identify "information-rich cases" (p.230) and, importantly in this study enabled the existing participants to foster

the principles of participation and partnership with the researcher. Snowballing identified interested individuals within other tertiary institutions and so additional ethics approval was sought to seek participants beyond AUT. After the successful recruitment of two additional individuals the study was started with a total of five participants.

Gerbic (2006) discusses recruitment problems in her study of undergraduate students using an online technology. She posits several reasons for low take up including a lack of time, a lack of gratuity, and a lack of understanding of the research process. While a lack of time is a plausible reason for postgraduate students, it is unlikely that they would lack understanding of the research process as many would be conducting their own research. I therefore feel that other factors were significant. The snowballing strategy identified some interested individuals but they declined to participate giving one of two reasons. Firstly people unfamiliar with the field of ethics seemed to be wary of being judged by the responses they might make, stating "I might give the wrong answer". Secondly, some declined to participate with reasons that related to the use of technology, for example "I'd be no good at that" and "I probably wouldn't know what to do". These sampling issues are worthy of further research to better understand what maybe a recruitment challenge unique to this specific field of research.

Justification of sample size

Participants were all female. They held diverse educational backgrounds and/or practice based expertise in the following areas; medicine, public health, nursing, dietetics, occupational therapy, mental health, health geography and health research. A sample size of five could be seen as a limitation of the study. However, most case study advocates stress the importance of focusing on the detail, the rich descriptions, and the in-depth exploration in order to illuminate the complexity of the case (Simons 2009, Bassey 1999; Flyvbjerg, 2006). With small sample sizes comes the opportunity, as Nietzsche stresses (as cited in Flyvbjerg, 2006), to "focus on the little things" (p.256). As with many aspects of qualitative study it is up to the researcher to justify the research decisions they make. There are several factors that help identify a suitable sample size such as the research method, the quality of the data and the topic being studied. Morse (2000) suggested that a smaller sample size is justifiable if the nature of the study has clarity and information is easily available. This study explores one software programme. Much of the data had been generated by the software itself and face to face interviews focused specifically on this one experience. Rich and diverse

data was readily available from different sources. Morse (2000) also emphasised that there can be no strict rules to determine the correct sample size. Therefore the potential limitation could be seen as a strength, as I was able to be fully immersed in the data. By being able to conduct my own transcribing and manual coding, I was able to stay close to the data. In addition, Patton (2002) draws attention to the constraints of time and resources. Despite the implementation of various sampling strategies no additional participants identified themselves. I proceeded with five participants and had confidence in my justification for this sample size.

The case scenario

The role of the case scenario was to provide a platform for participants to think about ethical issues in practice. It will be presented in full in Chapter five. In brief, the case scenario centred on a client/practitioner relationship in which the patient disclosed an intention to commit suicide. Furthermore, the client requested that this disclosure be kept in confidence. The selection of the case scenario was influenced by two main considerations. Firstly, that it would have resonance for all participants and the research audience. Secondly, the case was provocative in that it had two clear sides, but many shades of grey.

Consideration was also given to the protection of the participants and my desire for the research experience to be a positive one for them. AUTEC's Article 2.3.2 stresses the importance of minimising risks to participants (AUTEC, 2009). Within the Participant Information Sheet (Appendix C) I forewarned the participants that the case scenario centred on issues around suicide. This acknowledged the sensitivity of suicide for those affected by it, reducing the possibility of harmful surprises within the research process. As well as disclosing this information, participants were given contact details for AUT counselling support should it be required.

Pilot Study

A pilot test of the software was undertaken using a small group of software users. At this stage I envisaged just using the Vx case scenario followed by the Vx survey. I wanted to test the research instruments to ensure the software was operating without fault and that the instructions given within the software were easily understood. The Vx survey was composed of several open ended questions. The pilot study tested these questions in order to check that the comprehension of the questions matched the intention of the researcher.

Four software users completed the Vx case entitled “Pilot case”, followed by the “Pilot survey”. I sought colleagues and acquaintances that I knew had sufficient experience with the Vx software that completing the pilot study would not be overly arduous. All those involved in the pilot were very familiar with the chosen case scenario. Both the case scenario and the survey were exact copies of the actual study case and questions to be posed to the participants, as were the software instructions. All participants in the pilot group reported that the instructions were easy to follow and that the mechanisms of the software were operating without fault. No further analysis took place.

Equipping participants for the study

Participants were given 40 minute individualised software training sessions. With a small sample size I was able to offer flexibility in where this session was held; most participants chose for it to take place in my office at AUT. During this time the mechanisms of the software were explained, a detailed set of user instructions were issued, a practice case completed and opportunities offered for questions. In addition the software has inbuilt support available at each stage of the decision making process and accessing this help was demonstrated.

Participants were registered on the software by the researcher, using a participant appointed pseudonym, thus offering anonymity. Participants were then given a period of approximately two weeks to familiarise themselves with the software and to complete other, optional practice cases. The participants were advised to utilise the researcher for help if required. This assistance was not required. While this method of participant training was more time consuming for the researcher than a workshop for all participants it did suit the reality of sporadic recruitment. It also provided an additional level of protection for the participants. This training method meant that at no time during the research did any of the participants meet one another and so their privacy remained protected. While anonymity is not an essential element of the normal software process, it is relevant within the research environment and upon reflection I feel I was able to demonstrate an ethic of respect in the way this training took place.

Once the initial training session had taken place, the software could be accessed remotely from any computer, thus removing the physical presence of the researcher. The case scenario and the survey were loaded and participants were given a period of

three weeks to complete both tasks. Each participant completed the same case scenario. A challenge arose in that I did not want the early recruits to lose interest in the study while further recruitment was taking place and so each participant was trained and immediately offered the case and survey independent of other participants.

A significant aspect of the software is the potential to learn from others and to be able to view the case reports of other users. This was also an integral part of the study. Participants, having completed their own case scenario, were invited to view the reports of the other participants. In addition, several of the survey questions required the participant to view these reports and to reflect upon their experience of this process. An obvious drawback of this strategy was that the first participant would not have any other reports to view. As a pragmatic way to counteract this I invited a colleague, familiar with the software, to complete the case scenario in order to provide a resource for early participants. This person, also using a pseudonym, was only given access to complete the case and did not take part in any other part of the software tasks associated with the study.

Data collection

Case study data comprises of diverse sources of related information (Patton, 2002; Soy, 1997) but does not use any particular method of data collection. In fact Bassey (1999) advises researchers to "work out your own methods" (p.81) and to base those methods on sound ethical justification and best fit with one's research questions. I collected three sources of data. Importantly, all three were integrated to contribute to constructing the case rather than each element being viewed in isolation.

Vx case scenario reports

Upon completion of a Vx case scenario the software generates a series of online and printable reports which act as a record of each user's thinking process. While reports offer considerable insight into the way decision are made they also provide a context and useful cues for further data collection. Participants were asked to access and explore their own reports as well as the reports of others. I accessed these reports online but also kept printed copies for analysis.

Vx survey reports

Upon completion and submission of the case scenario, participants were invited to complete a Vx survey. The survey consisted of 16 questions arranged into four categories, namely 'Demographic information', 'Your Values Exchange experience', 'Reflecting on reports', and 'Final reflections' (see Appendix E). The aim of the survey was to elicit rich descriptions of the participants' experiences using the Vx. Together these descriptions would contribute to an understanding of 'the case'. Polit and Beck (2006) provide several advantages of using questionnaire style research instruments. These include anonymity and a lack of interviewer bias. Most questions were of an open nature and the software allowed unrestricted free text responses. The survey was set up so that participants could complete it at anytime subsequent to their case scenario submission and they were able to save their responses and return to complete in their own time. This enabled participants to exit the survey to explore their own, as well as the Vx generated case scenario reports of other users, before returning to the survey to reflect and respond to questions relating to these reports.

Allowing participants to view and reflect upon their own reports was an effective way to address validity (Bassey, 1999) and also reinforced the principles of partnership, participation and protection that underpin this study. In addition, the save and return feature allowed participants some control over the research procedure which was important as for some participants, the survey questions required timely consideration and thought before a response could be offered. In my view, the sharing of information and personal reflections within the Vx reports helped to foster an environment of openness which may have contributed to increased partnership and participation within the subsequent face to face interviews.

Yin (1989) reminds us that case study design need not be completed prior to the study, but revised during data collection. For this reason the study was conducted in two phases. Firstly the Vx case scenario and Vx survey were conducted. The data collected helped provide an extended exploration and elucidation of the participant's Vx experience. This allowed the researcher to be open to what appeared in the data. Subsequently, these data sources became the basis of the face to face interviews. AUTEC approval was given for this subsequent data collection method (Appendix B). Corresponding Participant Information Forms (Appendix F) and Consent Forms

(Appendix G) were distributed to the participants. All agreed to continue their involvement in the study.

Face to face interviews

In addition to Yin's (1994) methodological guidance regarding case study design, other factors contributed to the decision to conduct face to face interviews. Firstly, my own experience as an educator using the Vx related to groups of students using the software for sustained periods over the course of a semester. With a lack of published research using the Vx I had little guidance as to the potential quality or quantity of the data from the participants. In addition it was considered that the interviews would contribute to the validity of the case through triangulation because an interview allowed for a more in-depth understanding of 'the case' (Simons, 2009). Finally, I had been involved in using the Vx for several years and relished the prospect of learning more about the software from the participants themselves.

Most qualitative texts outline three main types of interview strategy, namely an informal conversational style, the semi-structured and the open-ended (Patton, 2002; Merriam, 2009). However Patton (2002) also discusses the suitability of a combined approach which was employed in this study. Interview questions were identified from the early findings of the Vx case scenario and survey reports. A semi-structured interview style predominated and a predetermined set of indicative questions was used to frame the interview with flexibility of order and wording used (Appendix H). Interviews allow for in depth information to be elicited from participants but also, in a semi-structured design allow ad hoc probing of new insights arising within the interview space (Simons, 2009). Interviews are one of the most common forms of data collection in qualitative research as they offer depth and flexibility. Patton (2002) describes interviews as allowing the researcher to "enter into the other person's perspective" (p.341). Interviews can also be seen as a challenging data collection method as some participants may feel discomfort at the thought of a permanent record or the concern of unwanted disclosures (Simons, 2009). A specific challenge associated with this study was there was a time lag of up to seven months between participants completing the Vx case scenario and survey components, and the face to face interviews. This was due to a range of unforeseen factors including work, travel and study commitments of the participants, unexpected employment responsibilities for the researcher, and delays for secondary ethics approval.

Strategies were adopted to minimise the impact of these delays; all participants were invited to revisit the software site, a full set of participant Vx reports were printed and posted to each participant, as was a copy of the semi-structured interview questions. Simons (2009) provides a twofold rationale for forewarning participants of the interview questions. Firstly it allows the participants to prepare for the interview which was helpful in this study because of the time delay between data collection activities. Secondly it demonstrates to the participants that the researcher has genuinely 'listened' to data already collected thus "establishing credibility with knowledge of the key issues" (p.48). Simons (2009) discusses the use of props in interviews and the value they have in eliciting responses. Providing participants with printed copies of the Vx reports was a strategy used to encourage reflection of their Vx experience and minimised the impact of this time lag.

Kvale and Brinkmann (2009) remind researchers that questions need not be the same for each participant. Not only will each question be interpreted differently, some participants will provide more depth of response allowing for the subsequent posing of highly individualised second questions. At times within the interview, participants were encouraged to reflect on individual responses they had made to specific Vx case scenario and survey questions and these were tailored to each participant. Some responses opened up new areas of interest for the interviewer and participant. At times the interviews took on a more conversational style with impromptu probing questions. Essential to probing questions is an ability to be an active listener as well as an in-depth knowledge of the research area (Kvale and Brinkmann, 2009). Having previous experience in consumer advocacy, as well as my present role as tertiary educator, meant that I felt confident to adopt this probing interview style.

Interviews were carried out between June 21st, 2010 and August 4th, 2010. Participants were asked to select a preferred interview location and while three participants elected to come to my office, two opted for me to visit them in their homes. I was willing to be flexible and was aware of my role and responsibilities within each location. Prior to the recording of the interview a period of casual conversation took place. While Simons (2009) feels such 'icebreakers' are unhelpful and that rapport can easily be established by just briefly outlining the study aims I felt that given the duration between the researcher-participant interactions there was a need for both parties to reconnect with

the study, and with one another. A brief overview of the research aims was verbalised and participant information and consent forms were revisited with opportunities for questions. At this stage the audio recording device was tested and recording began.

Reflective journal

A reflective journal was also kept with entries relating to critical points of interest as well as theoretical and methodological questions rising from my research experience. As the research progressed the journal became a repository for visual interpretations of the data as well as manually coded data print outs and personal reflections. The reflective nature of the journal also helped me to continually consider my role as an 'insider'. My interest in the Vx software and its use in ethics education is as an insider. As an ethics educator using the Vx in my workplace I acknowledge that I bring beliefs and values about ethics and the Vx to the research. Understanding the influence of these values is an important aspect of qualitative inquiry (Patton, 2002). My point of view is similar to that of Phillips (2005) who argues that it is not possible to set aside preconceived notions. Rather, new understanding of self and others comes about by acknowledging these influences and having a heightened awareness of their presence. Merriam (2009) advocates for acting and thinking in a manner that is both sensitive and respectful and I feel the research journal has facilitated this process.

Data analysis

Data analysis is a creative process with no set guidelines or procedures to follow (Simons, 2009). However, there should still be sufficient transparency within methodological writing for the analysis process to be understood. Coherent analysis of the data is essential and is best begun during the data collection process rather than at its completion (Merriam, 2009; Bogdan & Biklen, 2007). The Vx generates its own summary reports and so the data from the case scenario and survey were produced ready for analysis and for informing the subsequent face to face interviews.

Thematic analysis

A thematic analysis of the data was undertaken as the data was collected. Initially the data consisted of the just the Vx case scenario and survey reports with their interpretations forming the basis of the face to face interviews. The transcribed interviews were then analysed, and together with the initial Vx generated data represented the entire data set. Thematic analysis is a tool for helping the researcher to

make sense of their data rather than being seen as a separate research method (Boyatzis, 1998). It is an active process with common instances of an idea or theme identified across different sources of data. Thematic analysis is widely used however the process is not often described or explained. Authors such as Tuckett (2005) and Braun and Clarke (2006) argue for more transparency when documenting this valuable analytic method. I have used the six step processed developed by Braun and Clarke as the framework for my thematic analysis (p.87). This is replicated in Figure 4.2.

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

Figure 4.2: Braun and Clarke's phases of thematic analysis.

Following the steps in Figure 4.2, the participant's responses were initially read through several times to gain an overall understanding or view of the data and then after several readings, each line was scrutinised and codes (early interpretive suggestions) noted in the report margins. Points of interest were identified consisting of areas of consensus as well as points of difference. Through numerous readings of the data these points were grouped into categories and listed within my research journal. With successive readings categories were inductively amalgamated and refined. For each participant's Vx case scenario and survey report, each line was assigned to an existing category or to a new one until saturation occurred.

Merriam (2009) suggested that making sense of the data in qualitative research actually equates to the extent to which the findings answer the research questions, with the 'answers' represented by codes and themes. This notion was also supported by Braun and Clarke (2006) who claim that one of the strengths of thematic analysis is that there is considerable flexibility in how these themes are identified with the main criteria for a theme relating to the extent to which the idea contributes to the research questions.

Initially I had all but dismissed the relevance of the case scenario itself, viewing the research questions as relating to the decision making process rather than any actual decision outcome. I saw the role of the Vx case scenario as providing participants with a Vx decision making experience to later reflect upon. However, upon closer scrutiny of the data I found that while each Vx case scenario report mainly contained data related to the scenario itself some also contained self reflective content. Conversely, the Vx survey focused on reflections of the Vx experience. It was predominantly process orientated. However many participants used this opportunity to included further analysis of the actual case scenario. I have identified this as a product/process distinction. I initially considered analysing these sets of data separately. A period of reflexivity and discussions with my supervisor helped me see that many perspectives are needed to construct 'the case'. The data can have both separate and connected meaning. Therefore in my view, the research questions are best answered by considering data relating to both decision making process as well as the product of the case scenario decision itself.

Peer examination of early interpretations

Simons (2009) discusses the importance of early interpretations in that they can alert the researcher to important areas to focus upon. Before I conducted any interviews, I presented my early findings to the New Zealand Bioethics Conference in Dunedin, 29-31 January, 2010. This offered a valuable opportunity to present my work and to gain valuable feedback from established academics in the field of bioethics. The conference encouraged diversity of thinking and given the timing of my study, providing a relevant forum for sharing my initial ideas. The timing of the conference was ideal as it came at an important point in my research and gave the opportunity for peer discussions on the emerging findings and, at that early stage, to air my ideas within a safe, academic environment. Merriam (2009) described such peer examination as an important strategy in ensuring the trustworthiness of the research.

Analysis of interview transcripts

Bird (2005) describes transcription as "the act of (re)presenting original oral language in written form" (p.227) and argues that while this translation is underpinned by social and political ideologies, the process is primarily of ethical concern with careful consideration needed to ensure the participant's 'voice' and intended meaning, is heard. As a novice researcher I had concerns about the validity of my interpretation of the interview text as there is little written about the actual transcription process. Often within published research there is an acceptance that the transcript is just a written version of the interview; a "mundane and technical step" (Lapadat & Lindsay, 1999, p.67). However, I was acutely aware that any transcript is a socially constructed version of the actual interview and that meaning can be literally lost in translation. Authors have highlighted the need for further investigation into transcription significance and its role in the research process (Bird, 2005; Lapadat & Lindsay, 1999). I have found this an ethically and methodologically challenging aspect of the study.

My reflective journal was useful at this stage in the research as it offered a space to record my feeling about the interviews; about their product and the process. All audio recordings were first hand written into my reflective journal. This was very time consuming and other, more efficient methods existed such as transcribing machines. However, it provided a unique opportunity to immerse myself within the data (Tuckett, 2005). In addition, this closeness to the data allowed early analysis to begin to take place (Kvale & Brinkmann, 2009). During this process I became very familiar with each

transcription as well as learning a lot about the transcription process and the particular characteristics of how I interpreted the interviews.

Word documents were created for each manually written transcript. To begin with everything was noted, including pauses and utterances. This was then transformed into a more formal style to protect the participants. Kvale and Brinkmann (2009) discuss the impact of verbatim transcripts on participants who may feel that their interview projects a poor oral style and so these aspects were removed. Sentence beginnings and ends were often difficult to determine, some words hard to hear and some phrases did not have clear meaning, for example 'you know'. I therefore felt a significant ethical responsibility to the participants to produce a text that best reflected their ideas and so reliability was addressed by returning transcripts for approval or amendment by each participant. Two participants made changes to my transcripts which demonstrated the partnership within the research process. Kvale and Brinkmann (2009) conclude that transcriptions are "impoverished, decontextualised renderings of live interview conversations" (p.178) and unlike the Vx generated reports which represent actual participant responses, the transcripts represented only a constructed interpretation of the interview.

Trustworthiness: triangulation and validation

In any research there is a necessity for the researcher to demonstrate the quality of the findings and to provide a rationale for why the methodology, methods and findings, should be trusted (Simons, 2009). Case study examines a particular policy, programme or institution because it is of interest to the researcher and through such examination a better understanding of the uniqueness of the case is possible. Because of this uniqueness replication of research is not necessarily a relevant feature and there is an agreement that many evaluative measures used in other qualitative studies are problematic in case study research and that the term 'trustworthiness' may be a more appropriate term of evaluation (Bassey, 1999; Merriam, 2009; Simons, 2009).

Strategies for checking trustworthiness include triangulation and validation (Simons, 2009). Triangulation can involve the use of different sources of data that together contribute to an overall understanding of the case. Originally used in land survey and navigation, the term suggests that by using varied points of data collection, each will enhance the ability to find 'the truth' (Merriam, 2009). More recently a crystal analogy

has been used which represents the complex perspectives and multi-dimensional factors that contribute to the multidimensional richness of qualitative research (Merriam, 2009). Simons succinctly describes the dimensional qualities of a crystal.

