Cultivating student thinking and values in medical education:

What teachers do, how they do it and who they are

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ABSTRACT As part of their medical education, a student medic needs to develop the thinking and values essential to practice. This is so they can be the best doctor that they are able: to serve their clients, their profession and the societies in which they work. However, helping a student develop their thinking and values in the classroom can be difficult. This difficulty can be as a result of many factors, some related to a teacher’s practice. For example, a medical teacher might try to develop a student’s thinking under the remit of developing critical thinking, but the convoluted debate and complex literature about critical thinking can mean a student is confused about what the teacher means. A teacher might also use a proven teaching method such as discussion, but one that might cause a student to experience fear or anxiety such that the student disengages from learning. A teacher who uses a similar teaching method and aims to develop a student’s values can also experience difficulties. In this case, the difficulty might be because values can be a sensitive, highly personal topic and challenging for a student to discuss. A teacher who aims to cultivate student thinking or values might also experience a lack of specific pedagogical guidance about how to teach for this in the classroom. The pursuit of a solution for these problems was the main objective of the current thesis. I use a framework drawn from Barnett’s (1997) ideas about critical thinking, critical action and critical being, which I developed into the theory of Critical Being (Blakey, 2011; 2014). In the current thesis I extend this pursuit to develop and test ideas about how a medical teacher might educate for Critical Being. I used a year-long action research project in the context of small group teaching on an MBChB (degrees in medicine) programme with self-selected teacher participants who wished to improve their practice. Results showed that better cultivating student thinking and values as part of this theory might depend on what a teacher does, how they do it, and who they are: for some students, a teacher needed to use specific language about the thinking they wish to cultivate; for others, a teacher also needed to act well to manage the students’ emotion about learning, or manage their own emotion if the student was ‘difficult’. I also found that cultivating a student’s thinking might also depend, for some, on a teacher’s own values such as caring and their valuing of the teaching method they use, process (e.g. reflective thinking) or topic which they teach. Results have potential implications for medical teacher practice, how an institution might support a medical teacher in practice and how they might be selected for employment. To better educate a medical student might depend on more than administration of teaching method alone.
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Chapter One

Introduction and reasons for undertaking this research
INTRODUCTION
Medical educators recognise the importance of teaching a medical student how to think and what to think about. This is because a ‘Good Doctor’ (see Paterson, 2012) will need to think in many ways and about many things. For example, a Good Doctor will need to think logically, rationally, reflectively and creatively; a Good Doctor will also need to think so they can use their knowledge of science to help their client and about other ways they might help the client with their overall health (Paterson, 2012; Wilson & Cunningham, 2013). To cultivate a student’s thinking is therefore an essential part of educating them to be a Good Doctor.

In this thesis I use the word ‘cultivate’, and I do this to explain and describe one general aim of teachers in the current study. Teachers aimed for these future Good Doctors to get better at some kinds of thinking, better at thinking about some topics and to develop (or continue to develop) the values desirable for good practice. Therefore I use the term ‘cultivate’ as I feel this word best describes how teachers in the current study offered their students support, direction and guidance for growth. In some ways I felt that what teachers did, how they did it and who they were provided what might be viewed as the ‘soil’ for a student to grow their thinking and values.

The work of the medical teacher who aims to cultivate a student’s thinking and values could be seen as central to a student’s lifelong development as a professional and as a person. This might be because much of what is taught might be forgotten, but to cultivate thinking in a structured sense (e.g. more than simple wondering) and values can both outlast formal education (Winch, 2006) and be applied to all walks of a Doctor’s life.

Many of the higher education organisations that host medical education programmes clearly express their support for cultivating a medical student’s thinking and values. For example, the ‘critically thinking graduate’ frequently features as part of the statutes and charters of such institutions (see Otago, 2013). These educational institutions are also said to, mostly, be in broad agreement that the role of higher education is to develop a student’s lifelong thinking skills. Such institutions thus aim to educate students in ways that help them to think effectively as professionals and to be able to continue do so throughout their lives (Higher Education Council, 1992).

In turn, higher education establishments are supported by members of society in cultivating student thinking. For example, in the legislation of higher education institutions, it is
requested that these institutions cultivate student thinking in order that the institution act as a proxy 'critic and conscience' of society (Education Act Amendment, 1988, section 162).

As with cultivating student thinking, those who work in higher education and medical education have also recently witnessed a resurgence in the popularity and practice of developing a student’s values as part of a medical education (for example, this increase in popularity can be shown by the increase in the number of recent works such as that written by Cruess & Cruess, 2014). This popularity has increased (in the guise of developing a student’s professionalism, etc.) significantly over the last two decades and can now commonly be seen in medical school curricula throughout the Western world. Those in the profession of Western medicine, higher education institutions that educate their staff and members of society also seem supportive of medical teachers’ pursuit of this second (but not lesser) goal. Those who work in medical education institutions are now specifically asked to help students to grow as people (see Cruess, et al, 2014). In short, the Higher Education Council recommend that some:

…skills, personal attributes and values…should be acquired by all graduates…

(HEC, 1992, p.20).