> The crystal is a solid object, yet it can be turned in many directions to reflect and refract light. We can see alternative meanings, subtleties (shades of meaning) and how elements of the data may have separate significant meanings yet retain a connection and integration to the whole. (p.131)

While all three data sources contributed the triangulated findings, like a crystal, the Vx case scenario reports in particular offered their own meaning as well as contributing to the overall understanding of the case.

Finally, an audit trail may contribute to case study trustworthiness (Bassey, 1999; Simons, 2009). Bassey (1999) stresses that any research report needs to include sufficient methodological detail to enable the reader to see value in the study and sufficient detail to make their own interpretation of the data.

Validity relates to the accuracy of the research findings (Simons, 2009). While accuracy is linked to the use of appropriate methods of data collection, relationships within the research process are also important. Through establishing respectful relationships 'quality' data is more likely (Simons, 2009). Relationships were fostered in several ways. Firstly, the Vx offers decision making transparency and so each participant was able to access their own case scenario reports and to also examine case scenario reports for all other participants. Secondly, participants were all given access and encouraged to participate in any other Vx case scenario that was currently available on AUT's Vx website thus giving them opportunities to gain confidence and compare how other users had responded to case scenarios. In addition, following each face to face interview, transcripts were returned for validation, demonstrating democracy within the study. Presenting at conferences is also seen as a way to validate findings (Gerbic, 2006). As previously discussed, this was a beneficial forum to discuss my research with academic peers and establish wider collegial relationships.

Concluding comments

Limited research using the Vx coupled with anecdotal evidence that students found the software beneficial created the interest for the study. A pragmatic approach to qualitative inquiry was adopted using a descriptive case study methodology. The Vx

was the case. The study was initially informed by the work of Yin, Stake and Bassey with additional guidance from the work of Merriam and Simons. These influences were coupled with the need to make practical research decisions to suit the particular context and setting. Three data sources from five participants provided rich data that was thematically analysed. Strategies were put in place to ensure trustworthiness; these included triangulation and validation. Research ethics was the guiding force of this study. Each research decision was weighed up within an ethic of respect for the participants. In the following chapter, the findings will be presented.

Chapter Five: Findings

Overview

In this chapter the main findings of the research will be presented. The three data points were analysed. Collectively the data contributed to three themes relating to decision making. Of these, one theme related specifically to the decision outcome, which I have described as a 'product' related finding. This theme is predominated by case scenario report data. I called this theme 'recognising inherent tensions' because throughout the deliberative process and subsequent reflections participants appeared to experience competing and conflicting interests. These were not always explicit. The remaining two themes related to the decision making process, which I have described as 'process' related findings. These themes are informed more by the survey and interview responses. The second theme related to participant's reflections of the research experience and its impact on their understanding of decision making. I called it 'new ways of seeing'. The third theme was associated with participant's experiences of the decision making environment, in particular the use of asynchronous web-based technology. I called this theme 'foundations for thinking'. An overview of the participants and general demographic information will be presented. This will be followed by descriptions of the three themes.

This findings chapter describes the participants' experiences; it represents their voices. I have tried to portray this by integrating their responses into the text. They have been italicised to give them visual prominence throughout the chapter. It is usual for long quoted extracts to be set off from the normal paragraph. I did not feel this was an appropriate way to represent their voices. The participants are central to this chapter; they should not be seen as an outside source.

Demographic information

The Vx collects general demographic data from all users. While the face to face interviews elicited additional incidental knowledge about each participant, the overall intention was to keep the level of participant information close to the level usually obtained from Vx users. Figure 5.1 outlines the main demographic data.

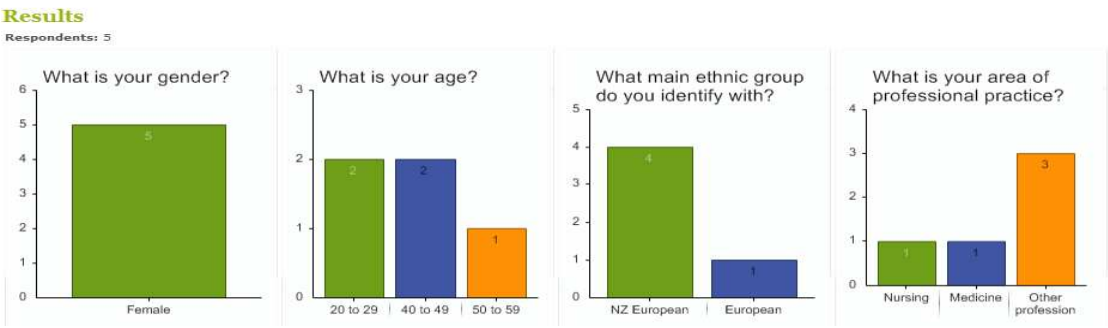


Figure 5.1: Main demographic data.

All participants were female of varying ages. Four out of five identified themselves as NZ European, and one as European. All participants came from different professional backgrounds. These included nursing and medicine. Three participants identified with 'Other' areas of practice. They identified themselves as an occupational therapist, a health geographer and a dietician.

The case scenario

Participants were invited to consider the following practice based scenario:

Mark is a health professional working in the burns unit of Central City Hospital. Mark has been working with Steve for the past 2 months. Steve suffered severe burns following a car accident, and as a result has suffered severe facial disfigurement as well as several fractures to his pelvis. Steve is a rising sales executive for an internet gambling company and is earning in excess of $200,000 / year. Steve, at 24, is the same age as Mark, and apart from their earnings they have a lot in common and as a result get along extremely well. They both believe in working hard and playing hard. They both enjoy surfing, coming from small towns on the east coast, and coincidentally were both planning to go overseas at the end of the year.

In the past 2 weeks, Mark has noticed a distinct decline in Steve's mood. Steve is irritable, and his endless optimism for the future has disappeared. Steve is unmotivated and is not making any progress with his mobility. Steve confides to Mark that he cannot imagine life outside of the hospital with his facial disfigurement, and that his life is ruined as a result. Steve swears Mark to secrecy, and tells Steve that he is saving his

medication for the right time to commit suicide. Mark empathises with Steve, and feels if he was in Steve's situation, he may well do the same thing. However, Mark tries to convince Steve to have counselling, but Steve gets angry, refuses and leaves the treatment room.

For this case scenario the proposal was that '*the health professional informs the client's doctor about the client's intention to commit suicide*'.

Deliberative summaries

Once the case scenario deliberation had been completed the user was presented with a report summarising the main results relating to agreement with proposal, key concepts, gender and age. This is presented in Figure 5.2.

Figure 5.2: Results overview.

Quantifying the data in this way would have more resonance for a larger sample size, however the summary report still gives a good visual snapshot showing who had taken part and how the case scenario had been considered. In particular the summary screen provides a visual indication of whether participants agreed or disagreed with the proposal. Additionally, the coloured representation of the six key concepts provides instant visual analysis of their relevance to the proposal positions. Figure 5.2 provides collective results. Each participant's individual perspective is described and then summarised in Table 5.1.

Bella

Bella is in the 40-49 age category. Her professional education and background is medicine. She agrees with the proposal. She feels that the health team and the family are the most important aspects of the case and that the ‘Law’ is the most important starting point. Bella also sees ‘My Role’, ‘Primary Risk’ and ‘Human Rights’ as important. Bella has selected ‘Emotion’ as lowest in importance.

Gracie

Gracie is in the 50-59 age category. Her professional and educational background is nursing. She agrees with the proposal. She feels that the patient is of most importance and she considers ‘Primary Risk’ as the most important starting point. Gracie also sees ‘My Role’ and ‘Dignity’ as relatively important but not ‘Law’ or ‘Emotion’, giving both a zero weighting.

Miriama

Miriama is in the 40-49 age category. Her professional and educational background is in occupational therapy. She agrees with the proposal. She feels that the patient is most important and ‘Primary Risk’ is the most important starting point. Miriama also feels ‘Human Rights’ has some importance but does not consider ‘Emotion’ as relevant as ‘Dignity’, ‘My Role’ and ‘Law’.

Melanie

Melanie is in the 20-29 age category. Her professional and educational background is dietetics. She agrees with the proposal. She too feels the patient is the most important consideration. Melanie sees ‘Primary Risk’ as the most important starting point with ‘Law’ and ‘Human Rights’ as also of some relevance. Melanie gives ‘Dignity’ and ‘Emotion’ zero to ‘My Role’.

Margaretha

Margaretha is in the 20-29 age category. Her professional and educational background is health geography. She disagrees with the proposal. She feels the patient is of most importance and ‘Human Rights’ is the most importance starting point. ‘Primary Risk’ and ‘Dignity’ are of some importance. Of her selected considerations ‘Emotion’ is given the lowest weighting with ‘My Role’ and ‘Law’ given zero weighting.

Table 5.1

Summary of individual participants' initial focus.

	Bella	**Gracie**	**Miriama**	**Melanie**	**Margaretha**
Proposal position	Agree	Agree	Agree	Agree strongly	Disagree
Who matters most	A group of people [a]	The patient	The patient	The patient	The patient
Most important consideration	My Role	Primary risk	Primary risk	Primary risk	Human rights

[a] Bella identifies a group of people as 'the health team and the family

For this study, individual user reports were used for analysis (see Figure3.12 for an example). Firstly I examined data relating to the primary questions posed. These related to the initial proposal position and identification of initial focus (see Figures 3.4 through to 3.7). Secondly, I explored the free text responses within the 'Rings' and 'Grid' screens.

Users could deliberate case scenarios as an outsider from a bird's eye perspective, or by seeing themselves as the health professional within the scenario itself. This is reflected in the participant's responses whereby some referred to the health professional by name i.e. Mark, while others positioned themselves more centrally, using 'I' within their responses.

The decision making product: Realising inherent tensions

Recognising complexity

Within each case scenario the Vx user is first presented with background information pertaining to the specific situation. This is accompanied by a proposal which suggests one possible course of action. The Vx user must take a position regarding the case scenario proposal. Within the 'Introduction' screen a decision must be made as to what

extent they agree or disagree with the proposal. This provides the user with a starting point for their deliberation. In the case scenario in this study, the proposal was that '*the health professional informs the client's doctor about the client's intention to commit suicide*'. Three participants selected 'Agree' and one chose 'Strongly Agree'. One participant selected 'Disagree'. Interestingly, whilst the decision outcome is completely different, the values driving the decision are similar. From a decision outcome perspective Melanie and Margaretha disagreed. Upon closer examination, aspects of their arguments bore similarities. They both wanted Steve to realise that recovery was possible, although the road ahead would not be easy. Clearly, they both shared the same goal; for Steve not to commit suicide.

Melanie agreed strongly with the proposal to inform the client's doctor. *Steve is neither old nor completely incapacitated, he could lead a normal life- there is surgery for facial reconstruction…Steve needs to be given time to recover fully because things may still improve…*[but] *it is still Mark's responsibility to tell the doctor about Steve's intention to commit suicide* (Melanie, case scenario report).

From a different perspective, Margaretha disagreed with informing the doctor. *I am convinced that the most important issue is to avoid the suicide…I know that there are coping strategies available, for example cosmetic surgery…I think explaining to him that ups and downs in the healing process are normal…but I think telling his doctor is the wrong way as it breaches our confidentiality agreement* (Margaretha, case scenario report).

Whilst shared values can drive different decision outcomes those who share a position on the case scenario do not necessarily hold common values for all aspects of their deliberation. This is evident within the responses to the question 'Who matters most?' Four out of five participants considered the patient as mattering most, while Bella considered this focus should be on a group of people. The software enabled users to define 'group' and Bella stated that 'group' referred to the health team and the family. So, while Gracie, Melanie, Miriama and Bella all agreed that the doctor should be informed; the values driving their decision differed. While most were concerned about the risk to the patient; Bella's focus was on the health team and the client's family.

The third aspect of the 'Introduction' screen was to clarify the most important consideration in the case scenario. Again there was a certain degree of diversity within commonly held positions. Of the four agreeing participants, three felt that 'Primary Risk' was of greatest consideration; each relating this risk to the patient. However Bella considered 'My Role' as most important. Margaretha, who disagreed with the proposal, chose 'Human Rights'.

One aspect of this study has been to explore the ways in which individual values have shaped the decision making process. Examining and comparing the preferences of those agreeing and disagreeing with the proposal contribute to an understanding of the role values play in the choices made. Users have additional opportunities to consider the case in depth within the 'Rings' screen (see Figures 3.8 & 3.9). Users assign each of the six pre-determined values a weighting based on the perceived relevance to the case scenario. Each participant's 'Rings' weighting is summarised in Table 5.2.

Table 5.2.

Rings screen percentage weightings.

Participant		Bella	Gracie	Miriama	Melanie	Margaretha
Position		Agree	Agree	Agree	Strongly Agree	Disagree
Key considerations	Dignity	13%	18%	9%	5%	19%
	My Emotions	7%	0%	5%	5%	5%
	My Role	19%	24%	9%	0%	0%
	Law	24%	0%	9%	19%	0%
	Primary Risk	19%	45%	48%	55%	35%
	Human Rights	18%	13%	20%	16%	41%

Note. Shaded areas denote the factor given greatest weighting, as calculated by the software.

In the ‘Introduction’ screen users are asked to choose their most important consideration whereas in the following ‘Rings’ screen they are asked to manipulate the pie chart to visually represent the relevance of all six consideration options. In most instances participants reinforced their initial focus by apportioning the greatest rings segment to the factor they identified as having greatest relevance. For example Gracie, Melanie and Miriama all identified ‘Primary Risk’ as their most important factors both in the ‘Introduction’ screen and within the visual representation within the ‘Rings’ screen. For Bella though, after initially choosing ‘My Role’ within the ‘Introductory’ screen, her visual representation showed the ‘Law’ as most important. While this could be seen as an inconsistency, it may also demonstrate the inherent tensions within her decision making. Bella speaks to this within the free text. *At this point I am aware that I might change my mind as I think I am being driven more by the law than anything else* (Bella, case scenario report).

In addition, Bella gave very similar weightings to several other considerations (‘Human Rights’, 18%; ‘Primary Risk’, 19%; ‘My Role’, 19%). Furthermore, the weighting of these secondary factors is not too dissimilar to the weighting she gave to her factor of greatest consideration (‘Law’, 24%). Again this may represent the complexity that Bella experienced, and which she commented upon within the free text. *I haven’t changed my mind, yet I’m more clearly aware of how complex the decision is than when I first started* (Bella, case scenario report). On the other hand, Melanie’s decision appeared much less complex. ‘Law’ with a weighting of 55% is her consideration of greatest importance and this stood well apart from her other considerations. Within her interview she confirmed this. *I saw it as very black and white* (Melanie, interview). While an initial gut reaction to a situation may appear black and white, further examination exposed increasing shades of grey, as Melanie observed. *What I found interesting was that there were people who were willing to see it in much more levels of grey…I thought it was a cut and dry case* (Melanie, interview).

Participants, irrespective of their experience or knowledge of dealing with ethical issues, recognised that decision making can be more complex than expected, as Margaretha explained in her interview. *I have read some articles about ethical considerations…but I did not realise how diverse and complex these problems are and how many different opinions exist (*Margaretha, interview).And again, when considering the way she approached the case scenario, Margaretha saw added complexity.

I completely forgot about the legal issues that could be involved and that's actually a very important argument. I just didn't think about that and reading the others just added to the complexity because my focus was on me as Mark and I didn't really consider the wider context (Margaretha, interview).

Complexity existed in different forms. For Bella, the software enabled her to see additional complexity within the scenario, but also complexity within herself. *Working through the decision making process so explicitly really highlighted the complexity within me – both the tensions within the scenario but also the conflicting values within myself* …[The Vx] *helped me to understand the complexity of my own thought processes"* (Bella, interview). For Miriama, the decision making process allowed tensions between her personal and professional roles to be realised. *Situations are complex between your own professional role and your own personal values…you get really tangled in the dilemma of your personal views and your obligations as a clinician, regardless of your experience level* (Miriama, interview).

Miriama also reflected on the difference between using a software programme to facilitate thinking and how she might approach a similar issue in the work place. She suggested that although the Vx process enabled complexity to be recognised, the reality was that in practice even more factors would come into play. *You can think of how a situation is going to be but when you're actually in there, there are so many more factors that influence things* (Miriama, interview). This was a perspective also shared by Gracie. *I think my decision making is…able to take into account many more situational variables than a software programme* (Gracie, survey).

While the realisation that decision making is more complex than first thought, participants generally came to see complexity as beneficial. For Melanie, alternative perspectives helped her understand other participants, even though their particular arguments did not cause her to change her position. *I just don't think that's what I would have done but you know, naturally other people deal with it in different ways and there are more options than what I saw and that's quite a useful thing…there's always another point of view…and trying to understand where people come from can be really valuable* (Melanie, interview).

Through the complexity of different perspectives, areas of commonality were also recognised, as Miriama pointed out. *All of the respondents, no matter what stance they have taken are seeking the outcome of Steve not committing suicide. It's interesting because…even the rings that were chosen – a lot of them actually used the same rings but from the opposite perspective. People who thought it was wrong to actually inform the doctor were suggesting the same things that those with opposing standpoints also suggested. I found this enlightening…everyone had those feelings but it was just how they framed it to decide what action to take* (Miriam, interview).

The need for clarity

The Vx generated data offered a visual interpretation of the 'Rings' weightings. In particular it split 'Agree' and 'Disagree' positions for comparative purposes. These are presented in Figure 5.3.

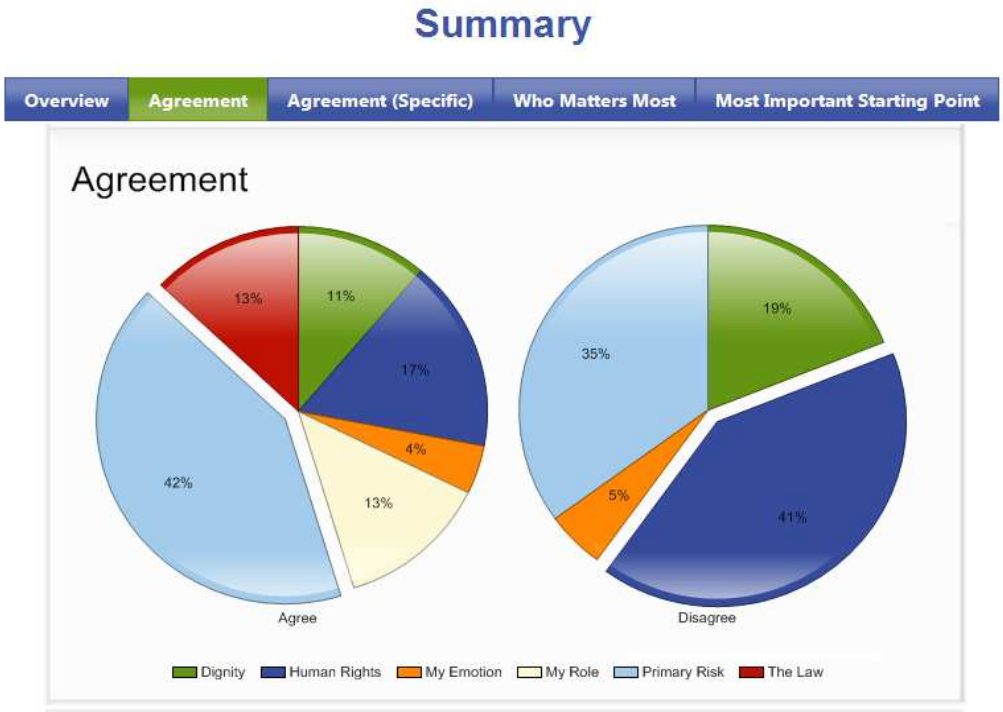


Figure 5.3: Combined rings weightings for agree / disagree positions.

It has already been noted that within contrasting perspectives, common aspects can be found. This was also evident with respect to the most important considerations. Both 'Agree' and 'Disagree' positions reveal that 'Primary Risk' and 'Human Rights' were of high importance. In addition, the degree of importance of 'Dignity' was similar as was the minor relevance given by both groups to 'My Emotion'.

The categories in the 'Rings' section are open to interpretation. The opportunity for the user to clarify their meaning is available within the free text. For example when considering 'Primary Risk', one can consider what this risk might be and who in particular is at risk. Without clarification it is possible to misinterpret terms and assume others share your interpretation. Risk was variously interpreted by the participants. Melanie saw risk as relating specifically to Steve. *Law and risk are the most important factors here, risk if he is not provided with help and support and does choose to commit suicide* (Melanie, case scenario report).

Bella saw risk in a different way. While she still had concern for the patient, she sensed the impact of his suicide on others: *His committing suicide in that setting has serious implications/risk for everyone else (although arguably including himself, if he's depressed and actually needs professional and family help to get through this situation)* (Bella, case scenario report).

Margaretha identified three types of risk. *In my opinion three risks exist: on the one hand, the person might commit suicide…and then his friends will lose a beloved one…*[secondly] *talking to his doctor will affect our friendship and trusted relationship – especially after he told me that I am not supposed to tell anyone. The third risk is, if he really commits suicide, I might feel responsible for his death my whole life with unknown consequences for my health and mental stability* (Margaretha, case scenario report).

Conflicting duties

A notable tension existed between the duty to help the patient and a duty to protect the practitioner. Four out of five participants began their case scenario by selecting the patient as mattering most (see Table 5.1) and supported this with a clear rationale. Participants acknowledged the need to help the patient and for most this was viewed as preventing him from committing suicide. Miriama, Gracie and Melanie appear to take similar positions in deciding to advise the doctor of the patient's intention to commit suicide. This was especially apparent within the free text responses:

Mark needs to discuss the situation with Steve's doctor and attempt to reconcile this with Steve at some stage that this was ultimately in his best interests…Steve's immediate safety is paramount (Miriama, case scenario report).

Mark cannot allow Steve to remain silent about his intention to commit suicide…he cannot allow Steve to end his life before he had a chance to find new meaning (Gracie, case scenario report).

Steve is neither old nor completely incapacitated, he could lead a normal life…things may still improve…if Mark does not inform the doctor then Steve may die (Melanie, case scenario report).

Bella and Margaretha, while taking opposing positions of 'Agree' and 'Disagree' had values in common; both wanted to support the patient and felt a sense of duty to his wishes. Margaretha recognised the inherent tension between autonomy and beneficence; wanting to avoid Steve harming himself but at the same time wanting to respect his wishes. *I am convinced that the most important issue is to avoid the suicide…however respecting Steve's position is the most important issue in this case…I think there are other ways to avoid suicide without telling his doctor…I think supporting and comforting him is important* (Margaretha, case scenario report). Bella also recognises this tension and expresses the discomfort she felt between these values. *I am uncomfortable because my initial instinct is to accept the proposal wholeheartedly but the more I consider it the more I feel that I am letting the patient down* (Bella, case scenario report).

All participants wanted the same outcome; for the patient to not commit suicide However their rationale differed but this did not necessarily relate to whether they had agreed or disagreed with the proposal. Within the case scenario reports, all participants considered the importance of looking to the future, to the impact of his suicide on friends and family as well as a sense of the value of life itself. For example:

- *His friends and family will lose a loved one* (Margaretha),
- *His family will have to deal with the loss of him* (Miriama),
- *His committing suicide has serious implications for his friends and family and people he is yet to meet* (Bella),
- *He may end his life before he has had a chance to find new meaning* (Gracie),
- *Steve needs time to recover because things still may improve* (Melanie).

While the initial focus was, for the most part on helping the patient, as the deliberations continued, most participants raised issues about the need to protect the practitioner. Apart from Gracie, whose deliberation focused exclusively on protecting the patient, all others saw practitioner protection as important. This generally related to legal protection as described by Miriama. *If he does not share this information with Steve's doctor he may not uphold both his professional and personal ethical standards…to an extent he will have enabled this to happen...there could potentially be legal ramifications…systems should have been put in place so individual staff do not end up carrying such a burden* (Miriama, case scenario report).

Margaretha also identified issues around protection but for her they related to protection from personal guilt. *Talking to the doctor will affect our friendship and trusting relationship, if he really commits suicide I might feel responsible for his death* (Margaretha, case scenario report).

For Melanie, protection from both legal and personal responsibility appeared to be important. She first speaks of her legal responsibility. *Mark could be implicated as helping him die…even if he isn't convicted it may affect his future employment so he needs to protect himself...legally Mark should tell the doctor* (Melanie, case scenario report). Later she considers the situation from a more personal perspective. *If that person had committed suicide tomorrow and I hadn't told anyone – I would feel terrible* (Melanie, interview).

Also of relevance to participants was the importance of doing one's duty as a health professional. However, there was variation in what this duty entailed. These excerpts demonstrate the notion that duty in itself provides a rationale for action and seems to relate to an obligation to 'fix' the patient. *Despite the fact that ultimately you do not want the client to dislike you by going against their wishes, that is your role and obligations as a clinician and as a team member…he is duty bound* (Miriama, interview). Melanie offers a similar perspective. *By telling, Mark may damage the client/health professional relationship but that's the job of a health professional – to sometimes make decisions to help the patient that they may not want* (Melanie, case scenario report).

These values are contrasted by those of Bella who challenges this perspective, inferring that a different sort of duty; a personal moral code may be more relevant to her decision making. *I don't fully believe in the role of a health professional to protect the patient because in this case we're protecting him from himself and what gives me the right to do that… it wasn't enough for me to fall back on the duty…I also had to live with myself as a person…and I would tend to lean towards my own personal values* (Bella, interview).

Some participants voiced ideas around the relative value given to the thought processes of the patient, speaking of the 'irrational' thought exhibited by the patient. Duty was seen to have been done by considering the ways in which the patient could come to a more rational position. For example;

- *Steve needs the chance for re-evaluation of his reasoning, with professional help* (Gracie, case scenario report).
- *It is highly likely that Steve may have developed a clinical depression which would affect his ability to make a rational decision…if Mark is found ultimately to not have depression and takes his own life then this is his decision that he can make autonomously in a rational state* (Miriama, case scenario report).
- *Should Steve choose to commit suicide that is his right, but he may not be completely rational in his decision making* (Melanie, case scenario report)

Melanie expands upon this point within her interview, linking it to situations in her practice as a dietician. She commented on difficulties with patients who were not willing or able to eat or those with severe dehydration, where deciding for the patient can be seen as beneficial in the long term. *Often people…aren't necessarily thinking correctly. And so to get them through that, enough to be clear headed sometimes you have to do what they don't want you to do* (Melanie, interview). By contrast Bella provides an alternative viewpoint on the patient's ability to make decisions. *If there isn't evidence that he's not of right mind and not capable of making choices in the sense of having a mental illness then I'd have a hard time taking a paternalistic position of 'I know what's best for you'* (Bella, interview).

Linked to this sense of duty was the notion that at some point duty and subsequent responsibility would come to an end. The difference in these positions may lie in the health practitioner's initial purpose and how they viewed their duty to the patient;

whether it was it to inform, to educate, or to support. It may also reflect the gravity of the situation and the unknown future consequences of their actions. The common link between these case scenario report extracts is the phrase ‘at least’ which appears to reflect some form of completion of duty. For example;

- *Even with counselling Steve may be unable to accept his altered state but at least Mark will have given him a chance* (Gracie, case scenario report),
- *If I the future he does take his own life at least all attempts would have been undertaken to assist him to see there are other options* (Miriama, case scenario report),
- *He might leave the room again and again or refuse to see me at all, but at least I haven’t breached our confidentiality agreement and the trust he has in me* (Margaretha, case scenario report).

Suppressed role of emotion

Free text responses frequently referred to emotions within the decision making process yet these findings are not supported by the primary responses made by the participants at the start of their deliberations. In fact a brief review of the primary responses to the question ‘What is the most important consideration in this case?’ shows that all participants gauged ‘My Emotion’ as being of much less consideration than most other options (see Table 5.2).

When considered as a group, the overall degree to which participants considered ‘My Emotion’ important was very low. Overall, ‘Emotion’ was given the lowest weighting by participants with only 4% of total considerations (see Figure 5.4).

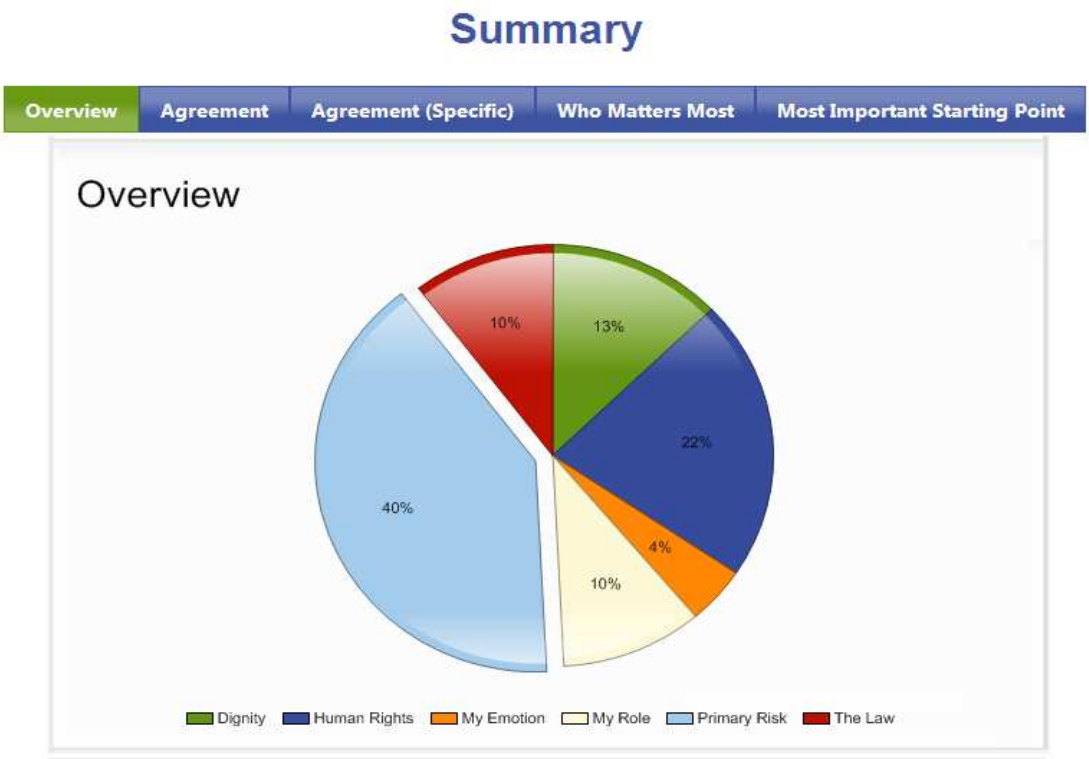


Figure 5.4: Participants' overall percentage considerations.

Despite low individual and overall weightings given to the 'Emotion' option, it was commonplace for participants to refer to their emotions and to emotional issues within their decision making. Excerpts from Gracie and Melanie demonstrate this. *He* (Steve) *needs to make Mark aware that that while empathising with him he does not /cannot remain silent* (Gracie, case scenario report). *Whilst Steve may sympathise with Mark it is still Steve's responsibility to tell the doctor…he'll most likely feel betrayed...but I don't think this is the primary concern* (Melanie, case scenario report)

This apparent tension between emotion and duty was expanded upon during the interviews, providing additional insight in how emotions are viewed by the participants. Gracie and Miriama linked emotions and professionalism. Gracie felt that there were some emotions that may hinder the decision making process. Her comments suggested that there is a limit after which the inclusion of certain emotions would be seen as unprofessional. *I used the word 'empathy' specifically because that's the limitation of professionalism; there's empathy – it should not go further than that .So yes you can empathise with someone but if you go the whole distance of sympathising with them*

then you're not supporting them at all and you're not helping them but as a duty to Mark, to his family, to yourself and everybody else, empathy has to remain in the professional capacity because that's your role (Gracie, interview).

Miriama also saw emotions as present within the professional setting, but that they needed to be controlled. *Just because you are in a professional role does not mean that you do not have similar emotions but you just have a responsibility to reflect on them and manage them* (Miriama, interview).

Another common view was that emotions were some sort of barrier to clear decision making. In Melanie's response it is inferred that the inclusion of emotions such as sympathy may even put decision making at risk. *While Mark may sympathise with Steve it is still Mark's responsibility to tell the doctor about Steve's intention to commit suicide… (Steve) needs to protect himself even if he does have sympathy with the client…(Mark) will most likely feel betrayed by Steve telling someone about his intentions but I don't think this is the primary concern in this case* (Melanie case scenario report). She expanded upon this in the interview. *Sometimes getting too involved means that you can't make those hard decisions about them and for them…this is what needs to happen regardless of your feelings or your personal emotions about the case* (Melanie, interview).

In contrast, Margaretha appeared to use emotions to help her to remain patient centred. Rather than putting her emotions aside, or seeing them as a barrier, she incorporated how she felt as if to gauge the appropriateness of her decision. *I was thinking about how I would feel if I'm asking someone not to tell something and then they just turn around and just talk to my doctors about me and I would feel very angry and I would have a problem actually trusting this person again* (Margaretha,)

The decision making process: New ways of seeing

Expansion of thinking

The reports of others had a powerful impact on most participants. For Margaretha, the reports helped her to understand the thinking processes of others: *I found it very interesting to read* [reports of] *people who had the same opinion, but arguing differently and from different perspectives… it* [the Vx] *helped me to understand better how other people see* (Margaretha, interview).

Having a better understanding of other people is likely to provide more beneficial outcomes. This is a tangible product of the Vx. The influence of the reports of others clearly impacted on the majority of participants, enabling wider alternatives for resolution of the case scenario. *I read new views that gave rise to new thinking prompting other ways I could deal with the situation* (Melanie, survey). *The experience emphasises for me the importance of not solely relying on your own values and opinions when deciding on the best approach to undertake in a given situation – to be 'open' is crucial for a health professional... It* [Vx] m*ade me realise that no matter what our stance was we all sought the same goal – everyone had valid comments that could assist the patient…and* [these] *extended the range of approaches I would have considered* (Miriama, survey).

A widened horizon

Using the Vx to deliberate the case scenario coupled with the exploration of the Vx reports provided opportunities for self reflection and an appreciation of broader perspectives. Whilst each had to complete their deliberation before gaining access to the views of others, it is evident that additional thinking did take place. For some this was a chance to re-evaluate the way they had approached the scenario, while others reflected on their own decision making processes.

For most participants, having access to the views and decision making processes of others had a positive impact on their thinking. All perspectives were seen as beneficial. Similar views allowed expansion of thought. *I do find it interesting to read what other people have said. I find that it's quite an eye opener and it challenges what you think* (Miriama, interview). Opposing views gave new insight into the case scenario. *I think*

it's always useful to step back and say 'What have I said compared to what other people have said?' because often you don't see what you don't see (Melanie, interview)

Sometimes this insight caused participants to reconsider their position, but equally, opposing views helped cement existing positions. *In your own thinking you sometimes just get tunnelled after a while and you have these ideas and beliefs but by reading the other persons you actually get more; a wider horizon* (Margaretha, interview).

Later in the interview Margaretha returned to this point. *What I really liked was that you had a specific idea what you thought was ethically correct and what you felt more comfortable with and then you read completely opposing ideas and I thought I definitely don't agree with this person and then a whole thinking process starts in your head. And when you read someone who goes a little more along with your ideas…but also maybe an additional aspect, this really extends how you might think about a specific topic* (Margaretha, interview).

Access to the reports of others not only enabled learning from others, but also there appeared to be an incentive to strengthen one's own argument.[The Vx reports] *made me think more critically about own argument and about perspectives of others* (Margaretha, survey). The reason for this is not clear. On the one hand it could relate to the transparency of the reports. Given that some users can feel their responses are being 'judged' by others there may be an inclination to provide clarity so as to be seen to be proficient at decision making. Alternatively, the desire to learn from others may reflect a real wish to improve one's reasoning ability. As students or as practicing health professionals reasoning skills are seldom explicitly taught. Perhaps participants such as Margaretha see the Vx reports as an opportunity to develop important skills and the arguments of others provide insightful access to such skills.

While most participants found value within the reports of others, Gracie felt that the small sample size was limiting. While she commented during the interview that: *I actually found it was quite interesting when I looked at other peoples* (Gracie, interview), within the survey she noted that: *more participants would provide greater opportunity* and *the numbers were too few* (Gracie, survey). Significance of sample size is a well established part of 'scientific' research and it is possible that this was a perspective more familiar to Gracie. Given the entrenchment of the scientific paradigm it is interesting that this was a minority view. No other participants commented on

sample size. In fact the depth of their responses clearly demonstrates that a small sample size does not infer poor quality data.

Despite concerns regarding sample size, Gracie still found the Vx experience as an opportunity to review her own decision making. Aspects of the deliberative process enabled her to identify and reinforce the important components of her own decision making. Of greatest relevance to Gracie is experience. *I've had many clinical episodes over many years and I think it is something that comes with a little bit of experience… I found it just about prevented me from going that next step…it was inhibiting rather than helping but that could be from my life experience, from my role, from my clinical experience, from the fact that I sit and judge ethical decision making and others as well* (Gracie, interview)

Rather than seeing particular benefit for herself, Gracie saw value in the Vx for others. *I think as a teaching tool it provides a great way of showing them how they should go about making or how things can change their ethical decision making…for those people who have not been exposed to making quite significant decisions, as this case was here* (Gracie, interview).

New understandings of self

The Vx decision making process also gave rise to new understandings about self. Sometimes this was an uncomfortable realisation. *It certainly made me realise that I approached it in rather a clinical/unemotional way which I wouldn't have expected of myself* (Melanie, survey). Melanie picks up this point again in the interview, describing her feelings as she realised that she had responded to the case scenario in an unlikely manner. *I was surprised reading back at the responses. They are unemotional and that's not normally my personality…I thought it was a cut and dry case…it was like Yep, this is how it's got to be – this is why…I guess I didn't see that it had as many levels as other people saw* (Melanie, interview).

Other participants also described their own particular uncomfortable truths. *I didn't know that I would feel the need to protect health professionals and the health organisation as much as I do…but I'm unclear why* (Bella, interview). Margaretha comments not so much on her decision making process but on her inability to make decisions. Having to take an initial position with respect to the case scenario proposal was difficult. *I have to really think if I strongly agree or disagree, but I'm doing neither*

and I thought Oh my goodness I'm just going to have to make a decision …and it probably shows that for me it's really hard to decide on the spot…and I'd probably like to stay in the middle as long as possible before I go left or right (Margaretha, interview).

The reflective process enabled one participant to come to a new awareness of her own decision making complexity. *It highlighted the complexity of scenarios as well as helped me understand the complexity of my own thought processes* (Bella, survey). This reflective process also enabled Bella to make sense of long standing decision making conflicts for her as a health professional. *I've learned that I see the patient as inextricably part of a family and wider group and so I would never put the rights of an individual above the rights of the group. I didn't realise this before. It's no wonder that medical decision making has sometimes been very challenging for me, given the Hippocratic Oath*. (Bella, survey).

In other instances, participants came to new understandings about themselves, through the reading of other people's case scenario reports. There was a tendency for some to assume that other people thought in a similar way to them. For these participants, the reports of others were revealing. *I saw that I took a legal/self preservation angle rather than patient centred – this surprised me…I only realised when I compared my answers to others* (Melanie, survey). For Margaretha, the reflective exercise confirmed a somewhat uncomfortable truth. *I guess I always try to comfort everyone and in the end it's a huge mess and I am in a dilemma what to do* (Margaretha, survey).

For most the Vx experience allowed them to realise that they could be confident decision makers. With clear justification, their views whatever perspective, were valid. *We're often living in a grey zone and when you see your own thinking you realise that you have every right to come up with the conclusion you've come to, as the other people do* (Bella, interview).