So, there seems to be an agreement between many of those in the profession of medicine, and the higher education sector more generally, that a medical student will need to cultivate both their thinking and their values as part of a medical education. This agreement is despite some criticism of this HEC report for some inconsistencies in its text (e.g. Clanchy & Ballard, 1995) and in marked contrast with a historical view that a medical education should almost exclusively focus on developing a student’s knowledge and clinical skills (Cooke, et al, 2010).

Developing certain values and developing student thinking have now been better recognised as essential to a student’s effective practice when they become a doctor. Thus, a medical teacher might be charged with either of these tasks. The most common place that this development might need to happen in a formal academic setting is as part of small group teaching (Harland & Pickering, 2011).

However, despite such seemingly obvious support for a teacher to develop student thinking and values, medical teachers who teach the small group can face many difficulties in effectively doing so. As a result, some find it hard to achieve their goals and there are times
that these difficulties will mean that some students will fail to develop the thinking or values required for optimal practice. That this might be so is supported by evidence from employers that suggests that some medical graduates apparently fail to develop the thinking skills or values believed to be necessary for best practice. For example, Paterson (2012) specifically identifies that some doctors apparently fail to develop empathy for their client. This evidence is supported by other reports from industry (see Casner-Lotto & Barrington, 2006) which describe how some graduates seem to lack both the thinking and values necessary to carry out their work effectively.

Before I describe some of the difficulties cultivating a student’s thinking and values in more detail, I will give a brief introduction to my thesis. The context of this thesis is small group teaching in medical education, in which I work. The medical education program on which the research took place was one for which most students completed a foundation year in health sciences (e.g. ‘health science first year’) or another degree prior to being selected for entry.

The aim of the small group teaching featured in the current study is to teach three year-long papers, each of which was given in one, two-hour class per week, in a group of 10 students. These papers are offered as part of a spiral curriculum and in addition to lectures and work in the laboratory (e.g. anatomy taught by dissection). The papers were: Healthcare in the Community (similar to Professional Practice offered in some other institutions), which is about broad issues in healthcare and the context in which they take place, for example, caring for addiction in the primary care setting; Integrated Cases, which is about individual presentations of a particular symptom (e.g. dizziness), about which the students are expected to discuss various aspects of diagnosis, treatment, ethics of treatment (etc.); Clinical Skills, in which students learn and practice the skills of physical examination (e.g. to listen to heart sounds) and how to question a client (e.g. to ask about their symptoms) and make a medical diagnosis. These papers are compulsory and undertaken by students in their second and third years of their medical degrees.

Five medical teachers and I undertook a year-long action research project in this context, using a theory of critical thinking with which we hoped to overcome some of the general problems that these teachers might encounter as part of their practice and at the same time specifically cultivate both the thinking and values of a student. Our aim was to examine which it might be to educate a student for what Barnett (1997) calls Critical Being.
In brief, Barnett argues that to be most effective, critical thinking needs to be accompanied by critical action, and that a person needs to think critically and act critically in all aspects of life. Barnett calls such a person a ‘Critical Being’. Thus, my research question is what it might be to educate a student for Critical Being in the small group context as part of a medical education.

Having undertaken this research I now make the thesis that cultivating student thinking and values as part of Critical Being might depend on what a teacher does, how they do it, and who they are. Each of my results and analysis chapters (5, 6 and 7) will contribute one idea to this thesis and in doing so I will add to knowledge about how a medical teacher might cultivate student thinking and values in the small group as part of a medical education.

I now move on to describe in more detail some difficulties in cultivating student thinking and values that have been described in the literature and that a medical teacher might experience in the small group context in medical education. These descriptions form part of my argument for this research as a worthwhile topic to pursue and are elaborated further, together with observations of my own practices, in each subsequent relevant chapter.

**Difficulties cultivating student thinking**

First, I introduce some difficulties that a teacher might experience when they aim to cultivate student thinking and that are described in the literature. I describe these under seven broad categories which form the next subheadings, with the purpose that I set the scene for the current research and some of the difficulties experienced by teachers in it. Difficulties range from how a teacher might define critical thinking, what might happen if a teacher has a different definition of critical thinking to that of their students, or other staff, difficulties that might relate to the particular teaching method a teacher uses, or their expertise, and various influences that a student or teacher might experience from the context external to their work in the classroom.

**Difficulties in defining critical thinking**

One difficulty faced by teachers who aim to cultivate student thinking is that they might do this (or be asked to do this) under the remit of cultivating a student’s ‘critical thinking’. However, it may be difficult for a teacher to define what they mean by critical thinking and then to go on to describe to a student exactly they want the student to learn. This difficulty may be a result of the convoluted debate about what ‘critical thinking’ might entail.
The convoluted debate about critical thinking has been said to be one result of a vast number of accepted definitions of it (Barnett, 1997). As a result of these vast numbers, the literature has become exceptionally complex, and authors from diverse fields continue to add new and different definitions to it. Over the last three decades three major reviews of the literature about critical thinking have been published:

- The ‘Delphi’ Report (Facione, 1990),
- Critical thinking in education: A review (Pithers & Soden, 2000) and
- Developing students' critical thinking in the higher education class (Vardi, 2013).