For Bella, the Vx experience impacted on the way she thought she'd address future decision making. *I think even just doing that one case that I'm now more conscious of the different perspectives and different values. Even in conversation if I'm taking a position about something, I'm now, in the back of my mind thinking – how did I get here? As a result I would be much more sympathetic to other perspectives… being*

prepared to engage with others on a health care team without necessarily feeling like my answer was the only answer (Bella, interview).

Melanie concluded that confidence was a key factor in decision making. Importantly she distinguished between the decision made and the process undertaken to reach the decision. She saw value in using the Vx to raise awareness of this process. *I think it's really good to have confidence in what you're saying…people should own their thoughts and I guess a programme like this helps them to do that. That, in itself is a good teaching tool if it gives them confidence…to see the pros and cons and work out what are the important things and why am I thinking like I'm thinking. Even if they get from this, confidence with that process regardless of the final answer, see that's really important* (Melanie, interview).

The decision making process: Foundations for thinking

Creation of space

As a consequence of using an internet based programme there was a raised awareness of the use of the written word. Participant's usual decision making practices were either group discussion based or resolved through individualised, internal thought processes. As both Miriama and Bella point out, using the written word for deliberation was novel. *I enjoyed doing the cases but maybe because it's in writing it is right in front of you and that's almost different from talking about something* (Miriama, interview). *I think it's a very different way to engage when you're reading through their thoughts* (Bella, interview).

Participants reflected on the space created by the Vx software. Within this space thinking seemed to be enhanced for some while restricted for others. For some, such as Bella, this space contributed positively to her ability to think through the issues especially when compared to a verbal dialogue. *When I'm listening to someone speak I'm listening through the lens… of my own interpretation of whatever it is we're discussing. But when I'm reading, it somehow impacts me more objectively. I'm reading it less through my own lens – so I think I'm hearing better when I'm reading it than when I'm listening to someone… I think in a discussion you're often preparing yourself for rebuttal…I'm already working out my argument for when it's my turn to speak, so not really fully taking in what the other person is saying.* (Bella, interview). Melanie presented a similar reflection in her interview. She commented on the unclutteredness of

being able to consider the situation alone. *It was just my own thoughts until the very end, so you're working through your own priorities* (Melanie, interview).

For others the written word created an almost unhelpful barrier between the issue and its resolution. Presenting a contrasting view of 'space' Gracie talked about a preference for continual comparisons of views, rather than the isolated deliberation. In a sense Gracie considered the space created by the Vx may feel more like blank space, where space represents a void or a gap. From this perspective she sees any written response as potentially representing a past thought process, which when read by others, may or may not be obsolete. *In a discussion group you have the opportunity to question and answer so someone provides the point of view and you're able to question or delve into their thought processes. Whereas when it's written down that's it – black and white – probably out of date now…there is no feedback* (Gracie, interview).

Bella and Gracie continued to provide polar perspectives. On the one hand, Bella saw real value in being able to read, rather than just listen to the views of others. *When I read people's ideas there was much more of an intellectual engagement…I think sometimes the emotions get in the way when I'm listening…and I didn't sense that at all. It was more objective so that there was a sense that I could engage with the issues without getting het up and needing to defend my ground and make my position clear* (Bella, interview). On the other hand, Gracie saw benefit in the live debate. Gracie also challenged the written word itself and the degree to which it accurately represents thought: *I'm not sure that writing it down is a true reflection of your thinking because you've actually put it down into words…and I just don't know if that's a true reflection of your actual thinking.* (Gracie, interview).

While this raises interesting epistemological issues which are beyond the scope of this thesis, Gracie's comments demonstrate the depth of thinking and reflection that has been triggered by the Vx experience.

A structural aid

The Vx software provided structure for thinking and this was demonstrated in two ways. Firstly the actual software mechanisms provide a framework to guide the thinking process**.** Secondly the Vx framework seems to operate as a trigger for additional thinking and consideration of the case scenario.

Aspects of the software such as the pie rings and the grid options offer a check list of factors that are routinely considered as relevant in decision making situations. Most participants felt they had benefitted from this structure, as the excerpts below demonstrate. First impressions were that the software was generally easy to use, that it helped clarify ethical issues and that it offered a range of cases relevant to both professional and daily life. Participants found that the different screens within the Vx provided a structural aid for their decision. For example Gracie and Melanie both commented on the logical progression of the Vx. They agreed that it was good to start the deliberation with one's gut reaction and then to follow this up with more considered thinking. *The tick boxes helped with ordering my reasoning* (Gracie, survey). *It did help to clarify my thinking so expand the reasons behind my gut feeling* (Melanie, survey). Miriama noted the benefits of the free text boxes as a way to build upon earlier thinking. *The free text boxes allowed me to elaborate on, explain, broaden and reinforce the answers I had given in the rings and grid.* (Miriama, survey).

Several participants saw benefit in the structure as a trigger for additional thinking;

- *It certainly provides a framework and sounding board for potential ideas to be discussed and explored. It allowed me to carefully consider my approach* (Miriama, survey),
- [The Vx] *allowed me to deconstruct my perspective and understand and clarify what I believe and what I would do* (Bella, survey),
- *When you think about the pie chart it is quite helpful because it is structured…you have to really think about it a little bit more by having the structure.* (Margaretha, interview).

In addition, Margaretha saw the free text areas as ways to individualise the deliberation. She felt those opportunities were necessary. Without the free text she would not be able to express herself. *I would not be able to describe what exactly I mean and what my reasons are for the way I describe my reasoning or point of view* (Margaretha, survey). For another participant, the free text boxes provided insight that helped explain the way she had expressed herself in other areas of the software. *I was grateful for the text boxes as they helped crystallise the fact that I had become uncomfortable with my initial instinctual response to the proposal* (Bella, survey).

Some participants identified specific aspects of the Vx that could be better explained. For example Melanie suggested that the *"grid was a bit confusing because I was not always sure what each grid section meant. The grid did not clarify anything about my thinking. I found the rings more useful in that respect"* (Melanie, survey).

Others felt the Vx helped clarify ideas. Bella commented that the software was a "*very useful thinking tool that allowed me to deconstruct my perspective…and understand and clarify what I believe and what I would do"*. Clarifying one's ideas was also identified by Miriama as a positive aspect of the software. She explained that the Vx was "*an inspiring way to both express and clarify individual ethical opinions whilst at the same time gauging overall opinions"*.

Feeling uncomfortable

It was not uncommon for participants to describe aspects of the Vx that made them feel uncomfortable. In fact, Bella began her 'Rings' screen free text acknowledging this. *I am uncomfortable* (Bella, case scenario report). Miriama particularly remarked upon the potential vulnerability felt when making ethical decisions which centred on subjective responses. *Whilst I know there is no right and wrong answer it does not mean you may not be judged for your opinions* (Miriama, survey).

There was a feeling among some of the participants that through feeling uncomfortable they came to be more open to differing views. *People need to learn that it's ok for others to have alternative perspectives and opinions and to be willing to discuss differing opinions to come to a greater understanding* (Melanie, survey). Margaretha inferred that while we would all like to think we were logical and clear minded thinkers, this was not always the case. *There is no simple logic about decisions and everyone reasons differently about the same case* (Margaretha, survey).

The Vx requires continual clarification of one's thinking process. For many responses the software will require further explanation to be provided. The Vx is also able to identify conflicting thinking and alerts the user to consider their response in more depth. Some participants used the word '*forced'* to convey the feeling of this process of elucidation. Despite feeling forced and potentially uncomfortable, both Bella and Margaretha's comments imply that this enforcement had positive consequences. *It* [the Vx] *forced me to be honest with myself about unconscious aspects of my thinking and*

my beliefs. That was incredibly helpful even if uncomfortable (Bella). *I was forced to take a stand point and then reason from this point of view. Sometimes this made me think about my own beliefs and values differently* (Margaretha).

Gracie also felt challenged by the Vx process but in a different way. She compared the software with her own decision making process. *When making ethical judgements to myself…it is more tacit, integral with my life experiences* (Gracie, survey). While the structure of the tick box responses helped with ordering her reasoning, they *required more thought because the words in the statements weren't mine.* Gracie concluded that her own decision making processed was preferred. *It is more flexible and able to take into account many more situational variables than a software programme* (Gracie, survey). While she would rather rely on past experience for decision making, she did see the merits of the software for training purposes for clinical practitioners. For Grace her place of safety lay with her existing methods of decision making.

Feeling safe

Participants appeared to feel a sense of risk and vulnerability when subjective responses were required. There was a degree of anxiety that one could be judged by peers or employers. *Whilst I know there is no right and wrong answer it does not mean you may not be judged for your opinions* (Miriama, survey). Margaretha sensed the isolation of being the only person to disagree with the proposal. Rather than feeling confidence in her position, she appeared to assume that she may be 'wrong'. *Oh, I answered so differently and nobody else had my ideas and I thought Oh, did I do it wrong?* (Margaretha, interview).

Bella reflected beyond the case scenario. She described a specific area of ethical conflict within her practice and her feeling of risk and vulnerability. *So if there was a conflict between what I thought I ought to do and what I really felt was right as a human being then I would tend to lean toward my own personal values. Whether I would disclose that to other health professionals that's a whole other question because that would have left me feeling at risk and possibly legally liable* (Bella, interview).

An important aspect of the Vx is that it offers transparency for users to view the reports of others. In addition users can elect whether their reports will identify them by name or whether they will remain as an anonymous user. In this study all participants were anonymous with self appointed pseudonyms. The issue of transparency and the use of

names were raised in the survey and some participants also discussed anonymity within their interview. Generally participants saw anonymity as a way to feel more comfortable about using the Vx. The degree to which participants voiced willingness to use their own names related to the extent to which other users created a supportive environment for decision making. *If the case reports were going to employees etc it may impact on your employability* (Melanie, survey). And again during the interview Melanie spoke to this point. *If people feel that even if there's no right or wrong there is some potential there to be judged then they might be reticent to actually talk honestly about how they'd deal with the situation* (Melanie, interview).

Several participants linked the use of pseudonyms with feeling safe to be open and honest;

- *I think I would have not written so openly and discussed my own opinion so freely* (Margaretha, survey).
- *I'd feel uncomfortable unless it was a closed group that had agreed to openly share the info with each other and with a clear confidentiality agreement* (Bella, survey)
- *If you want people to be honest about the true way they would approach ethical dilemmas I feel the option to be anonymous is important* (Miriama, survey)

The findings suggested that if trust can be established then there may be more of a willingness to not be anonymous. *If it's very friendly and trusting of opposing opinions then I'd feel happy to put down my name but sometimes professional relationships are hierarchical* (Margaretha, interview). Both Melanie and Bella considered the potential openness of the Vx as a positive aspect for future decision making. Melanie saw the necessity and benefits in being open to the views of others. *People need to learn that it's ok for others to have alternative perspectives and opinions and to be willing to discuss differing opinions to come to a greater understanding* (Melanie, survey). Bella found reassurance in the transparency provided by the Vx. *I realised how helpful it was to see what others had written and to see how honest they too had chosen to be. In some ways I felt reassured that someone had taken the other point of view* (Bella, interview). These excerpts demonstrate the importance of feeling safe to express one's personal opinions and an anxiety that without this level of trust participants felt a fear of being judged on the decision they had made. With a supportive decision making

environment and an acceptance of diversity participants felt more willing to be open and honest and the choice of remaining anonymous contributed to this environment.

Potential of technology

Using technology to deliberate ethical issues was a new experience for the participants. For the most part, using the internet had positive effects, some of which have been explored within other themes. For example, the ways in which the Vx created space and structure to facilitate thinking. Additional factors were also noted. Miriama saw the potential for the internet to break down barriers which may exist in face to face discussions. Her comments have relevance for both education and professional settings. *I like the privacy of the internet. I think it provides an opportunity for people who won't speak up in a group setting to say a lot more and I think that's quite a positive thing* (Miriama, interview).

All participants saw the wider potential of the Vx. Common views related to widened utilisation in tertiary education and in professional practice;

- *If you're using this as a teaching device for people who are in say, their first year of studying and not been exposed to those really difficult challenging things, then yeah it's a really good window to start them off, to ease them into it* (Melanie, interview) ,
- *I think it's a great teaching tool for those coming to learn about how ethical decision making occurs…I'm just thinking about some of the young nursing grads – people like that who haven't been exposed to a clinical environment…it has the potential as part of an e-learning frame for clinical practitioners* (Gracie, interview),
- *It has the capacity to be useful for experienced practitioners and even for supervisions to present as a medium for clinicians to work through dilemmas they may be facing in their practice. Equally so for teams who are facing a demanding complex situation where it is difficult for the clinical team to reach consensus on the way forward, where one ultimately needs to be reached* (Miriama, interview).

Margaretha saw a potential use within the university ethics committee process. *I think for the ethics committee you write what they want to hear – like in an assignment and you include things and they tick the boxes…I think the software might help a little bit to*

structure your thinking in a different way instead of just ticking boxes (Margaretha, interview).

Other uses were also noted, including organisational policy development, public discussion forums and facilitating community representation. These are all areas worthy of future consideration.

Concluding comments

Collectively the data was organised into three themes. The themes revealed a product / process distinction. Theme one related to the decision product. ‘Realising inherent tensions’ described areas of conflict, both hidden and overt within the actual decisions made by the participants. The theme revealed a raised awareness of the complexity of decisions, the need for clarity, conflicting duties and the suppressed role of emotions. The remaining two themes related to the decision making process. ‘New ways of seeing’ revealed participant’s reflections of the Vx experience. These related to an expansion of thinking, new ways of looking at the scenario and new understandings of self. ‘Foundations for thinking’ reflected participant’s experiences of the decision making environment. A creation of space, a structure for thinking and safety all contributed to the potential of the software to effectively support decision making.

Chapter Six: Discussion

Overview

Having described the findings, this chapter now provides a detailed analysis with links to the literature, examples from the findings and implications for ethics education. In keeping with the findings chapter, I will begin by analysing the findings that relate to the decision product, then the decision making process. The analysis will be linked to the three themes identified from the data and the research question. While the case study strategy is not generalisable, this discussion may have resonance beyond this thesis.

Whereas the findings chapter focussed on the participants' voices, the following analysis represents the researcher's voice. I have tried to portray this by removing the participants' names. I have used quotes from them, as outside sources to support my discussion points.

Analysis of the decision product

Competing principles

It is well established that patient's best interests are fundamental to health care practice (Hope, Savulescu & Hendrick, 2003). In addition, principles such as patient beneficence and nonmaleficence are central within health professional's codes of ethics (Kuhse & Singer, 2001). Participants reflected these values by acknowledging the need to help the patient and to prevent harm. However, perspectives on these values differed. Most participants felt they could most effectively benefit the client by advising the doctor of the client's intention to commit suicide with the aim of preventing Steve from the harm of committing suicide. This aim was reflected in the participant's responses, for example "*he cannot allow Steve to end his life*", and that informing the doctor of Steve's intention to commit suicide "*was ultimately in his best interests"*.

Tensions were also evident between autonomy and beneficence. Beauchamp and Childress (2001) suggest that whether the practitioner's duty lies in acting to benefit the patient or upholding patient autonomy is a "central problem" in bioethics (p.176). They argue that the degree to which this tension is problematic depends upon whether acting beneficently compromises or strengthens patient autonomy. On the one hand, practitioners want to encourage patients to take an active role in decisions. However in

this instance allowing Steve to act autonomously means that he may end up committing suicide. This would be seen by many practitioners as not beneficial (although Steve may have considered his choices carefully and see this as his best option). One participant succinctly sums up this tension, stating "*that's the job of a health professional – to sometimes make decisions to help the patient that they may not want*". Despite the tendency for beneficence to override autonomy, Beauchamp and Childress remind us that there is no one absolute ethical principle.

In a systematic review Gravel, Legaire and Graham (2006) found that while there is a trend toward advocating for more recognition of patient autonomy through a shared decision making process the reality is that this sort of model had not been widely adopted by clinicians. In particular, decision making with respect to suicide appears to predominantly focus on paternalistic decisions. Participant responses support this. Those agreeing to break confidence rationalised their decision in terms of client beneficence. This was in spite of Steve's clear request for confidence. In addition, allowing Steve to make an autonomous decision directly conflicts with the associated risk of legal ramifications, even though breaching Steve's confidence could be seen as breaching the fundamental ethical principle of trust.

Trust and fidelity

Trust is an interesting ethical virtue and is considered the primary reason for patients to seek treatment from specific practitioners (Beauchamp & Childress, 2001). In addition there is evidence that failure to guarantee confidentiality may deter patients from seeking future treatment. Despite this centrality, only one participant discussed trust, commenting that if her confidence had been breached she "*would feel very angry and I would have a problem actually trusting this person again*". This view supports established research that failure to guarantee confidentiality may deter patients from seeking treatment (Jones, 2003) and that between 25-50% of mental health patients fail to seek treatment due to fear of disclosure (Sankar, Moran, Merz & Jones, 2003).

Interestingly, Beauchamp and Childress (2001) note that trust may be considered by some as a "fading ideal in contemporary health care institutions" (p.35) mainly due to the threat of legal action. The findings support this. Generally participants were willing to breach confidence and risk losing trust in order to 'save' the patient. This may also reflect tensions within their professional role with an underlying rationale of 'saving'

themselves. The one person who did see trust as central, and was not willing to breach that trust, did not have clinical experience or education.

A lack of clarity around professional roles particularly those relating to confidentiality and possible suicide have been identified (Chaimowitz, Glancy & Blackburn 2000; 2002). Stevens and McCormick (1994) used a confidentiality case to study ethics student's decision making. Despite students acknowledging the importance of confidentiality, almost a fifth decided that breaching it was acceptable if the patient was not going to find out. They reported a high level of "medical positivism" (p.116) whereby medical knowledge was seen to be rationale for overriding patient's wishes. Their findings bear similarity to this study. In particular, while the explicit focus within the deliberations in this study were on helping the patient, at times there was an implicit focus on protecting the practitioner. For example one participant showed concern that Mark, the practitioner, may be implicated legally or that his actions could influence future employment opportunities and that he would need to "*protect himself*". Another felt similarly about the possible "*legal ramifications*" if the information wasn't shared.

Tensions around self-interest and fidelity have been highlighted by Beauchamp and Childress (2001) who claim they can often cause a conflict of interest. While traditionally practitioners tended to give priority to their patient's interests, the modern health care environment has created multiple area of conflict, for example between their duties to the patient and to institutions or the state. Participants in this study clearly illustrate this argument citing obligations to the patient but also to the law.

While Beauchamp and Childress (2001) argued that ultimately such a conflict can only be resolved by giving one interest up, Green et al. (1995) suggested that choosing self over other interests is an inherent, but a manageable aspect of being a health practitioner. "In deciding their behaviour, doctors automatically or subconsciously heed their own needs or best interests. The part that these interests play should be recognised: "To deny self interests is possibly to lose control of its effects in determining behaviour" (p.234). While they report including both explicit (for example, sexual or financial) and implicit (for example role anxiety) forms of self interest within their curriculum, it is difficult to determine how implicit examples are identified or taught. Green et al. assume that practitioners will have an awareness of implicit forms of self interest. The Vx facilitated this awareness and some were surprised. For example one

participant remarked that "*I didn't know that I would feel the need to protect health professionals and the health organisation*". Another reflected that she "*took a legal, self-preservation angle, rather than patient centred; this surprised me*".

Competing duties

Bertolami (2004) argued that ultimately each of us must devise our own way of acting which "works for him or her, while at the same time achieving compatibility with the lofty aspirations of the profession" (p.418). The majority of participants rationalised their decisions in terms of duty. However, differences in the perception of this duty existed. For some this was professional duty, while for others a personal moral code. Participants who raised issues around duty often used the phrase '*at least*'. This infers that at some point duty and subsequent responsibility would come to an end. This can be interpreted in two ways. Firstly this could be seen as respecting autonomy which Seedhouse (2009) describes as the process of the health professional stepping back from the patient's decision making, having provided all the relevant information, education and support, thus allowing an autonomous choice to be made. It could also be seen as similar to a contractual agreement whereby the practitioner provides his knowledge and advice and then considers their role complete.

A further area of conflict related to the thought processes of the patient and the subsequent duty of the practitioner. The participants showed concern for the rationality of Steve's decision. This is commonly cited as an issue in the literature on confidentiality. Varied perspectives exist around obligations to respect the decision making capabilities of patients. Bostwick et al. (2009) discusses the challenges around reporting suicidal ideations, suggesting that there is an assumption that any patient with such tendencies must be reported. While the rationale is often underpinned by legal obligations, of stronger influence is the assumption that such thinking is 'irrational' and the patient is likely suffering from a mental illness. For example one participant queried whether Steve's current depression has rendered him unable to make a rational decision. Bostwick et al. discusses the need for acceptance of 'rational' suicide however this would be challenging for many health professionals. For example Bernat (2008) states:

> Some patients have an irrational and childish bias toward the present and near future. They may be churlishly and unreasonably unwilling to undergo even a slight amount of pain and discomfort in the present to prevent much worse suffering in the future. (p.29)

Sherlock (as cited in Bernat, 2008) notes that a patient's state of health can prevent them making "correct decisions" (p.31) and therefore sees the health professional as having a special obligation to ensure appropriate decisions are made. Participants who had concerns about patient irrationality did not demonstrate the degree of paternalism exhibited by Bernat or Sherlock but their extracts do demonstrate the values commonly held around decision making capabilities of potentially suicidal patients. Bostwick et al. (2009) claims that further research is needed into the reality of decision making across different health professions and the role shared decision making may play and there is scope for considering the use of the Vx in such studies.

Emotion and reason

Another area of tension for the participants was the role of emotions and their conflict with reason. There is extensive literature exploring this aspect of health care decision making (Coulehan, 1995; Purtilo, 1999; Seedhouse, 2001, 2009). Focusing on medical practice, Coulehan (1995) examines and critiques issues of detachment and connection. Detachment is seen as an essential component of practice to protect the practitioner from the burden of the patient's suffering as well as protecting the patient from the effects of a loss of practitioner objectivity. Coulehan reports that emotions are seen to be "undesirable insofar as they compromise the ideal of objectivity" (p.223). This is a view to which he is opposed, arguing that an incorporation of one's emotions is inevitable and that in fact emotions "are the energy and life of my practice" (p.224). Dewey (as cited in Hickman & Alexander, 1998), provides a similar argument. He claims that "emotional reactions form the chief materials of our knowledge of ourselves and of others" (p.332). While authors such as Campbell et al.(2006) see the relevance of a degree of detachment combined with elements of emotion and empathy, others align more closely to considering the role of emotions as inseparable from, and thus central to decision making (Coulehan, 1995; Dewey (as cited in Hickman & Alexander, 1998; Fulford, 2004a, Seedhouse, 2005).

Seedhouse (2005) reminds us that there is a long history of trying to separate emotion and reason; linking back to Plato and ideas that reason was the only avenue through which true knowledge could be found. The debate continues with emotion still being regarded as an inferior aspect of decision making. The participants' initial analysis of the case scenario may reflect this inferiority. All participants considered 'Emotion' to be

of less importance than most other factors (see Table 5.2). This was irrespective of whether participants agreed or disagreed to breach client confidence. These findings support results reported by Newcombe (2007). Her unpublished master's dissertation explored the use of the Vx by a group of occupational therapists. Her participants deliberated a case focussing on a needs assessment situation involving ramp modifications to an amputee's home. In her study 'Emotion' was rated by participants as the second least important from the range of considerations offered.

Seedhouse (2005) claims that "what we reason about and the ways we reason are profoundly and inextricably linked to our emotional experience of the world" (p.30). While 'Emotion' was not selected as being as relevant as other factors, much of the free text opportunities referred to emotions using words such as *empathy*, *sympathy*, *uncomfortable*, *angry* and *feelings*. This may suggest that it is difficult to decentralise their place in decision making. This study showed that while emotions were commonly referred to there was a sense that they were an unhelpful part of decision making. For example one participant talked about the practitioner needing to protect himself "*even if he does have sympathy*" Another talked about needing to "*manage*" emotions. While yet another thought that sympathising too strongly with the client would prevent being able to help him in an appropriate way and carrying out what she saw as her duty to the client, his family and to herself, which was ultimately to break the confidence. One interpretation of the findings is that detachment may not be possible to achieve. In addition there is literature that may suggest that such detachment is not warranted. Further research would enhance these interpretations.

It is important to note that all participants were female. Coulehan and Williams (2003) discuss professional values in health care and suggest that females can often maintain a reflective persona in practice due to traditional socialisation of emotions such as empathy and compassion. Within this study it is not possible to explore this notion in any depth. It too is worthy of future research as the Vx case scenario reports seem to suggest that the females in this study may be experiencing conflict between inferred professional, and existing gender-based values.

Clarifying key terms

There is a call for increased clarity of meaning within ethics (Cowley, 2005; Seedhouse, 2005). Ethical decision making involves the use of key terms whose meaning can vary

in the way they are used and interpreted. This can contribute to tensions where similar positions can mask significantly different perspectives. For example in a practice setting, discussions on 'risk' may take place without clarification of meaning. It is possible for an individual to assume that others will consider 'risk' in a similar way to themselves. In practice, this leads to what Seedhouse (2001) described as "illusory clarity" (p.28). This has a significant impact on the way decisions are made and their impact on patients. Individuals may agree that 'risk' is important. They may also agree on the required intervention. However, as was the case in this study, the values driving the interpretation of risk differed. Recognising these differences may provide new insights into the situation with wider perspectives for resolution. For one participant, this recognition was evident. She reflected that "*it's no wonder that medical decision making has sometimes been very challenging for me*". Interestingly, there is no structured prompt to ensure clarification of meaning is addressed within the 'Rings' section of the software. This could perhaps be seen as a limitation of the Vx. In a later publication, Seedhouse (2005) acknowledges this. He defends this lack of clarity by admitting that all philosophy is flawed but that even with some flaws the Vx can provide useful guidance to help people think. This may be an aspect of the software which can be developed further.

Complexity

The discussion to date has centred on some of the inherent tensions within the case scenario decision. As a result of analysing these tensions the complexity of decision making has been revealed. Through the transparency of accessing the case scenario reports raised awareness of this complexity was also a marked feature of participant's experiences. For example one participant noted that "*I did not realize how diverse and complex these problems are and how many different opinions exist*". These findings were consistent with research from Green et al. (1995) where case scenarios were also used. Aiming to stimulate medical students thinking about ethical issues in psychiatry, their participants reported that they had more awareness of "the complexity of ethics, the many responses that you could make in a difficult situation and how much people's solutions differed" (p.236).

Fulford (2004a) offers a convincing argument to explain the increased complexity within health care decision making. He argues that values have always been diverse. However the place of values has not always been acknowledged or understood. He

argues that more recently Western society is becoming more individualised and cosmopolitan. In addition, scientific progress has created more choice for both practitioner and patient. These factors have resulted in value diversity becoming more visible. The implications of this are that where once medical values may have been more likely to have been shared, and hence hidden, they are now more diverse and visible. These points are further illuminated by this study which demonstrated the potential of the Vx to bring into visibility the presence of different perspectives. This was predominantly through the accessing of the reports of other users. For example one participant commented that after looking at others responses to the case "*I just don't think that's what I would have done…but there's always another point of view*".

The decision product: implications for ethics education

The study suggests that the Vx may contribute to heightened awareness of complexity of decision making and internal tensions. Beneath the participants outward decision whether or not to breach confidence, a complex mix of individual values were at play. For the participants the Vx facilitated new insights into the scenario itself and the tensions present within the decisions made. The findings suggest that the Vx has the potential to make a valuable contribution to ethics education. From one case scenario and five participants an in depth array of perspectives were made visible, both between and within individuals. Broad ranging areas of ethical tension were revealed. These tensions have implications for students' future health care practice. Conflicting principles and duties, issues of trust, the role of emotions are likely to be present in many, if not all the decisions students will face. In many instances there will be no guidance. Individuals will need to justify the decisions they make. An important role of ethics education is therefore to equip the decision maker with resources to undertake ethical deliberation. The Vx, as an experiential based learning tool may contribute to this role.

The product / process distinction

The discussion to date has centred on what can be learned from the decision product. It will now turn to consider the decision process. "*I haven't changed my mind, yet I'm more clearly aware of how complex the decision is than when I started…* [the Vx] *helped me to understand the complexity of my own thought processes"*. The participant makes the distinction between the decision itself and the process by which the decision was made. This extract reveals important insight into decision making. She appears to

have set aside the product of that decision ("*I haven't changed my mind*") and has been made more aware of the process by which the decision was made. Understanding decision making *process* is central to health care ethics (Fulford, 2004a). Unlike bioethics which may advocate for specific values, Fulford et al. (2002) argue that health care ethics focuses on acknowledgement of diverse values. This study supports Fulford's position. Participants saw the Vx as being able to contribute to this acceptance of diversity. In addition, diversity was seen as beneficial as it allowed multiple ways of looking at the world. As one participant reflected "*There's always another point of view...and trying to understand where people come from can be really valuable*".

Analysis of the decision process

Revisiting values theory

Fulford (2004a) developed the notion of values-based medicine (VBM) to provide a counterpart to evidence based medicine (EBM). He made the case that increased complexity and diversity within health care has meant that both evidence and values need to be recognised within decision making. "We need facts to guide our decisions; but we also need values" (p.209). Seedhouse (2005) adopted a similar view of this relationship, describing it as symbiotic. "Without values we cannot discriminate between useful and useless evidence. Without evidence our preferences are uninformed" (p. 22). Basing his arguments on the thinking of Hare, Fulford (2004b) argues that in healthcare, while conflicting values will be visible, shared values will remain hidden.

Relevant to this discussion is that Fulford appears to have extended Hare's argument. Fulford (2004a) defines VBM as concerning "situations where legitimately different (and hence potentially conflicting) value perspectives are in play" (p.205). He adds that "we tend to notice values only when they are diverse or conflicting and hence are likely to be problematic" (p.209). Fulford's interpretation suggests that differing values, while more likely to be visible, are potentially problematic. A further assumption is that shared values, although hidden, are less problematic. In addition, his use of the word 'legitimate' infers that some values are perhaps not legitimate and so may not be afforded the same worth as others. This seems counter-intuitive if one is adopting a philosophical position where diversity is both acknowledged and valued.

This study shows how values transparency can reveal important insights. Participants holding opposing positions actually had some shared values. All participants thought the client was important, even though they ultimately differed on whether they should breach confidence. All shared a common goal: for the client not to commit suicide. However, the values underpinning their decision differed. In addition, the values of those who shared the same position showed degrees of divergence. For example, two participants who both agreed to inform the doctor held quite different perspectives. One was concerned with her duty to help the patient see clearly whilst in a temporary state of ill health. She acknowledged that her actions would not always please the patient but that they were necessary. By contrast, the other participant did not see her role in this way. She had real concerns that it wasn't her role to think for the patient and that she felt uncomfortable with the idea of trying to protect the patient from himself.

Research about the Vx is limited. However these findings are consistent with Vx research by Newcombe (2007). Her study also revealed that values can be shared or differ, irrespective of whether participants were in agreement with the decision outcome. In her study some of those who appeared to disagree actually shared similar goals but like my participants, saw alternative methods for achieving those goals Complexity within the decision product were evident. As Newcombe pointed out "It is not divergence of facts which is making the difference; it is divergence of values" (p.95).

Newcombe's (2007) claim is correct to a certain degree. Evidence plays an important role in decision making. The fact that all participants were given the same 'evidence' yet came to different decision outcomes infers that participants' individual values impacted on the way the decision was considered. Fulford (2004a) presented the argument that in decision making shared values remained hidden while conflicting values were more visible. This study suggests that Fulford's theory may oversimplify the role of values in decision making. While he inferred that shared values were unproblematic, this study suggests the contrary. In fact, participants' experiences have shown that the notion of shared values may be a misnomer. Fulford, while emphasising his focus on decision making *process* appears to base his argument on the role of values on the decision making *product.*

Implications for decision making

Rather than categorising individuals as holding distinctly shared or diverse values it is more realistic to consider each person holding a unique combination of values. Each decision product will be informed by a potentially different mix of those values. Aspects of each decision will have both commonality and difference compared to the decisions of others. This study demonstrates the complexity of the role of values and suggests that the Vx may offer a more realistic view of this role. By facilitating people's thinking to move beyond the initial response of 'Agree' or 'Disagree', the participants' experiences demonstrate that the Vx enables sustained deliberation. A predominant focus just on the decision outcome or *product* provides a limited representation of the user's thinking. Greater understanding is possible when the *process* undertaken to reach that decision is visible.

This is important for practice based decision making. In practice, decisions involve the health care team and often the patient and their family. Each person, whether professional or lay, brings to a decision a unique form of the fact + value equation. A focus on the decision product not only risks misrepresenting people's underlying values, it prevents those values being revealed. As a result decisions may be made where consensus of decision outcome is achieved but not consensus of values. This study has shown that not only are values inseparable from our decisions but that what is known about the differences between shared and conflicting values is more complex than Fulford's (2004a) view. While I acknowledge the importance of values diversity, it is not always possible to see when or whether diversity exists. It may not necessarily be restricted to instances where people outwardly disagree. Every decision has a value element and there is benefit in revealing all values, whether they appear to be shared or in conflict.

Implications for ethics education

This study also highlights the advantages of a process orientated values based approach to ethics education as opposed to an objective approach which seeks 'right' answers. This approach may lead to anxiety about whether people have reached the right or wrong conclusion. The sole participant to disagree with the case scenario proposal appeared to sense this. "*Oh, I answered so differently and nobody else had my ideas and I thought oh, did I do it wrong*?" Her response mirrors some of the students who had initially shown an interest in participating in this study but had not proceeded as they

were concerned they would give wrong answers. Anecdotally the association of ethical decision making with 'correct' answers is commonplace within my role as an ethics educator. A main contributor to this may be the firm position of positivism within health related degree programmes. Despite the presence of other world views, objectivity predominates and evidence is seen as the leading contributor to decision making.

Cowley (2005) is very scathing of current medical ethics education. While he sees the merit in its existence, he argues that it is currently taught from a positivist perspective as if it was an objective subject. Furthermore, there is a hidden curriculum to make ethics more scientific. Cowley claims that not only does traditional ethics language ostracise students, there is a propensity to measure decisions against ethical expertise. Much of the research conducted within disciplines of medicine or nursing tend to use objective tests and often incorporates the use of 'experts' (Crisham, 1981; Goldie et al. 2002; Hebert, Meslin & Dunn; 1992; Akabayashi, Slingsby, Kai, Nishimura & Yamagishi, 2004).

Mathieson (2008) asserts that ethics education ought to help students identify their own values, rather than instilling specific beliefs. This research supports this argument and demonstrates that rather than basing ethics education on the recognition of prescribed standards, the Vx as an educational tool places emphasis on *diversity* of values. This was seen by the participants as beneficial. By valuing diversity the onus is on each decision maker to provide robust justification for their actions, instead of being able to show adherence to a given standard. The software gave users confidence in their decision. Without objective standards, their decision was reliant on their own ability to defend their thinking. As one participant concluded, "[Vx] *gives you a sense of confidence that it's ok – as long as you're taking responsibility for your thinking and how you got to that position*".

Bertolami (2004) has concerns that ethics curricula don't work. He argues that many current ethics courses "do not cultivate an introspective orientation to professional life" (p.414). He cautions that many don't encourage students to think for themselves and there is the risk of students blindly accepting what is taught. Ethics education could therefore be seen as an opportunity to encourage students to think for themselves. Throughout this thesis I have made the distinction between decision product and process. Bertolami (2004) also recognised the distinction. He claims that not only can

diversity allow outcomes to be viewed differently, but that different ways of thinking can be realised. The study shows that transparency also contributes to new thinking about the decision making process. Linking to one of this study's themes, the potential for ethics education to foster new ways of seeing then becomes an empowering product of this process. As a result of their Vx experience, participants did reflect upon new ways of seeing. This related to new insights about the case scenario, about themselves as decision makers and the potential uses of the Vx to deliberate ethical issues. Different elements of the Vx contributed to these insights. Primarily, new insights were gained by having access to the reports of others.

This view was not held by all participants. One participant concluded that her Vx experience had reconfirmed that her existing decision making process was preferable. Rather than seeing the Vx as especially empowering, she felt constrained. "*Life experience creates a different frame in which you make decisions. Clearly the more experience you've had you confer back to that to make your decision. That's what I'm talking about – the tacit, the learned from experience*". Welsh and Lyons (2001) researched the role of tacit knowledge in mental health nursing practice, concluding that making use of the intuitive knowledge of those with experience should not be overlooked.

The Vx recognises this tacit knowledge and offers scope for incorporating one's experience, especially within the free text areas. Interestingly, this participant didn't enjoy writing in these spaces, claiming that "*I guess I didn't want to write down a lot of things. I perhaps rejected the writing part…it was kind of frustrating for me*". Later she added that she felt the Vx was "*programmed responses –it's not fed by more info; the responses are already programmed in*". Ironically, had she felt more comfortable utilising the free text, she may have been able to incorporate more of her valuable tacit knowledge. While there is undoubted value in tacit knowledge, Barnitt and Partridge (1997) found that for physiotherapists and occupational therapists, solely relying on past experience may actually lead to rigid ways of thinking. This was attributed to not being able to easily identify new features of a situation.

Seedhouse (2005) argues that " it is beyond dispute that once a decision-maker has a clear picture of his values, and of how these relate to his decision making, he will become more insightful and therefore almost certainly a more rounded decision-maker"

(p.135). In addition, Smith (1998) found that personal reflection and deliberation can ensure the quality of professional work. This study supports these assertions. Although the participants may not have a crystal clear picture of their values, and few of us probably do, their experiences suggest that the Vx has the potential to make the decision making process more open.

The potential of the online environment

The discussion will now turn to the implications of this study relating to its online setting. Online technology has the potential to create environments which can enhance student engagement with course content (Mason, 2009) increase accessibility (Goldin, et al., 2001) and reduce the influence of peer pressure (Fleetwood et al., 2000). All participants felt the environment was different from that in which they would normally consider practice based ethical issues. The use of technology to deliberate ethical issues was a new and novel experience and was seen to create a space in which the decision making was located. The space was seen by some as restricting, while others thought that it enhanced thinking. Aspects that contributed positively to this space were being able to think alone without the distraction of a discussion, the ability to 'hear' alternative views better when reading rather than by listening to dialogue and the ability to work through your own particular priorities. These findings are consistent with research by Gerbic (2006) who studied business students' experiences of asynchronous learning environments. She suggested that online technologies differ from face to face environments in three main ways and that each of these differences could be seen as either a benefit or a limitation. This was in line with the participants' experiences in this study.

Firstly, face to face conversations are rich with visual and aural cues which create opportunities for competitive dialogue and constant feedback from other conversation members. By contrast online discussions are not as personal and can sometime result in participants feeling less responsibility. In this study some participants noted the lack of instant feedback usually present in a face to face discussion. In particular, one participant felt that she valued the ability to query and gain clarity from others. This contributed to her preference for the face to face environment. By contrast, another saw disadvantages in the competition present within a face to face setting. Having to prepare one's next verbal response may detract from really listening to the rest of the

conversation. She comments that in a face to face environment in her mind she is "*already one step ahead...I'm working out my argument for when it's my turn to speak*".

Secondly, Gerbic (2006) found that there are differences with respect to space. Face to face conversations are rapid and instant, whereas the online counterpart offers time to consider one's response. Issues of time were not especially noted by the participants although Gracie did comment that she considered that the written online communication represented a moment in time and that by the time it was read by others it was likely to be "*out of date*". Gerbic's findings seem to consider 'space' to relate especially to space in relation to time, whereas the experiences of these participants seemed to reflect space as relating more to a 'place' where thinking occurred. For example, Melanie appeared to value this 'space', saying that "*it was just my thoughts to the very end"*. Her further comments suggested that the online environment may assist in the formalising of one's thinking, offering a barrier from being swayed by others, as may occur in a face to face setting. "*I think the benefit of not hearing other people's opinions until the end is that you'll be less likely to listen to others at the end of it because you've worked out where you stand and why*".