However, even with the assistance of such thorough reports (e.g. the Delphi report contained contributions from 46 experts, including academics and practitioners from philosophy, education and the social sciences) there still remains little consensus among authors about what critical thinking might be.

The discussion about critical thinking, which has taken place with great length and depth, could be thought of as a ‘healthy’ endeavour. As Moore, 2004, observes, critical thinking has likely been discussed critically (whatever ‘critical’ might mean in this instance). There is also little doubt that some definitions of critical thinking have been used by those in practice to effectively cultivate their own thinking and the thinking of others (Norris, 1985). However, over the years, many authors and practitioners have begun to express concerns that the literature has reached such a point that those who wish to cultivate student thinking might struggle to take the first step in doing so: to choose a theory of critical thinking with which to inform their practice. This difficulty might thus preclude a teacher moving on to develop effective ways to cultivate student thinking in the classroom, and compound other difficulties which they might face in effectively doing so (see later section) (Halonen, 1995; Tucker, 1996; Barnett, 1997; Haas & Keeley, 1998; Kuhn, 1999; Pithers & Soden, 2000).

**Difficulties that might result from different definitions of thinking**

There is another difficulty that teachers who wish to cultivate a student’s thinking might encounter as a product of the convoluted debate about critical thinking. This difficulty can potentially affect those (e.g. practitioners and students) who have chosen a theory of critical thinking with which to inform their practice. Such a difficulty is simply that one person might hold a different view about the definition of critical thinking to another. For example, those in an educational institution (teachers, students, programme conveners and so on) might choose,
adopt or be taught theories of critical thinking that are different to each other. These people can still experience problems cultivating student thinking. If any of these members makes reference to their aims in teaching or learning as ‘cultivating or developing critical thinking’ (etc.), and formulates their practice or learning around this definition of critical thinking, because of the diversity of ideas about critical thinking, some will educate, or learn with one kind of thinking in mind, but do, or experience something different (Golding, 2011). A concrete example of such diversity might be a teacher who has come to understand that critical thinking mostly entails thinking that might be defined as logical thinking. This teacher would teach a student very differently, and achieve different outcomes, to one who has come to understand critical thinking to mainly mean reflective thinking.

The potential mismatch between what a teacher might mean to do and what a student might experience could have unwanted negative implications for either. This is even though a student might still benefit from good teaching, or teaching aimed at cultivating a different kind of thinking to that which they expect. For example, a student might achieve well, but achieve different things to a peer who is taught by another teacher (develop their logical thinking but another might also develop their reflective thinking); a student might fail to achieve the outcomes a teacher desires (fail to develop their reflective thinking); a teacher might also find it hard to communicate with another about the method they might use to cultivate a student’s thinking. As a whole, it is also likely that the educational programme in which these teachers and students work is delivered inconsistently across a cohort and between student intakes.

Difficulties that might relate to the small group context

Whichever way a teacher might define the thinking they wish a student to cultivate (e.g. as reflective thinking, evaluative thinking, or with reference to a definition of critical thinking such as that described by Facione, 1990), suitable environments have been identified by those in teaching practice, in which a teacher might cultivate student thinking. For example, the small student group has been suggested as an ideal site for a teacher to help a student develop their thinking (e.g. Biggs & Tang, 2011; Golding, 2011; Harland & Pickering, 2011).

However, several factors can still significantly hinder whether a student actually cultivates their thinking when taught in the small group. For example, the close and sustained contact between teacher and student that can be useful for cultivating thinking can also create difficulties; a student might refuse to take part in a discussion; a teacher might not cater well
to a particular student’s learning needs if they develop a dislike for that student; a teacher’s ways of talking with their students might upset them and mean a student fails to engage in productive discussion. Any of these factors might not be conducive to cultivating the thinking of the student concerned, but also, because of resultant problematic group dynamics, also fail to cultivate the thinking of other group members. Such issues can also be stressful for a teacher, significantly influence their satisfaction with their work and, at times, require that they implement, or seek, specialised management to solve.

**Difficulties that might relate to a teaching method used in the small group**

A teacher might employ a method in the small group that has been proven to cultivate student thinking, but still experience difficulties. For example, a method might cause difficulties if a student finds it especially ‘new’. A concrete and common example of such a difficulty might be that a teacher asks a student to contribute to a group discussion. The student can find this a significantly different experience to more passively listening to a lecture and find such a ‘newness’ incredibly daunting. It has even been suggested by some that a student might experience such ‘newness’ of teaching method so dramatically that they feel like ‘aliens in a new cultural landscape’ (Brookfield & Preskill, 1999, p. 143).

While it could be said that most students would be challenged by experiencing a new teaching method, it has also been reported that some students might react to such methods in ways that might especially compromise their learning. For example, a student might respond to a new teaching method by clinging to an inappropriate habitual tendency in learning, such a tendency to learn by rote (Paul, 1990; Biggs & Tang, 2011; Johnstone, et al 2011); they might try to copy down exactly what each group member has said, to learn later, instead of learning how to contribute to a discussion. Some students might also be afraid of various aspects of such a teaching method. For example, a student might be afraid of speaking in the group situation, and as a result disengage from participating in it (Kitchen, 2012).

In either of these cases, a student might require additional assistance from a teacher to learn what is required of them in this new ‘landscape’ or negotiate the fear they experience in it.

**Difficulties cultivating student thinking which are about lack of teacher expertise**

If a teacher employs a teaching method with the aim of cultivating student thinking (however defined), they might experience difficulties developing student thinking if they lack expertise that allows them to use the method effectively (Golding, 2011). In other words, thinking, as a
learning outcome does not automatically result from the instigation of a particular teaching method, even when it has been proven in practice. For example, the instigation of discussion between student and teacher with the aim to cultivate the student’s reflective thinking might not necessarily lead to the development of this ability; to be effective, a teacher might also need to gain expertise and skills that allow them to effectively question their student, or to learn how to use a vast amount of personal persistence to effectively develop the thinking of a student who is unfamiliar with reflective thinking (Golding, 2011; see also Chapter 5, helping students to develop a thinking ‘habit’). A concrete example of such persistence might be that a novice reflective thinker would likely need to engage in reflective thinking many times over, in order to effectively develop their thinking. Lack of teacher expertise can mean students fail to develop their thinking as well they might. It was in response to such challenges that I developed the current research project, with one aim being to enable teachers to develop the expertise required to better cultivate student thinking.

**Other difficulties that might arise in cultivating student thinking that can be about the student**

In any small group classroom, there will likely be cases in which a student fails to develop their thinking even when a teacher has instigated a proven method to do so, and has developed expertise in its administration (e.g. see Ritchhart & Perkins, 2008). As a result, even an ‘expert’ teacher might fail to cultivate the thinking of their students. Failure to cultivate student thinking can simply be because one person cannot make another think (Moon, 2009). Because it is not possible to make another person think in a particular way, there is always the potential that a student will fail to develop their thinking even when given the opportunity. This failure may be because conscious thinking is mostly under a student’s control and the student simply does not wish to develop his/her thinking, or because of a number of other factors. For example, a student’s thinking development can be influenced by their more general will to learn or whether they have a sufficient understanding of what their teacher requires them to do (Moon, 2009; see also Chapter 5, using specific language when describing thinking).

**Difficulties in cultivating student thinking which can emanate specifically from outside the student’s immediate classroom environment**

Some difficulties cultivating student thinking in a small group can originate specifically from outside of the student’s immediate classroom environment (Moon, 2009). In other words, the
teacher of a small group might experience difficulties cultivating student thinking that are outside their immediate control.

Some such difficulties arise as a product of the environment of medical education. In some fields (especially medicine) certain environmental factors have become notorious and been termed a ‘Hidden’ or ‘Internal’ Curriculum (e.g. see Hafferty, 1998; Ozolins, et al, 2008). One particularly influential aspect of the Hidden Curriculum is said to be the behaviour of teachers outside of the student’s current classroom. For example, the ways a teacher might talk about other papers offered on the medical program might influence a student’s learning of these papers inside of the classroom. A specific example of such behaviour would be a lecturer expressing a negative opinion about a paper that includes the learning of reflective thinking, and taught in a small group; a student of the small group who learns of this opinion could then be negatively influenced by it, which can, in turn, fail to engage in what they are asked to do.

Some other factors from ‘further’ outside the classroom can also have an effect on the development of a student’s thinking, by their proxy influence on the effectiveness of a teacher’s practice. For example, if a member of management makes a decision to reduce a small group teacher’s contact time with students in preference to teaching via electronic media. While I cannot judge whether such a decision would be generally better or worse for a student’s learning, such a move might be interpreted by a teacher as an act of ‘devaluing’ their work. Such an interpretation can, in turn, have a significant negative influence on how well they teach (Haas & Keeley, 1998) and how well they cultivate a student’s thinking.

There are also several other factors yet further outside of the classroom that might influence a teacher’s effectiveness in practice and a student’s thinking development. These factors can relate to what members of management of a medical institution might say or do. Such factors might include a general lack of congruence between what is ‘said’ by members of an institution and what they decide to do in it (Harland, 2012). For example, a member of management might overtly claim that they value cultivating student thinking (say, as part of working towards a ‘graduate profile’) but at the same time make provision for ‘mass’ teaching programmes such as human biology. The lack of congruence between a ‘mass’ program and a method that more specifically aim to develop student thinking might be because a lecture (online work, etc.) comprises larger scale teaching methods in which
cultivating disciplined\textsuperscript{1} thinking can be exceptionally more difficult than in the small group (but not, of course, impossible). Such methods are both culturally and financially embedded in the university, at times for viability of the institution itself (Harland, 2012). However, a teacher might interpret the implementation of such teaching methods to also imply that the institution values the acquisition of student numbers over [or equal to] cultivating student thinking as an educational goal (Biggs & Tang, 2011); at the very least, a teacher might feel that they work against a background incongruent with the main aims with which they are charged in teaching (Swennen, et al, 2008) or a confusing dual agenda of the institution at which they work.