Thirdly, Gerbic (2006) found that the two communication environments differed in that one uses speech while the other, the written word and so the associated skills are different. Speech relies on listening and talking while the written word utilises reading and writing skills as well as a permanent written record. Again participants evaluated these skills differently. For one, the written word provided more objectivity and allowed her to "*hear better*". She explained that this related to the ability to read with less emotion that would be involved in a face to face discussion. By contrast another participant found that the written word created an almost unhelpful barrier between the issue and its resolution. Gerbic (2006) found that for some students the written word could reduce the potential learning experience. She added that with experience students can gain confidence within the online environment and with time increase their engagement. It is noted though that all Gerbic's participants were aged between 20 and 40 years of age, with most in the 20-24 age bracket. Age may have been a factor in my study given that the one participant saw fewer benefits to the online environment was also the oldest participant (self selected age grouping of 50-59 years). Further research would be needed to explore this further.

Most research using online technology to teach ethics noted findings that related more closely to the creating of the space rather than the experience within the space. Findings included easy and flexible access (Goldin et al., 2001; Ellenchild Pinch & Graves, 2000; Fleetwood et al, 2000) which meant that students could tailor their use to meet their particular needs. Fleetwood et al. (2000) noted that this flexibility was suited to distance students, while Goldin et al.(2001) and Ellenchild Pinch and Graves (2000) saw benefit in the online environment being able to offer less time constraints than the usual classroom setting. While these factors were not specifically identified by the participants in this study, the ability to access the technology remotely meant that the participants did not meet one another at any time during the research. This is an important point and one that differs significantly from using the Vx software within the curriculum. Ellenchild Pinch and Graves's study reported that online components of ethics courses encouraged subsequent face to face discussions. Participants in this study did not naturally have opportunities for subsequent face to face discussions. While this could be considered for future studies, the potential benefits would need to be weighed with a loss of anonymity.

Aspects of the Vx framework are similar to the CD-ROM 'PETE' (Professional Ethics Tutoring Environment), devised by Goldin et al. (2001). Both utilise the thinking of other peers to foster additional thinking by others. However the nature of this additional thinking differs between PETE and the Vx. Within PETE peer texts are used to guide other students through a case, learning the steps their peers had taken. This differs from the Vx where peer thinking can contribute to new understandings of self and others.

All participants found the Vx software generally easy to use. This ease of use contrasts with students researched by Ellenchild Pinch and Graves (2000). They reported that the most frequently noted concern for students using online technology was fear of computers. In my study the main concerns of participants related to specific features of the Vx rather than concerns about the actual communication medium used. It is noted that the studies are a decade apart. The views of these participants may therefore demonstrate an acceptance of online technologies as part of education and everyday life. As a result, participants are more equipped and confident to critique an individual software programme.

All participants reported that the actual Vx mechanisms provided a framework to guide the thinking process and that this was seen to be beneficial. Participants described the structure as being able to "*help with ordering my reasoning*" and "*helped clarify thinking*". Using words such as "*elaborate*", "*reinforce*" and "*deconstruct*", most commented that the framework followed a logical flow and allowed one to progress from an initial gut reaction through to more considered thinking. These findings are more positive than those from Mancherjee and Sodan's (2004) study of the software tool ETHOS. Its aim was to explore the extent to which the software helped structure ethical decision making within a business environment. Their results found that participants found the software confusing and this was attributed in main to the predominance of traditional ethical theory as the basis of the decision making process. Not only did the software take a long time to complete, the instructions were difficult to follow and the terminology was not presented in a manner that was easily understood by laymen. The authors claimed that while this was a problem for using within an occupational environment, students may well have been better equipped to overcome these challenges if their courses included a similar level of terminology and theoretical knowledge.

Democratising ethics

These specific comments from Mancherjee and Sodan (2004) demonstrate that the Vx software, through purposively not using technical ethics jargon, has been able to avoid some of the challenges faced by ETHOS. Participant's lack of theoretical knowledge did not appear to limit their use of the Vx. Bertolami (2004) argues that ethics courses that rely on learning *about* ethical theories and knowledge will not necessarily be effective or enjoyed. He suggests that "most ethical principles are too abstract, dry, and off-putting to have any practical effect" (p.417). Cowley (2005) provides a strong argument for using ordinary language within ethics education. He claims that ethical terms do not actually add to the self reflection needed for ethical decisions to be made. Often the terminology is obscure (for example utilitarianism and deontology) and this can present a barrier to students.

Cowley (2005) also suggests that the continued presence of such language, especially within medical ethics education, reinforces its "quasi-scientific" nature. This study has shown that ethical decision making does not need to be accompanied by ethical terminology. All participants were able to deliberate and to give thoughtful

consideration to the case scenario without the use of specific terminology. Through an absence of technical terms not only can any user easily use the Vx software, it can just as easily be utilised within the workplace as opposed to within tertiary education. This demonstrates the accessibility of the software. In addition, and on a philosophical level, it helps democratise ethical decision making; legitimising lay access to the field of ethics.

Mechanisms to support the decision maker

In addition to the software contributing to the space and structure for thinking, this study shows that feeling safe is an important factor in decision making. Specifically, participants described a feeling of anxiety about being judged by others. One participant further explained that a consequence of feeling judged was that individuals may become "*reticent to actually talk honestly*". This anxiety was also noted by Molewijk, Abma, Stolper and Widdershoven (2008) who researched ethics education within a psychiatric hospital. They found that health professionals felt insecure talking openly about areas of doubt as it could be interpreted by peers as "professional weakness" (p.121). Offering a solution, one of their participants said "It would be wonderful if we could recognise the elements of our dilemmas, share them with our colleagues, and get to learn how we could transform powerless feelings into concrete and constructive ways of dealing with those dilemmas" (p.121). This sentiment is shared by a participant in this study, as she reflects on the benefits of a supportive environment: "*People need to learn that it's ok for others to have alternative perspectives and opinions and to be willing to discuss differing opinions to come to a greater understanding"*.

The study suggests that trust is an important element in establishing a safe decision making environment. Until trust is established, participants generally favoured anonymity. This could shield them from the judgement of others, and for one participant, from "*hierarchical professional relationships*". Participants also voiced a degree of anxiety associated with subjective responses. For example one noted that "*even if there is no right or wrong there is some potential there to be judged"*. This statement may reveal a tension between subjectivity and objectivity, demonstrating the entrenchment of objectivity within ethics education. Much of the literature reviewed demonstrated clear goals to evaluate and measure ethical behaviour (Goldie et al. 2002; Green et al, 1995; McAlpine, et al., 1997). This study appears to suggest that without the 'threat' of judgement or of having one's subjective thinking measured, thinking and

decision making may feel more supported and people may feel more able to be open and honest. Further research would enhance understanding of this tension.

The decision process: implications for ethics education

This study suggests that a focus on the decision outcome or product provides a limited and potentially inaccurate representation of the user's thinking. Participant's experiences reveal that whether they agreed or disagreed with the proposal may be less relevant to their deliberation than the process of their decision making. This is not to say that whether people agree or disagree is irrelevant. Rather without further elucidation, they can mask the hidden values underpinning decisions made. This research has demonstrated the potential of transparent decision making. Meaning and understanding appear to be enhanced if viewed alongside the process undertaken to reach that decision, leading to new ways of seeing.

The research findings have implications for using online technologies within ethics education. Singer et al. (2001) discussed the potential for incorporating the internet into more ethics education curricula. They claimed that the online environment offers opportunity for flexible access which may aid distance learners as well as ongoing professional development. This study reinforces these claims. In addition, the findings suggest that the online, asynchronous environment of the Vx may help support decision making by offering a space to reflect.

Schon (1987) described the merits of reflection, with encouragement to think and reflect impacting profoundly on learning, and on professional practice. Participants generally valued the space to reflect, which contributed to overall positive experiences using the Vx. It is important to note that the degree to which the participants engaged with the software may be related to the case scenario itself. Gerbic (2009) discussed the impact of the learning activity as part of the wider online learning context. She argued that activities that are controversial with different possible points of view are effective at motivating students to participate in the online environment. This has important implications for ethics education. While one participant in this study noted that a different case scenario may have elicited more in depth responses from her, generally ethical issues draw out varied perspectives. Ethical issues are by nature subjective and open to interpretation and debate. This suggests that an online environment has considerable potential for further development of ethics education. This study

demonstrates that not only does the Vx appear to provide a foundation for thinking and decision making, but as an online learning tool it offers unique features which may enhance existing methods of ethics education.

Concluding comments

The educational potential of the Vx is twofold. While the values based philosophy underpinning the software's development is process orientated, the potential of the Vx for revealing important aspects of the decision product should not be overlooked. Tensions were apparent. Some were exposed and identified by the participants, while other tensions were less overt. Ethical principles of autonomy, beneficence, paternalism and trust underpinned these tensions. Many of these conflicts related particularly to professional duty and the role of emotions. They represented an internal tug of war for the participants. It is likely that these areas of tensions would be present within other practice based case scenarios.

Aspects of the decision making process highlighted the complexity of ethical decision making. While notions of value diversity made valuable contributions to the discussion, values transparency provided a more helpful framework through which to view decision making. Shared values may be an oversimplified term. Rather than values being either shared or different decisions are fuelled by a much more complex mix than this distinction assumes.

Dichotomous positions within ethics education of objectivity and subjectivity were discussed. While objectivity aimed to produce standardised responses, the subjective nature of the Vx appeared to empower participants into new ways of seeing themselves and their decision making. Specific characteristics of the Vx were discussed and their contribution to providing a foundation for thinking and decision making explored. This research has illuminated the educational potential of the Vx software for this group of participants. While not generalisable, the study provides important insight into the software's use. The findings and subsequent discussion is also indicative of having *interested* participants and well suited methodology.

In Chapter seven the research question will be addressed. A summary of findings will be presented, including strengths and limitations, implications for ethics education and points of interest for future research.

Chapter Seven: Conclusion

Following from the findings and subsequent discussion this chapter will provide a brief summary of the findings in relation to the research question and aims. The implications of the research will be discussed, with strengths and limitations presented. Areas of future research will be considered and a personal reflection will close the thesis.

Addressing the research question

This study was located within the field of ethics education. In particular it focussed on the Vx as a tool to assist teaching and learning in this field. While the study focussed on a tertiary education environment the study also had relevance for broader education within a practice based setting. The aims of this study were;

1. To explore the ways in which the Vx facilitated users to think about practice based ethical issues.
2. To explore how individual values shape the decision making process, and
3. To explore how individuals can learn about values and decision making from others.

Using case study methodology, the study attempted to address the research question: What is the educational potential of the Vx?

Through the analysis and discussion of the findings, the educational potential of the Vx, has been revealed. As a case study, this research does not claim to be able to offer a definitive description of the Vx software or the full range of experiences associated with its use. Given that every individual has a unique range of values that inform their decision making, this study recognises that there will be variation within the wider population. From studying the singularity of this case a better understanding of these participants' experiences has been possible. Aspects of the case while not generalisable are potentially informative.

Three themes informed each of the research aims providing an in depth understanding of the case. Firstly, the Vx facilitated users to think about practice based ethical issues. The online environment provided a unique setting to deliberate ethical issues. Through providing structure, space and safety it created a supportive environment for decision making. By using the Vx the participants gained an increased awareness of ethical issues and the complexity of decision making. The transparency of the software enabled

new thinking about the case scenario and for some, new thinking about themselves. This facilitation may be sustained beyond the research experience. "*Just doing that one case I'm more conscious of different perspectives and different values…I think I'm a little more explicit in saying to people you know whatever position you take you need to think through what's driving that…and I challenge them to think about their work and how they're making decisions*".

Secondly, the study enabled a deep exploration of the ways in which values shape the decision making process. Using a controversial case scenario allowed for a broad range of values to be made visible. With close scrutiny of the data, a number of tensions were examined, reflecting the presence of diverse values. This illuminated the complexity of decision making. As one participant observed, "*there is never a simple answer to any case*". Some values were more recognisable than others. For example most participants saw the relevance of the law. However, not all realised the conflict between protecting the patient and protecting themselves. Fewer were able to recognise the extent to which emotion underpinned their decisions; most had thought it had limited importance. This study demonstrates that the role of values is more complex. Further research would be needed to further examine this important issue.

Finally, the study enabled an exploration of the ways in which individuals can learn about values and decision making from others. In general the participants benefitted from the transparent and democratic nature of the software. Having access to the thinking of others in a non-hierarchical environment facilitated the learning from one another. The study found that through the transparency of seeing the reports of others participants came to new ways of seeing. This insight was three fold. Some participants saw new, alternative ways of dealing with the case scenario. As one reflected: "*There are more options than what I saw and that's quite a useful thing to know; that there's more than one way to skin a cat"*. For others the reports helped reinforce their existing argument and new ways of being confident in their own thought processes. Participants utilised the reports of others to reflect on their roles as health practitioners and suggested new settings in which the software could be implemented, for example within community groups, and ethics committees.

Study implications

There are several important implications of this study for ethics education. There is evidence that recognition of the product / process distinction may enhance students' experiences of ethics education, potentially leading to improved health outcomes for patients. This relates to the philosophical underpinnings associated with the methods of delivery. Despite an emphasis in the literature on ethics being taught using objective methods, the reality is that values as well as evidence drive the decisions we make. There has been very little research undertaken that explores the role of values. One explanation for this is that to embrace values as the main driver of the choices we make requires a significant paradigm shift (Seedhouse, 2009). Firstly one must accept that there are no objective truths, that ethics is subjective. Rather than ethics education being about 'correct' answers, a focus on a non-hierarchical acceptance of diversity may enrich learning. From this perspective each individual's point of view has validity. Making decisions transparent enables students to learn from one another, to better understand the world in which they live. In doing this, decision making becomes a more democratic activity. This can be an empowering process as well as providing new ways of looking at practice based issues.

Ethics education needs to focus on both the decision product and the decision process. A focus solely on the decision outcome or product provides a limited and potentially inaccurate representation of thinking. Participant's experiences reveal that whether they agreed or disagreed with the proposal may be less relevant to their deliberation than the process of their decision making. This is not to say that whether people agree or disagree is irrelevant. Rather without further elucidation, they can mask the hidden values underpinning decisions made. This research has demonstrated the potential of transparent decision making. Meaning and understanding appear to be enhanced if viewed alongside the process undertaken to reach that decision, leading to new ways of seeing.

The research findings have implications for using online technologies within ethics education. Singer et al. (2001) discussed the potential for incorporating the internet into more ethics education curricula. They claimed that the online environment offered opportunity for flexible access which may aid distance learners as well as ongoing professional development. This study reinforces these claims. In addition, the findings

suggest that the online, asynchronous environment of the Vx may help support decision making by offering a space to reflect.

This small scale study suggests that the Vx has notable potential and can make a positive contribution to decision making. Barriers seem to exist within ethics education. An emphasis on objectivity, knowledge of ethical terminology and the role of ethics experts may undermine the capacity of students to recognise the decision making skills they already posses. Godbold (2007) argues that ethics education "must start from the bottom up" (p. 184). As educators we therefore have a responsibility to engage with the students we teach. To meet the needs of vocationally focussed students, for example those in health related degree programmes, I propose that ethics education be presented as 'justified decision making'. This would help to democratise ethics and make it more accessible to the non-philosophy student. The study shows that all the participants already possessed the skills necessary for thoughtful decision making; they just need a space to be able and allowed to think. "The most important single factor influencing learning is what the learner already knows." (Ausubel, 1968, p.vi). The Vx challenges much of the existing frameworks present within ethics education, yet it seems to be effective in facilitating students to be thoughtful practitioners. Importantly, the Vx may help to close the theory-practice gap by offering an easy to use framework where existing knowledge and experience can be utilised along with the varied perspectives of others to formulate effective ways to deal with practice based issues. The fact that participants linked their experiences to their practice, both retrospectively to situations they had already encountered but also to possible situations in the future is testament to the Vx's potential.

Limitations and strengths

The study findings and discussion ought to be considered in light of the following limitations and strengths.

- The singularity of the case study can be seen as either a limitation or a strength. The small scale study did not allow for broad representation of the wider population. For example all participants were female. However, the richness of the data would not have been obtainable within the scope of a master's thesis, had a significantly larger sample been used.
- The Vx had not been significantly researched and so case study methodology was considered an appropriate strategy for exploring this educational tool. An

important element of case study research is that it takes place in a natural setting. This study creatively interpreted the term ‘natural setting’. This could be interpreted as a limitation. A more rigid adherence to case study research may have more likely involved the researcher’s own students, exploring the ‘real life’ potential of the software. However a potential conflict of interest existed as ongoing teaching relationships with the participants were likely. As a result participants were selected for which the Vx was not a ‘natural’ part of their education or health care practice.

- The study involved the deliberation of only one case scenario. A larger study may benefit from using a range of scenarios. Gerbic (2009) discusses the importance of the actual learning activity. It is accepted that the depth of thinking and reflection may vary depending upon the degree to which the user can identify with the case scenario. A range of scenarios or a larger sample may have counteracted this factor.
- All participants were female. Representation of both genders would allow further exploration especially in terms of the influence of emotions on decision making, which the literature suggested varied between genders.
- Recruitment was difficult. Some individuals showed initial interest but voiced concern that they may be judged on the decisions they made. Others felt anxious about their ability to correctly use the software. While this was frustrating for the researcher such anxiety was also reflected within the participant’s responses reinforcing the notion that ethical decision making is not only often linked to the discovery of ‘correct’ answers, but can be associated with feelings of discomfort. These specific recruitment issues are worthy of further research.
- Seedhouse (2005) claims that critics of the software may consider that it is possible to fabricate one’s decision to either mask one’s true feelings or to in some way sabotage the data. There are sufficient similarities within the three data collection methods to assume that participants offered genuine reactions to the case scenario and honest reflections of their experiences.

Despite these limitations, the study has several strengths which, on balance outweigh the challenges faced by the researcher.

- A particular strength of this thesis is that the Vx to date has been under researched. Given that it is now established in several international educational and practice based institutions, coupled with positive anecdotal evidence from

students and teaching staff, very little research into its use has taken place. This thesis is potentially unique in providing research to support those anecdotes.

- From a small scale study the case study methodology coupled with the research design have enabled both breadth and depth of issues to be explored. The research has covered a lot of terrain, in some depth. It has examined specific areas of ethical tension within a specific case scenario; considered the philosophical basis of ethics education and decisions making; as well as exploring the use of educational technologies within ethics education. The foundation has been laid for further scrutiny of any of these areas within future research.
- The study has been underpinned by a pragmatic approach to research. Using methodological literature I have made practical design decisions to suit the specific research setting, rather than being constrained by methodological tradition. Not only did this approach help overcome particular challenges associated with the study it importantly required me to critically examine and justify every aspect of the research process.
- On a personal level the greatest strength of this research has been the conducting of the research within an ethic of respect for the participants. Rather than 'ethics' being seen as just a necessary part of the research design process, ethics has been a central focus of this research. This has provided a robust framework on which to conduct my study.

Future research

The broad nature of this research, coupled with interesting findings, provides the scope for several areas of future research. Such studies would further enhance understanding of the educational potential of the Vx.

1. Participants saw potential for the Vx to be used in a number of different settings. These included public discussion forums, community decision making, organisational policy development and as part of the ethics committee process. Research into each of these would provide valuable insight.
2. Other case study designs could be implemented. For example a multiple case study may be suitable for a future larger study. A further study could be designed to enable current students to be researched. The involvement of interested colleagues would widen the scope for Vx research and help counteract any conflicts of interest. Researching students in their natural setting would

allow additional aspects of the Vx to be examined. For example, its integration within the curriculum, and its use as an assessment tool.