Other, seemingly small decisions that might be made in an educational institution can also influence a teacher’s effectiveness in their practice. For example, some decisions about logistics can mean a teacher simply feels undermined; physical spaces that are used as places in which to cultivate student thinking are often in demand for other things (e.g. for use as meeting rooms) and, at the outset of university property development processes, rarely integrated into planning or considered as a significant consideration for those in financial control (DaRosa, 2011). An example of a teacher ‘feeling undermined’ during the current study by a management decision was a small group teacher who was required to review and discuss their students’ individual performance with them, but in a week with no ‘official’ teaching. Meetings were a requirement of the paper on which this teacher taught and essential for them to learn about, and cater for, a student’s potential learning needs. This teacher found that none of their usual teaching spaces were available for these private discussions, as the classrooms had been loaned out for use by staff from another department. As a result the teacher in question had to ‘make do’ with a table in the busy adjacent cafeteria. As a result, the teacher felt precluded from talking about what they needed to (e.g. when they needed to talk about a student’s fear, and how this fear precluded the development of their thinking; see Chapter 6). This teacher felt hugely undermined by the lack of access to resources with which they could most effectively carry out their work and cultivate student thinking.

I have described difficulties that a teacher might experience as part of cultivating student thinking in the small group. In the following results and discussion chapters I use conclusions that I draw from my empirical data to illustrate how a teacher might respond to these

\textsuperscript{1} When I talk about ‘disciplined thinking’ I make reference to a kind of thinking that is more structured than simply wondering (for example) and not disciplinary thinking, which instead can make reference to the thinking that can happen as part of working in a specific profession.
difficulties. For example, given the complexity of the debate about critical thinking that has arisen in the literature, I discuss how a teacher might then best respond to this complexity as part of their practice.

I now move on to describe difficulties that a teacher might experience in aiming to cultivate a student’s values as a part of small group teaching. I describe these difficulties because developing a student’s values was one remit for the teachers in the current study, and I make reference to cultivating student values in Chapter 6, which is about how teachers in the current study managed student emotion in order to better cultivate their values.

**Difficulties in cultivating a student’s values**

The small student group as part of a medical education has now also become a site in which a teacher might purposefully educate the professional as well as purposefully cultivating student thinking. What I mean by ‘educate the professional’ is that in a small group, a teacher might aim to help a student medic develop the values desirable for excellent clinical practice. For example, a teacher might aim to help a student develop their empathy.

Some methods that a teacher might use to cultivate student thinking can also be useful for cultivating student values (Harland & Pickering, 2011). For example, a teacher might facilitate a discussion or debate about values amongst a small group of students. Thus, much of what a teacher or student might experience as part of these methods can be similar to those experienced when aiming to cultivate student thinking. However, rather than developing a skill such as reflective thinking, the goal of a teacher aiming to cultivate student values would be for their student to gradually develop their sense of what it might be to ‘think, act and feel like a physician’ (Cruess, et al, 2014, p. 1446).

The focus on educating ‘the professional’ as part of a medical education follows a call by some (e.g. Cruess & Cruess, 1997) to focus on educating students as people as well as educating them in the sciences of medicine (e.g. biochemistry). In turn, this call (which also comes from those within the profession) was founded on concerns about the poor performance of doctors in some aspects of practice and a perceived need ‘that professionalism, a subject of fundamental importance to medicine and to society, should be taught explicitly throughout the continuum of medical education’ (Cruess, et al, 2014, p.
Values education is now increasingly included, in various forms, as part of medical curricula and in particular as part of what is taught in the small group.

However, when a medical teacher aims to cultivate a student’s values in the small group context, they can experience similar difficulties to those when they aim to cultivate student thinking (Kohn, 1997). For example, a student can find it quite daunting to talk about their values and a teacher thus finds it hard to start a discussion about them. Such a difficulty can be experienced in addition to those that around more general curricula design (e.g. how to get the teaching of values included in a curriculum) and how to assess for values, especially given that one student might develop values at very different rate to another (Cruess, et al, 2014).

As they might when they aim to cultivate student thinking, a teacher can experience phenomena in which educating a student for values can happen outside of the classroom, and outside of what might be viewed as the ‘formal’ curriculum. In other words, educating for values might happen outside of what a teacher deliberately means to teach in the classroom or lecture (etc.). For example, a student might develop values in response to any experience in education, or what any teacher or member of staff does; as Harland (et al, 2012, p. 347) notes, ‘whether these are a deliberate or an unconscious part of the [teacher-student] transaction’ or not. Some medical teachers might also not consistently teach the same recommended values of the profession as each other, or say one thing about a value to a student but do something very different (Stern, 1998). As I have already alluded to, some teachers have also expressed concerns that the medical profession now puts a significant emphasis on cultivating a student’s values but there remains a general lack of specific, detailed guidance about how this might best be done in the classroom.

I finish this introduction with a quick look at how a teacher aiming to cultivate student thinking and values in the small group might be supported in doing so. The ideas I introduce here will be elaborated further as part of my literature review (Chapter 2).

**Teacher development and support**

A teacher who aims to cultivate student thinking or values as part of a medical education can experience difficulties doing so. These difficulties would likely be experienced, and need to be managed, over and above any skill or topic expertise that a teacher might be expected to develop and teach. For example, a teacher might need to manage a student who is influenced
by a value that is not conducive to professional practice, such as extreme dishonesty, at the same time as maintaining and communicating about skills of clinical practice or knowledge about the health system.

Many of these difficulties could be understood to be a normal part of what a teacher does, e.g. to learn which are the best questions to ask a student as part of a discussion to cultivate their thinking, or how to help a student who finds group work new or daunting and as a result finds it hard to take part. These difficulties could be argued to be a normal part of a medical teacher’s practice (Biggs & Tang, 2011) but one can also understand that a small group medical teacher’s work might at times place demands on them or be stressful to carry out.

Training and support opportunities for any teacher, including the medical teacher in an academic setting are reported to be increasing, and staff development more generally is now a rapidly growing profession (Webb, 2012). Ways to develop a teacher’s practices are becoming both better understood and more available to staff. However, for many teachers across academia, development and support opportunities are still highly variable in quantity, quality and availability. As for many in higher education, development for a teacher is neither obligatory, universal or, for some, (and pertinent to the current study) readily available. Qualifications in teaching, which one might assume would help a medical teacher develop their practice are also becoming more commonplace, but in higher and medical education are neither compulsory or mandated (Harland, 2012; also to date, NZ). Thus, the support that a teacher might need is not guaranteed to be available.

Even when a teacher receives professional development with which to support their practice, those who provide it might also experience their own difficulties. For example, development staff often face insufficient funding to provide a teacher with effective opportunities with which they might develop their practice, and at times providing any opportunity can be logistically hard for staff who have other demands on their time and energy (e.g. in medicine, many teachers are also employed in clinical practice). There has also been some general doubt about what effective development or support for a teacher might entail (Webb, 1993). For many reasons, teachers who aim to cultivate student thinking and values can be unable to access the opportunities for personal development or ongoing support they require.
In summary: there is a significant body of evidence that supports the idea that the long and complex debate about critical thinking theory and difficulties cultivating student thinking and values in practice can significantly impact teacher practice, student outcomes, and in some cases (e.g. where members of an institution have different ideas about what critical thinking might entail) the educational systems within which teachers and students work. At the same time, a medical teacher who aims to cultivate student thinking and values requires expertise and support to best do so, but training and support for these teachers is provided against many constraints (e.g. inconsistent regulations across the educational sector, time, money, and logistics), often offered inconsistently between institutions and, for some, difficult to gain access to. In general, there is also some uncertainty about what the best professional development or support opportunities for a small group medical teacher might be.

The difficulties I describe here have an impact that might be understood to fall outside of a teacher’s direct practice or educational outcomes for a medical student. At the same time those in both higher and medical education still struggle to identify how exactly to cultivate student thinking and values in the classroom. Therefore, it could be argued that the difficulties that a teacher experiences in practice could be also understood as barriers to achieving the ideals of a higher education, the medical profession and the optimal provision of service to the clients and societies these bodies serve.

I will now argue specifically for the importance of the current thesis to medical teacher practice and begin to introduce the conclusions that I make about difficulties teachers in the current study experienced as part of cultivating the Critical Being. Difficulties were experienced when teachers in the current study aimed to cultivate student thinking and values, as part of educating for Critical Being.
ARGUMENT FOR UNDERTAKING THIS RESEARCH:

Why I chose to do what I did
I undertake this research with a focus that is different to some other studies, as this different focus might offer new ideas about ways that medical teachers might develop student thinking and values and how they might be supported in these practices. This project is informed by a framework that is significantly different to some others (i.e. other definitions of critical thinking) but, necessarily, in a site that is almost universally supportive of cultivating student thinking and values. This site is also one in which many medical teachers experience difficulties achieving their aims in practice. I now explain my argument for this research in more detail.

Why I use the framework of Critical Being
In 1997, Ronald Barnett proposed a theory of critical thinking with which he aimed to solve many of the problems that might be encountered by a teacher who aims to cultivate student thinking. In ‘Higher Education: A Critical Business’, Barnett proposes an idea about critical thinking to include the ‘additional’ dimensions of critical action and critical being.

Barnett bases his argument for including these two additional dimensions as part of this theory primarily on an understanding that the convoluted and complex debate about critical thinking theory is one result of concepts of critical thinking that have little utility for those who teach in higher education. For example, Barnett argues that the exceptional complexity of the literature about critical thinking is a result of concepts that are actually of limited use. While one might think that the addition of extra dimensions to a theory might make the debate more complex still, it is the utility of a theory for thinking which Barnett seems to wish to address; also, Barnett sees the addition of critical action and critical being to his ideas as one which will have more utility in practice, but also achieve more in terms of student outcomes. For example, he hopes that with such a theory a teacher might cultivate the student as a person, as well as cultivate their thinking.