3. This study was descriptive, future case studies could incorporate theory seeking or theory testing designs (Bassey, 1999). Other methodologies are also worthy of consideration such as action research or heuristics.
4. Given the recruitment problems experienced in this study and also shared by Gerbic (2006) it would be valuable to gain a better understanding of research participation in general but also specifically relating to research that focuses on the field of ethics.

The above suggestions relate to new areas of research. There is also scope to examine the findings of this study in more depth. Aspects of both decision product and process are worthy of further consideration.

5. From a philosophical perspective the role of values in decision making continues to be overshadowed in the literature by an emphasis on evidence. Further research would contribute to that body of knowledge. The experience of the participants, suggest that the notion of shared and diverse values is more complex than Fulford's (2004a) argument suggests. More generalisable research would be needed to develop a counter argument further.
6. Finally, the tensions present within the actual case scenario have important implications for health care practice. The findings may be indicative of areas of conflict experienced by a wide range of professionals in a variety of settings. Further research into these tensions and specifically within situations involving confidentiality are all worthy of future scrutiny.

Final reflection

On a personal level my thesis experience has also mirrored the themes of the study. I too have come to learn much about the product and the process of my own thinking and writing. From my immersion in the study I have become more aware of the tensions within the research process. Like the participants I have come to new ways of seeing, both in terms of the thesis focus but also new understandings of myself. I also now have a foundation on which to build future research.

Upon revisiting the motivations and personal interests that were the drivers for this study, I have a raised awareness of their relevance. I had identified issues around power in health care relationships, institutional decision making and the entrenchment of

‘correct’ answers within education. The participants’ voices have shed light on all of these. I feel privileged to have shared time with the participants and for them trusting me and one another with the product and the process of their thinking.

I continue to be inspired by my students; by those willing to take the risk and own their opinions, to have the courage to allow their intuition to guide their actions, and to rely on their own ability to reason. They are the future health professionals I’d wish to be treated by.

“And if research began to show that there is indeed a relationship between values and physical outcomes, imagine what an impact this would have on the education, selection and retention of health professionals”(Seedhouse, 2005, p. 134).

References

Adelman, C., Jenkins, D., & Kemmis, S. (1976). Re-thinking case study: Notes from the second Cambridge Conference. *Cambridge Journal of Education, 6*(3), 139-150.

Akabayashi, A., Slingsby, B., Kai, I., Nishimura, T., & Yamagishi, A. (2004). The development of a brief and objective method for evaluating moral sensitivity and reasoning in medical students. *BMC Medical Ethics*, 5(1). Retrieved from http://www.biomedcentral.com/1472-6939/5/1

Antenatal Down Syndrome Screening Advisory Group. (2007). *Antenatal Down Syndrome screening report in New Zealand 2007: A report of the Antenatal Down Syndrome Screening Advisory Group to the National Screening Unit.* Retrieved 4 March, 2008, from http://www,govt.nz/moh.nsf/UnidPrint/MH6087?OpenDocument

Auckland University of Technology. (2007, October). An exchange of values. *Inside AUT.* Retrieved 25 May, 2008, from http://www.aut.ac.nz/staff/insideaut/2007_october/ethics.htm

Auckland University of Technology Ethics Committee. (n.d*). Ethics knowledge base: Principles of the Treaty of Waitangi.* Retrieved 08 October, 2009, from http://www.aut.ac.nz/research/research-ethics/ethics

Ausubel, D. (1968). *Educational psychology: A cognitive view.* New York: Holt Rinehart and Winston.

Barnitt, R., & Partridge, C. (1997). Ethical reasoning in physical therapy and occupational therapy. *Physiotherapy Research International*, 2(3), 178-194.

Bassey, M. (1999). *Case study research in educational settings*. Buckingham: Open University Press.

Beauchamp, T. L., & Childress, J. F. (2001). *Principles of biomedical ethics* (5th ed.). New York: Oxford University Press.

Berghan, G. (2007). *What do ethics mean in health promotion?* Proceedings of the Ethics and Evidence in Health Promotion Symposium, Health Promotion Forum of New Zealand, Auckland, New Zealand.

Bernat, J. (2008). *Ethical issues in neurology.* (3rd ed.). Philadelphia: Lippincott Williams & Wilkins.

Bertolami, C. N. (2004). Why our ethics curricula don't work. *Critical Issues in Dental Education*, 68(4), 414-425.

Bird, C. M. (2005). How I stopped dreading and learned to love transcription. *Qualitative Inquiry,* 11(2), 226-248.

Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative research for education: An introduction to theory and methods*. Boston: Allyn & Bacon.

Bostwick, J., Brendel, R., Hicks, D., & Steinberg, M., D. (2009). On "Distinguishing among irrational suicide, rational suicide, and other forms of hastened death: Implications for clinical practice" by Calvin P. Leeman, M.D. *Psychosomatics,* 50(3), 192-197.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks: Sage.

Bradley, P., & Burls, A. (2000*). Ethics in public and community health*. London: Routledge.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

Bridgeman, A., Collier, A., Cunningham, J., Doyal, L., Gibbons, D., & King, J. (1999). Teaching and assessing ethics and law in the dental curriculum. *British Dental Journal*, 187(4), 217-220.

Campbell, A. V., Chin, J., & Voo, T.-C. (2007). How can we know that ethics education produces ethical doctors? *Medical Teacher*, 29, 431-436.

Campbell, A. V., Gillett, G., & Jones, G. (2006*). Medical ethics* (4th ed.). Melbourne,Vic: Oxford University Press.

Cartwright, S. (1988). *The report of the committee of inquiry into allegations concerning the treatment of cervical cancer at National Women's Hospital and into other related matters*. Auckland: Government Printing Office.

Chaimowitz, G., A, Glancy, G., D, & Blackburn, J. (2000). The duty to warn and protect: Impact on practice. *Canadian Journal of Psychiatry*, 45(10), 899-904.

Chamberlain, K., Camic, P., & Yardley, L. (2004). Qualitative analysis of experience: grounded theory and case studies. In D. F. Y. Marks, L. (Ed.*), Research Methods for Clinical and Health Psychology*. London: Sage.

Cole, S. (2000). *Ethics and The Treaty of Waitangi*. Retrieved 18 September, 2009, from http://www.nathaniel.org.nz/?sid=58

Conway, M. (2007). The value of values- do they go deep enough? In J. Cox, A. V. Campbell & K. W. M. Fulford (Eds.), *Medicine of the person: faith, science and values in health care provision* (pp. 70-80). London: Kingsley.

Coulehan, J. (1995). Tenderness and steadiness: Emotions in medical practice. *Literature and Medicine*, 14(2), 222-236.

Coulehan, J., & Williams, P. C. (2003). Conflicting professional values in medical education. *Cambridge Quarterly of Healthcare Ethics*, 12(1), 7-20.

Cowley, C. (2005). Teaching and learning ethics: The dangers of medical ethics. *Journal of Medical Ethics*, 31, 739-742.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage.

Crisham, S. (1981). Measuring moral judgement in nursing dilemmas. *Nursing Research*, 30(2), 104-110.

Cull, H. (1999). *Inquiry under S.47 of the Health and Disability Services Act 1993 into the provision of chest physiotherapy treatment to pre-term babies at national Women's Hospital between April 1993 and December 1994.* Wellington: Ministry of Health.

Dewey, J. (1948). *Reconstruction in philosophy*. Boston: Beacon Press.

Dickenson, D., & Vineis, P. (2002). Evidence-Based Medicine and Quality of Care. *Health Care Analysis*, 10, 243-259.

Ellenchild Pinch, W. J., & Graves, J. K. (2000). Using web-based discussion as a teaching strategy: Bioethics as an exemplar. *Journal of Advanced Nursing*, 32(3), 704-712.

Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12(4), 531-545.

Fleetwood, J., Gracely, E., Vaught, W., Kassutto, Z., Feldman, D., & Novack, D. (2000). MedEthEx online: A computer-based learning program in medical ethics and communication skills. *Teaching and Learning in Medicine*, 12(2), 96-104.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219-245.

Fulford, K. W. M. (2004a). Neuro-ethics or neuro-values? delusion and religious experience as a case study in values-based medicine. *Poiesis Prax*, 2, 297-313.

Fulford, K. W. M. (2004b). Ten principles of values-based medicine. In J. Radden (Ed.), *The philosophy of psychiatry: a companion* (pp. 205-234). Oxford: Oxford University Press.

Fulford, K. W. M., Dickenson, D. L., & Murray, T. H. (Eds.). (2002*). Healthcare ethics and human values.* Oxford: Blackwell.

Gerbic, P. (2006). *On-campus students' learning in asynchronous environments*. Unpublished Doctoral thesis, Deakin University, Melbourne, Australia.

Gerbic, P. (2009). Including online discussions within campus-based students' learning environments. In E. Stacey & P. Gerbic (Eds.), *Effective blended learning practices: Evidence-based perspectives in ICT-facilitated education.* (pp. 21-38). Hershey, PA: Information Science Reference.

Gerbic, P. (2010). Getting the blend right in new learning environments: A complimentary approach to online discussions. *Education and Information Technologies*, 15(2), 125-137.

Gillon, R. (2003). Ethics needs principles - four can encompass the rest - and respect for autonomy should be "first among equals". *Journal of Medical Ethics*, 29(5), 307-312.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*: *Strategies for qualitative research*. New York: Aldine.

Godbold, R. (2007). *A philosophical critique of the best interests test as a criterion for decision making in law and clinical practice.* Unpublished Doctoral thesis, Auckland University of Technology, Auckland, New Zealand..

Goldie, J., Schwartz, L., McConnachie, A., & Morrison, J. (2002). Impact of a new course on students' potential behaviour on encountering ethical dilemmas. *Medical Education*, 35, 295-302.

Goldin, I., M, Ashley, K. D., & Pinkus, R. L. (2001). *Introducing PETE: Computer support for teaching ethics*. Paper presented at the Eighth International Conference on Artificial Intelligence & Law, New York.

Gravel, K., Légaré, F., & Graham, I. D. (2006). Barriers and facilitators to implementing shared decision-making in clinical practice: a systematic review of health professionals' perceptions. *Implementation Science,* 1(1), 16. Retrieved from http://www.implementationscience.com.ezproxy.aut.ac.nz/content/1/1/16

Green, B., Miller, P. D., & Routh, C. P. (1995). Teaching ethics in psychiatry: A one-day workshop for clinical students. *Journal of Medical Ethics*, 21(4), 234-238.

Grinnell, F. (2004). Subject vulnerability: The precautionary principle. *The American Journal of Bioethics*, 4(3), 72-24.

Harman, G. (2000*). Explaining value and other essays in moral philosophy*. Oxford: Oxford University Press.

Hattab, A. (2004). Current trends in teaching ethics of healthcare practices. *Developing World Bioethics,* 4(2), 160-172.

Health and Disability Commissioner. (1996). The Health and Disability Commissioner Code of Health and Disability Services Consumers' Rights Regulation 1996. Retrieved 1 July, 2009, from http://www.hdc.org.nz/theact/theact-thecodedetail.

Hébert, P. C., Meslin, E. M., & Dunn, E. V. (1992). Measuring the ethical sensitivity of medical students: A study at the University of Toronto. *Journal of Medical Ethics*, 18(3), 142-147.

Hickman, L. A., & Alexander, T. M. (Eds.). (1998). *The essential Dewey: Pragmatism, education and democracy (Vol. 1).* Bloomington, IN: Indiana University Press.

Hope, T. (1995). Evidence based medicine and ethics. *Journal of Medical Ethics*, 21(5), 259-260.

Hope, T., Savulescu, J., & Hendrick, J. (2003). *Medical ethics and the law: The core curriculum.* Edinburgh, Scotland: Churchill Livingston.

Jones, C. (2003). The utilitarian argument for medical confidentiality: A pilot study of patients' views. *Journal of Medical Ethics*, 29, 348-352.

Kuhse, H., & Singer, P. (Eds.). (2001). *A companion to bioethics*. Oxford: Blackwell Publishing.

Kvale, S., & Brinkmann, S. (2009). *Interviews* (2nd ed.). Thousand Oaks, CA: Sage

Lapadat, J. C., & Lindsay, A. C. (1999). Transcription in research and practice: From standardization of technique to interpretive positionings. *Qualitative Inquiry*, 5(1), 64-86.

Limentani, A. E. (1999). The role of ethical principles in health care and the implications for ethical codes. *Journal of Medical Ethics*, 25, 394-398.

Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Lofton, L. (2004). Teaching ethics: a growing need among healthcare professionals. *The Mississippi Business Journal*, (July). Retrieved 25 May 2008, from http://www.msbusiness.com/archives.cfm.

Loui, M. C. (2005). Educational technologies and the teaching of ethics in science and engineering. *Science and Engineering Ethics*, *11*(3), 435-446.

Macdonald, B., & Parlett, M. (1973). Re-thinking evaluation: Notes from the Cambridge conference authority, teacher education and education studies'. *Cambridge Journal of Education*, 3(2), 74-82.

Mancherjee, K., & Sodan, A. C. (2004). Can computer tools support ethical decision making? *Computers and Society,* 34(2), 1.

Mason, R. (2009) Foreword. In E. Stacey & P.Gerbic (Eds.), *Effective blended learning practices: Evidence-based perspectives in ICT-facilitated education.*. Hershey, PA.Information Science Reference.

Mathieson, K. (2007a, 9-12 August). *Dioptra: an ethics decision support system*. Paper presented at the Americas Conference on Computer Information Systems, Keystone, Colorado.

Mathieson, K. (2007b). Towards a design science of ethical decision support. *Journal of Business Ethics*, 76, 269-292.

Mathieson, K. (2008). "We don't need no stinking ethics": The struggle continues. *Journal of College and Character*, 9(4), 1-12.

McAlpine, H., Krisjanson, L., & Poroch, D. (1997). Development and testing of the ethical reasoning tool (ERT): An instrument to measure the ethical reasoning of nurses. *Journal of Advanced Nursing*, 25, 1151-1161.

Merriam, S. B. (1988). *Case study research in education: A qualitative approach*. San Francisco, CA: Jossey-Bass.

Merriam, S. B. (2009). *Qualitative research: a guide to design and implementation.* San Francisco, CA: John Wiley & Sons.

Miles, M. B., & Huberman, A. M. (1984). *Qualitative data analysis: A sourcebook of new methods*. Beverley Hills, CA: Sage.

Mills, A. E., & Spencer, E. M. (2005). Values based decision making: a tool for achieving the goals of healthcare. *HEC Forum*, 17(1), 18-32.

Molewijk, A. C., Abma, T., Stolper, M., & Widdershoven, G. (2008). Teaching ethics in the clinic: The theory and practice of moral case deliberation. *Journal of Medical Ethics*, 34(2), 120-124.

Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, 10(1), 3-5.

Naidu, S., & Cunnington, D. (2004). Showcasing faculty experiences with technology enhanced teaching and learning. *Association for the Advancement of Computing in Education*, 12(2), 141-154.

Nassif, J., M, Gorczyca, J., T, Cole, J., K, Pugh, K., J, & Pienkowski, D. (2000). Effect of acute reamed versus unreamed intramedullary nailing on compartment pressure when treating closed tibial shaft fractures: A randomized prospective study. *Journal of Orthopaedic Trauma*, 14(8), 554-558.

New Zealand Legislation (1975). The Treaty of Waitangi Act. Retrieved 5 March, 2010, from http://www.legislation.govt.nz/act/public/1975/0114/latest/DLM435368.html

New Zealand Legislation (2003). Health Practitioners Competence Assurance Act. Retrieved 3 March, 2010, from http://www.legislation.govt.nz/act/public/2003/0048/latest/DLM203312.html

Newcombe, D. (2007). *Ethics of the everyday: Using values transparency software to explore values based decision making in healthcare*. Unpublished Dissertation, Auckland University of Technology, Auckland, New Zealand.

Orange, C. J. (1987). *The Treaty of Waitangi*. Wellington: Allen & Unwin.

Osborn, D. P. (1999). Research and ethics: Leaving exclusion behind. *Current Opinion in Psychiatry*, 12(5), 601-604.

Parsons, S., Barker, P., & Armstrong, A. (2001). The teaching of health care ethics to students of nursing in the UK: a pilot study. *Nursing Ethics*, 8(1), 45-56.

Paterson, R. (2002). The patients' complaint system in New Zealand. *Health Affairs*, 21(3), 70-79.

Patton, M. Q. (2002). *Qualitative research and evaluative methods* (3rd ed.). Thousand Oaks: Sage Publications.

Pence, G. (2004). Virtue theory. In P. Singer (Ed.), *A companion to ethics*. (pp. 249-258). Oxford: Wiley-Blackwell.

Petrova, M., Dale, J., & Fulford, K. W. M. (2006). Values-based practice in primary care: easing the tensions between individual values, ethical principles and best evidence. *British Journal of General Practice* (September), 703-709.

Phillips, B. (2005). Nursing care and understanding the experiences of others: a Gadamerian perspective. *Nursing Inquiry*, 14 (1), 89-94.

Polit, D. F., & Beck, C. T. (2006). *Essentials of nursing research.* (6th ed.). Philadelphia: Lippincott Williams & Wilkins.

Purtilo, R. (1999). *Ethical dimensions in the health professions.* (3rd ed.). Philadelphia: W.B. Saunders.

Rokeach, M. (1979). *Understanding Human Values*. New York: Free Press.

Sackett, D. L., Rosenberg, W. M., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: what it is and what it isn't. *British Medical Journal* (312), 71-72.

Sankar, P., Moran, S., Merz, J., & Jones, N. (2003). Patient perspectives on medical confidentiality. *Journal of General Internal Medicine*, 18, 659-669.

Savulescu, J. (2006). Conscientious objection in medicine. *British Medical Journal*, 332, 294-296.

Schon, D. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Seedhouse, D. F. (2001). *Health: The foundations for achievement* (2nd ed.). Chichester: John Wiley & Sons.

Seedhouse, D. F. (2005*). Values-based decision making for the caring professions*. Chichester: John Wiley & Sons.

Seedhouse, D. F. (2009). *Ethics: The heart of health care* (3rd ed.). Chichester: John Wiley & Sons.

Simons, H. (1996). The paradox of case study. *Cambridge Journal of Education*, 26(2), 225-241.

Simons, H. (2009*). Case study research in practice*. London: Sage Publications.

Singer, P. A., Pellegrino, E. D., & Siegler, M. (2001). Clinical ethics revisted. *BMC Medical Ethics*, 2(1). Retrieved 07 November 2009, from http://www.biomedcentral.com/1472-6939/2/1

Smith, A. (1998). Learning about reflection. *Journal of Advanced Nursing*, 28(4), 891-898.

Smith, L. M. (1978). An evolving logic of participant observation, educational ethnography and other case studies. *Review of Research in Education*, 6(1), 316-377.

Smith, R. (1997). Informed consent: the intricacies. Should the BMJ reject all studies that do not include informed consent*? British Medical Journal,* 314 (7087), 1059.

Soy, S. K. (1997). The case study as a research method. Unpublished paper. University of Texas at Austin. Retrieved 17 November, 2010, from http://www.ischool.utexas.edu/~ssoy/usesusers/l391d1b.htm

Stake, R. (1994). Case studies. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.

Stake, R. (1995*). The art of case study*. Thousand Oaks: Sage.

Stevens, N. G., & McCormick, T. R. (1994). What are students thinking when we present ethics cases?: an example focusing on confidentiality and substance abuse. *Journal of Medical Ethics, 20*(2), 112-117.

Tuckett, A. G. (2005). Applying thematic analysis theory to practice: A researcher's experience. *Contemporary Nursing*, 19(1-2), 75-87.

van der Burg, S., & van de Poel, I. (2005). Teaching ethics and technology with Agora, an electronic tool. *Science and Engineering Ethics*, 11(2), 277-297.

Walker, R. (1983). Three good reasons for not doing case studies in curriculum research. *Journal of Curriculum Studies*, 15(2), 155-165.