Barnett explicitly specifies that critical thinking (etc.) should be cultivated as part of a higher education. While he does not argue against cultivating thinking in any other educational institution, he does argue that one defining element of a higher education (i.e. what makes it ‘higher’) should be the provision of an education that effectively teaches a student to think. Not only this, but a ‘higher’ education should extend beyond developing student thinking to educate students as people (Barnett, 1997). Thus, it could be understood that Barnett’s ideal
higher education would have a (roughly) threefold purpose: to train a student as (what he calls) a technician (1997, p. 5, i.e. in professional skills), to teach them to think, and to extend that education to one that helps a student grow as a person. As I explain in detail in Chapter 4, which is about the theory I developed from Barnett’s ideas, I found that one specific way that a teacher might extend such an education to the ‘person’ was to help a student to develop their desirable values.

According to Barnett, this purpose that he envisions for higher education institutions might be termed one that educates rather than teaches a student (much in line with ‘cultivating’ that I specify as my own terminology) and that institutions should do this, he argues (and as I also mentioned in my introduction) so a student is better able to serve their clients and make a positive lifelong contribution to their new profession and the societies in which they practice.

In summary, Barnett makes reference to the purpose of his ideas in the hope that:

> If higher education is to play its part in enabling graduates to effectively be able to take on the world (p. 2)…higher education needs a new theory of critical thought…that needs to educate in such ways that students are ‘changed as persons.’

(Barnett, 1997, p. 5).

In his 1997 work, ‘Higher Education: A Critical Business’, Barnett expresses the hope that his proposition of the three ideas of critical thinking, critical action and critical being might provide a useful framework for a teachers to use around educating a student and also end some of the issues that might result from the protracted debate about what critical thinking might be (e.g. teachers and students talking at cross purposes to one another).

Barnett is now joined by other authors from the perspective of the profession of medicine (such as Paterson, 2012; Cruess, et al, 2014), who talk about a similar aim for those students who undertake a medical education. If Barnett’s aims are now echoed by those within the profession itself, perhaps now is a good time to see how together, his ideas and those of authors such as Cruess (etc.) might give us a better idea of how an ‘education for a person’ might be achieved.
HOW THE IDEA FOR THE CURRENT RESEARCH EMERGED FROM MY PRACTICE

The current research originated almost 10 years ago, from my experiences in clinical practice, as a clinical teacher and as a small group teacher in medical education. As part of my work, I experienced significant challenges which, I now understand, align with some that I find described in the literature and about which Barnett also expressed concern. For example, I experienced difficulties effectively communicating with other staff about what I aimed for my students to develop (thinking, etc.) or which teaching method I wished to use to cultivate student thinking. I can now interpret these difficulties to be a result of some staff having a different idea about what critical thinking might be, to my own.

In my practice I also experienced challenges in engaging some students in what I needed them to do. For example, engaging them in some ways of thinking (e.g. logical thinking), thinking about some aspects of practice (e.g. medicine in the community) or engaging them in learning in ways that might be new to them (e.g. in engaging them in a discussion about a topic, rather than listening to me telling them about it). I also had experiences of some students who showed evidence of values I believed incompatible with professional life (e.g. evidence of a deliberate lack of patient confidentiality in relation to clinical practice). Many staff, including myself, seemed unsure how to better educate for these things.

At the same time as I worked to find more effective ways to teach to such challenges, I also felt frustrated by some ideas about practice that did not seem to fit well with my aims. For example, I felt frustrated by the views of some staff who considered that the answer to all issues and challenges in teaching and learning would be solved by offering a student ‘more teaching’ (which seemed to mean to tell the student about the topic all over again) or that I should involve the student in a ‘tutorial discussion’. Or, that I should simply ‘tell students about’ some things that they might need to learn (e.g. values such as empathy). I understood these methods were unlikely to be effective. In other words, some staff seemed to consider that repeated ‘telling about’ was a good way to administer most teaching, or that the administration of a teaching method alone would result in a student achieving a desired learning outcome. In my experience, cultivating student thinking and values was somewhat more challenging and required substantially more expertise than I had developed, or seemed to be offered by the ideas of other staff.
In some ways I felt uncomfortable when it was first suggested to me that I might use Barnett’s 1997 work to frame the foundational research for the current thesis (which formed my Masters’ thesis: Blakey, 2011; 2014). My discomfort seemed related to a feeling that the use of Barnett’s work to solve my problems with teaching practice was rather counterintuitive; that Barnett’s complex socio-philosophical commentary essentially seemed to lack the sense of practicality which I sought. This feeling is apparently supported by the thinking of some others (e.g. Hilsdon, 2007) who criticise Barnett’s 1997 work; Hilsdon remarks that Barnett’s work does seem to lack the concrete guidance for practice that some teachers in higher education might need. However, on closer inspection, Hilsdon’s critique of Barnett’s work seems in the main directed at its complexity as a document, which makes it hard for some readers to understand. On balance, I would tend to agree with this critique because Barnett’s 1997 work might indeed seem daunting to the practitioner. However, Barnett’s ideas about critical thinking are not as explicitly criticised by Hilsdon and seem to generally be a useful idea. I felt that Barnett’s trifecta of ideas: critical thinking, critical action and critical being seemed to offer some ideas upon which to formulate a basic framework about teacher practice and begin to tackle some of the challenges I had experienced cultivating student thinking, and that are also reported in the literature.