Welsh, I., & Lyons, C. M. (2001). Evidence-based care and the case for intuition and tacit knowledge in clinical assessment and decision making in mental health nursing practice: an empirical contribution to the debate. *Journal of Psychiatric and Mental Health Nursing*, 8(4), 299-305.

Weston, A. (2001). *A 21st century ethical toolbox*. Oxford: Oxford University Press.

Williams, S. D., & Dewett, T. (2005). Yes, you can teach business ethics: A review and research agenda. *Journal of Leadership and Organizational Studies*, 12(2), 109-120.

Wong, J., & Cheung, E. (2003). Ethics assessment in medical students. *Medical Teacher*, 25(1), 5-8.

Yin, R. K. (1994). *Case study research: Design and methods*. London: Sage.

Appendices

Appendix A: Auckland University of Technology (AUTEC) Study Approval.

MEMORANDUM

Auckland University of Technology Ethics Committee (AUTEC)

To:	Rosemary Godbold
From:	**Madeline Banda** Executive Secretary, AUTEC
Date:	27 August 2009
Subject:	Ethics Application Number 09/189 **Exploring the impact of using decision making software on ethical decision making: a case study.**

Dear Rosemary

Thank you for providing written evidence as requested. I am pleased to advise that it satisfies the points raised by myself and the inquorate subcommittee of the Auckland University of Technology Ethics Committee (AUTEC), and that I have approved your ethics application. This delegated approval is made in accordance with section 5.3.3 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 14 September 2009.

Your ethics application is approved for a period of three years until 27 August 2012.

I advise that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through *http://www.aut.ac.nz/research/research-ethics*. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 27 August 2012;
- A brief report on the status of the project using form EA3, which is available online through *http://www.aut.ac.nz/research/research-ethics*. This report is to be submitted either when the approval expires on 27 August 2012 or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this. Also, if your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply within that jurisdiction.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at ethics@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEC and myself, I wish you success with your research and look forward to reading about it in your reports.

Yours sincerely

Madeline Banda

Executive Secretary,
Auckland University of Technology Ethics Committee

Appendix B: AUTEC Second Stage Study Approval.

MEMORANDUM

Auckland University of Technology Ethics Committee (AUTEC)

To:	Rosemary Godbold
From:	**Madeline Banda** Executive Secretary, AUTEC
Date:	20 April 2010
Subject:	Ethics Application Number 09/189 **Exploring the impact of using decision making software on ethical decision making: a case study.**

Dear Rosemary

I am pleased to advise that I have approved minor amendments to your ethics application, allowing a second stage of data collection. This delegated approval is made in accordance with section 5.3.2 of AUTEC's *Applying for Ethics Approval: Guidelines and Procedures* and is subject to endorsement at AUTEC's meeting on 10 May 2010.

I remind you that as part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through *http://www.aut.ac.nz/research/research-ethics*. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 27 August 2012;
- A brief report on the status of the project using form EA3, which is available online through *http://www.aut.ac.nz/research/research-ethics*. This report is to be submitted either when the approval expires on 27 August 2012 or on completion of the project, whichever comes sooner;

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are reminded that, as applicant, you are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

Please note that AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to make the arrangements necessary to obtain this. Also, if your research is undertaken within a jurisdiction outside New Zealand, you will need to make the arrangements necessary to meet the legal and ethical requirements that apply within that jurisdiction.

When communicating with us about this application, we ask that you use the application number and study title to enable us to provide you with prompt service. Should you have any further enquiries regarding this matter, you are welcome to contact Charles Grinter, Ethics Coordinator, by email at ethics@aut.ac.nz or by telephone on 921 9999 at extension 8860.

On behalf of the AUTEC and myself, I wish you success with your research and look forward to reading about it in your reports.

Yours sincerely

Madeline Banda

Executive Secretary,
Auckland University of Technology Ethics Committee

Appendix C: Participant Information Sheet.

Participant Information Sheet

Date Information Sheet Produced:

03 August 2009

Project Title

Exploring the impact of using decision making software on ethical decision making: A case study.

An Invitation

I am Amanda Lees and I am undertaking this research as part of my MHSc. I would like to invite you to participate in this research project to explore the impact of using the Values Exchange (Vx) decision making software programme. Participation in this research project is voluntary and you may withdraw at any time.

What is the purpose of this research?

The Values Exchange is a web based technology that provides a framework for making ethical decisions about a range of health and wider social issues. The purpose of this research is to gain an understanding of how the Values Exchange impacts upon participant decision making processes. Findings from this study will be presented within the Faculty of Health and Environmental Science at AUT University as well as forming the basis for a conference presentation or journal publication. The aim of the research is to:

a) To explore the ways in which the Values Exchange software facilitates the user to think about practice based ethical issues.

b) To explore how individual values shape decision making

c) To explore how individuals can learn about values and decision making from others

How was I chosen for this invitation?

The study is open to anyone currently enrolled in a postgraduate paper within AUT's Faculty of Health and Environmental Science, who works or has experience in a field of health care. The study does not rely on you needing any knowledge of ethical theory. Your participation is not viewed as an assessment; your responses will not be graded or judged in any way. I am only interested in how the software has impacted on the way you think and make decisions about practice based situations.

What will happen in this research?

The research will focus on one case situation from health care practice. Ethical case studies often include sensitive and potentially disturbing material, including material relating to suicide. If you would like to take part, you will be invited to attend a one hour workshop, where you will be introduced to the Values Exchange software, including some practice cases. The software can be accessed from any computer and you will have one week to use the software to work through a specific practice based ethical case scenario. Your name will be changed to respect confidentiality. The software compiles a summary of your use of the software as well as other participants. Because I am interested in how we learn from one another, I will ask you to look at your report as well as the reports of some other participants. Then you will be invited to complete an online survey. Afterwards, some of you may be invited to be individually interviewed about your experiences. Both the workshop and interviews will take place on the North Shore campus. However, if you live beyond easy reach of AUT, I can arrange for instruction and any subsequent interview to take place via a SKYPE video linked telephone call.

What are the discomforts and risks?

There are no anticipated risks in this study however some people may feel uncomfortable reflecting upon their values.

How will these discomforts and risks be alleviated?

Your confidentiality is assured. You can choose to withdraw from the study at any time. If you decide that you do not wish to continue being a participant, but you have already used the software, it will not be possible to destroy all data from the software, however any data collected during an interview process will be destroyed and will not be included in the data analysis or write up of the study.

What are the benefits?

If you choose to participate in the study you will have the opportunity to analyse and reflect on your experiences of using the Vx decision making software. The skills learnt have the potential to benefit you in practice. Your experiences are valuable as the software is a relatively new innovation and a better understanding of its impact has the potential to benefit its development and use.

How will my privacy be protected?

Participants will be registered to use the Values Exchange software. The researcher will ensure that pseudonyms will be used to protect your privacy. The workshop will bring participants together. Therefore consent forms will require participants to assure the confidentiality of other participants.

What are the costs of participating in this research?

The only cost of your participation in this study is your time. The workshop will take approximately one hour and any subsequent interview will take no more than 45 minutes. The time taken to consider the case scenario will vary between participants, but may be between 10 and 60 minutes.

What opportunity do I have to consider this invitation?

I am happy for you to contact me with any question you may have about this research. If you are interested in participating you will have up until the 17th September, 2009 to contact me regarding your participation.

How do I agree to participate in this research?

If you would like to participate in the study I will post you a consent form and stamped addressed envelope which you should complete and return it to me at the address below. I will then contact you to arrange workshop dates to suit.

Will I receive feedback on the results of this research?

The results of the research will be available on the Values Exchange website. You will also immediately see the reports generated by the software based on the analyses submitted by you and other participants.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Rosemary Godbold, rosemary.godbold@aut.ac.nz , 921 9999 ext 7772. Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, *madeline.banda@aut.ac.nz* , 921 9999 ext 8044.

Researcher Contact Details:

Amanda B Lees, amandab.lees@aut.c.nz , 09 921 9999 ext 7647.

Project Supervisor Contact Details:

Dr Rosemary Godbold, PhD, RN, rosemary.godbold@aut.ac.nz , 09 921 9999 ext 7772

Approved by the Auckland University of Technology Ethics Committee on 27 August 2009, AUTEC Reference number 09/189.

Appendix D: Consent Form.

Consent Form

Project title: Exploring the impact of using decision making software on ethical decision making: A case study.

Project Supervisor: Dr Rosemary Godbold

Researcher: Amanda B Lees

- ○ I have read and understood the information provided about this research project in the Information Sheet dated 30 July 2009.
- ○ I have had an opportunity to ask questions and to have them answered.
- ○ I understand that I may withdraw myself at any time prior to completion of data collection, without being disadvantaged in any way.
- ○ If I withdraw, I understand that my responses to the software will be retained because other participants may use my software generated reports in their reflection; all other relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- ○ I understand that should I take part in an interview, notes may be taken and that the session will be audio-taped and transcribed.
- ○ I agree to maintain the privacy and confidentiality of other participants.
- ○ I agree to take part in this research.
- ○ I wish to receive a copy of the report from the research (please tick one):

  Yes○ No○

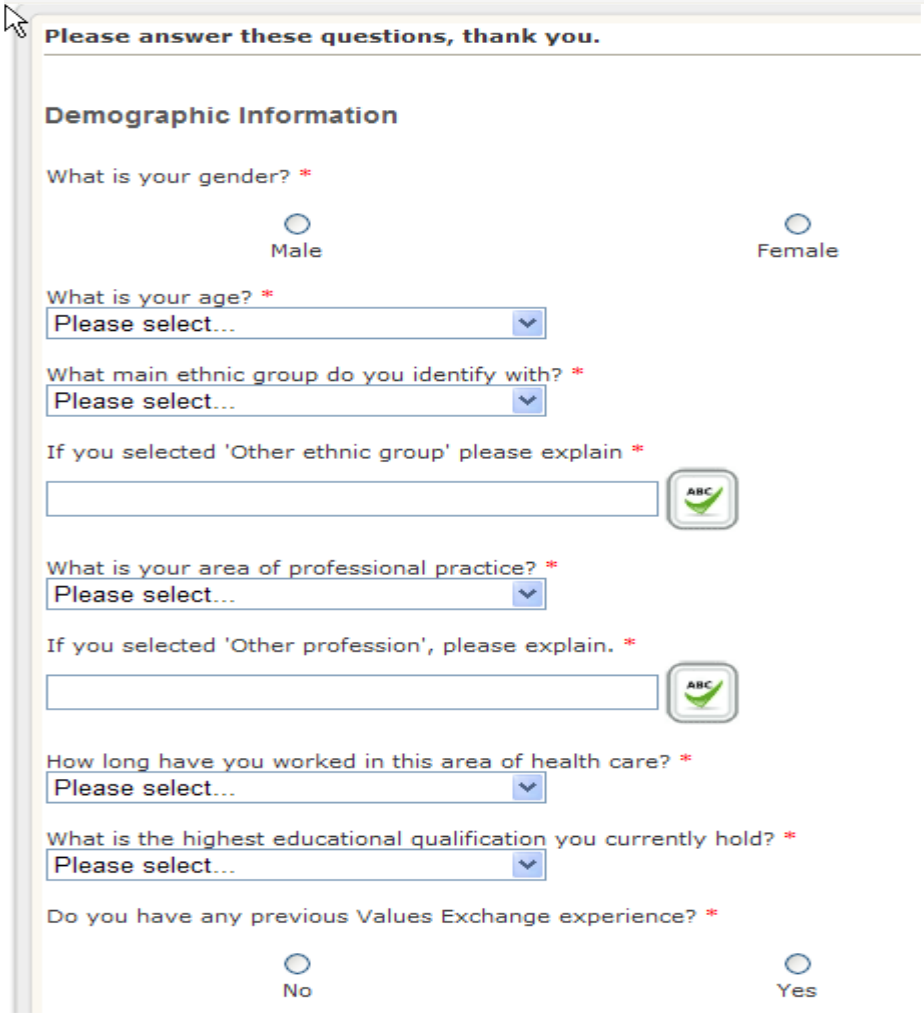
Participant's signature: .....
Participant's name: .....
Participant's email address :.....
Date: .....

Approved granted by the Auckland University of Technology Ethics Committee AUTEC Reference number 09/189

Please return to:
Amanda B Lees, Internal mail A-12, National Centre for Health Law and Ethics, School of Public Health and Psychosocial Studies, Faculty of Health and Environmental Studies, North Shore Campus, Private Bag 92006, Auckland 1142

Note: The Participant should retain a copy of this form.

Appendix E: Survey Questions.



Drop down options for demographic questions

Age bands: 20-29, 30-39, 40-49, 50-59, 60 and over

Ethnic Group:
NZ European
Maori
Pasifika
European
Indian
Other Asian
African
Any other ethnic group
Do not wish to say

Area of Professional Practice:
Nursing
Medicine
Physiotherapy
Podiatry
Psychology
Psychotherapy
Other profession

How long have you worked in this area of health care?
0-1 years
1-2 years
2-5 years
5-10 years
Over 10 years

What is your highest level of educational qualification?
Experienced based training
Undergraduate degree
Masters degree
PhD

Your Values Exchange Experience

What was your initial impression of the Vx software? *

How easy was it to follow the instructions to complete a case using the Vx software? *

Thinking about your experience of using the free text boxes, how comfortable were you writing about the way you felt about the case? Please explain. *

Was your thinking challenged by the Vx process? If so, in what ways? *

Reflecting on Reports

Having read your own reports as well as the reports of others did you find anything of particular interest? Please explain. *

Did the reports of others trigger new thinking about the case scenario? If yes, please explain. *

Did the reports of others contribute to your understanding of how decision making differs between individuals? If so, please explain. *

One of the founding principles of Vx is transparent decision making. For the purposes of this study pseudonyms were used to ensure confidentiality. In another context, for example in an educational or practice setting how would you feel about using your real name and having your name on case reports? *

Final Reflections

Has the Values Exchange changed your views about the ethical decision making process? If so, in what ways? *

Have you gained any insight into the values affecting your decision making? If so, please explain. *

Do you think this software would be beneficial in your practice? If so, what might the benefits be?

What do you consider to be the limitations of the software? *

What, if anything have you learnt from this experience that you can use in your practice, irrespective of whether you have access to the Vx or not? *

Is there anything else you would like to tell me about your experience using the Vx software? *

Thank You

Appendix F: Participant Information Sheet (Second Stage).

Participant Information Sheet

Date Information Sheet Produced:

1 March 2010

Project Title

Exploring the impact of using decision making software on ethical decision making: A case study.

An Invitation

You have kindly been participating in the above research project which I am undertaking as part of my MHSc. As outlined in the previous Participant Information Sheet, I would now like to invite you for an interview where we will discuss some of the research findings. Continued participation in this research project is voluntary and you may withdraw at any time.

What is the purpose of this research?

The Values Exchange is a web based technology that provides a framework for making ethical decisions about a range of health and wider social issues. The purpose of this research is to gain an understanding of how the Values Exchange impacts upon participant decision making processes. Initial findings have already been presented at the 2010 NZ Bioethics Conference, Dunedin, 29-31 January and upon completion, findings from this study will be presented within the Faculty of Health and Environmental Science at AUT University as well as forming the basis for a journal publication or further conference presentation.

The aim of the research is to:

a. To explore the ways in which the Values Exchange software facilitates the user to think about practice based ethical issues.

b. To explore how individual values shape decision making

c. To explore how individuals can learn about values and decision making from others.

What will happen in this research?

As a participant, you will be invited to an informal interview of approximately 20 -30 minutes. Interviews will take place on AUT's North Shore campus, however I am also happy to travel to your place of study if this is more convenient for you. During this time we will discuss themes that have emerged from the initial data and we will discuss your experience of using the Values Exchange. Given that it is now several months since you completed your case scenario and survey, I will email you copies of these as well as providing you with indicative questions that will form the basis of our discussion. The interview will be audio recorded for subsequent transcription by the researcher and notes may be taken.

What are the discomforts and risks?

There are no anticipated risks in this study however some people may feel uncomfortable reflecting upon their values. If this is the case and you would like to talk to someone about your feelings, then I can arrange for you to talk with someone from AUT's Health, Counselling and Wellbeing centre.

How will these discomforts and risks be alleviated?

Your confidentiality is assured. You can choose to withdraw from the study at any time. If you decide that you do not wish to continue being a participant, but you have already used the software, it will not be possible to destroy all data from the software, however any data collected during an interview process will be destroyed and will not be included in the data analysis or write up of the study.

What are the benefits?

If you choose to participate in the interview you will have the opportunity to further analyse and reflect on your experiences of using the Values Exchange decision making software. Your experiences are valuable as the software is a relatively new innovation and a better understanding of its impact has the potential to benefit its development and use.

How will my privacy be protected?

Only the participant and the researcher will be present at the interview. Your self selected pseudonym will continue to be used to identify you and transcription and analysis will only be carried out by the researcher.

What are the costs of participating in this research?

The only cost associated with the interview is your time.

What opportunity do I have to consider this invitation?

I am happy for you to contact me with any question you may have about the interview. If you would like to participate, please email me by 26th March and I will email you a consent form.

How do I agree to participate in this research?

If you would like to participate in the interview, please bring your signed consent form to the interview.

Will I receive feedback on the results of this research?

The results of this research project will be made available to all participants upon request. The thesis will also be available within Scholarly Commons.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Rosemary Godbold, rosemary.godbold@aut.ac.nz , 921 9999 ext 7772. Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, madeline.banda@aut.ac.nz , 921 9999 ext 8044.

Whom do I contact for further information about this research?

Researcher Contact Details:

Amanda B Lees, amandab.lees@aut.ac.nz , 09 921 9999 ext 7647.

Project Supervisor Contact Details:

Dr Rosemary Godbold, PhD, RN, rosemary.godbold@aut.ac.nz, 09 921 9999 ext 7772.

Approved by the Auckland University of Technology Ethics Committee on 20 April 2010, AUTEC Reference number 09/189.

Appendix G: Consent Form (Second Stage).

Consent Form

Project title: Exploring the impact of using decision making software on ethical decision making: A case study.

Project Supervisor: Dr Rosemary Godbold

Researcher: Amanda B Lees

- I have read and understood the information provided about this research project in the Information Sheet dated 1 March 2010.
- I have had an opportunity to ask questions and to have them answered
- I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
- I understand that I may withdraw myself at any time prior to completion of data collection, without being disadvantaged in any way.
- If I withdraw, I understand that my responses to the software will be retained because other participants may use my software generated reports in their reflection; all other relevant information including tapes and transcripts, or parts thereof, will be destroyed.
- I agree to take part in this research.
- I wish to receive a copy of the report from the research (please tick one):

  YesO NoO

Participant's signature:

.....

Participant's name:

.....

Participant's Contact Details (if appropriate):

……

Date:……

Approved by the Auckland University of Technology Ethics Committee on 20 April 2010. AUTEC Reference number 09/189.

Note: The Participant should retain a copy of this form.

Appendix H: Indicative Interview Questions.

I'm interested in the ways in which the Values Exchange (Vx) facilitated your thinking about ethical issues .Tell me a bit about your experience of using this specific web-based mode of communication.

One factor that was evident within the Vx reports and survey was that some participants identified aspects of using the Vx as uncomfortable. To what extent this was relevant for you?

I'm wondering if you can also tell me more about some of your survey responses. (open-ended dependent upon participant) For example you said …….. Can you tell me a bit more about what you meant by ……..?

Now I'd like to move on to talk about some of the areas of interest that I've identified within the data that I've already collected.

One aspect of the decision making that I've identified is the relationship between duty and emotion. Participants seemed to vary on the role of each of these factors. Can you tell me a bit more about the role of these factors for you in this case?

Another area I'm interested in learning more about is to what extent you found the Vx software prompted self reflection. I wonder if you can share your experience with me.

A potential pitfall of the study has been the significant time lapse between completing the case online and this interview stage. During this time have you considered any aspects of the software process in your decision making? This could relate to personal, individual decision making or group situations.

Please feel free to tell me anything else about your Vx experience.