Barnett’s argument that his ideas have utility in higher education appealed to me. For example, his argument that his ideas might offer a way to overcome some difficulties educating a student to think in many ways, rather than just one way and to educate a student as a person. This argument appealed to many of my own experiences in practice and I hoped these new ideas might also help end some of the problems communicating about and developing student thinking in practice. This element of practicality that I found in Barnett’s ideas gave me impetus to go ahead with researching them further, and in my 2011 work (Blakey, 2011, see also Blakey, 2014) I sought, and found what I interpret to be practical manifestations of Barnett’s trifecta of ideas of critical thinking, critical action and critical being. The manifestations that I found suggested that Barnett’s ideas did indeed have genuine utility and could be applied in a health science context. This may not be the experience of other writers, and I acknowledge the criticisms of Barnett’s work. However, the finding in my own research and practice that Barnett’s ideas were useful and relevant to teacher practice encouraged me to pursue a further and more in-depth use of them.
Some of the empirical evidence that emerged from my 2011 Masters’ study (see Chapter 4 for more detail) also offered evidence with which I could begin to formulate tenets of a theory, based on Barnett’s trifecta of ideas. Thus, I was offered a potential framework with which to approach the current (2015), and further, research. One example of what I found in my 2011 study was about Barnett’s idea of ‘critical action’. I found that critical action for a teacher meant they made a critical judgment about how they taught. More specifically, a teacher made a judgment about what they did for each student and how they did it. I also found that to make these judgements, a teacher thought carefully about what that student might need (see Chapter 6 for a more detailed example of a teacher making a judgement and a student’s needs in learning). Another important finding from the 2011 study was that I found one way to educate for Barnett’s ‘critical being’ might be to educate a student for values. I developed the beginnings of a theory that was suggestive of ways to begin to educate for what Barnett (1997) foresaw: an education that might extend outside of and outlast the classroom.

However, one limitation of my 2011 study was a result of the short period over which data (e.g. as comments about teaching practice, see Chapter 3) were collected; I was unable to gather data over time as I had neither a second phase of data collection, nor a time period over which I might collect it. This lack of ‘time’ was problematic, because having found a link between Barnett’s ideas and what it might mean to educate for values, and consulted the literature, I began to understand that educating for values might better be done over an extended time period (e.g. see Harland & Pickering, 2011). This understanding led to my design of the current study which might reveal data about (for example) how a teaching method might positively influence the development of a student’s values over time (see Chapter 6, section 3 for more detail on this).

Thus, I proposed the current study design (explained in detail in Chapter 3) to allow for data collection over one academic year during which I hoped to increase the likelihood of, and amount of data about, how a teacher might educate a student as a person (Barnett, 1997).

**Justification for theoretical basis of the current research**

I have explained, in brief, why Barnett developed his ideas about critical thinking, critical action and critical being. I have also explained that both Barnett’s ideal for a higher education and the ideals of those who practice medicine seem to conjoin in support for what a medical teacher might do: cultivating student thinking and values.
There is a further argument for the use of Barnett’s ideas of critical thinking, action and being as the basis for a theory. These ideas, to the best of my knowledge, have yet to be used as a framework for research in a medical education context. While the initial (1997) work has been utilised in a social science setting (see Johnstone, et al, 2011) and some of Barnett’s later ideas incorporated as part of other theories (e.g. Barnett’s ideas are referred to under the term ‘critical conscience’ in the work of Harland, 2012), I feel that the current research offers an opportunity to gain some further insight into Barnett’s ideas and to develop them in ways that might better inform a medical teacher’s practice.

The current study is therefore an action research project undertaken over one academic year which contains an examination of what it might be to cultivate student thinking and values as part of an undergraduate medical programme. Overall, the study is framed by the theory of Critical Being that emerged from Barnett’s initial ideas.
CURRENT RESEARCH, CONTEXT AND RESEARCH QUESTIONS

The current research, its arguments and the literature review revisit and build on my Masters’ thesis (Blakey, 2011; 2014) in which I examine small group health science teaching for evidence of how teachers and students experience Barnett’s dimensions of critical thinking, critical action and critical being. The current thesis therefore grew from the many promises of Barnett’s ideas, conclusions that I described in my Masters’ thesis, various challenges cultivating medical student thinking in practice and the apparent call for those in higher and medical education to better cultivate the thinking and values of students.

Barnett’s ideas and some results of my Masters’ research now form the theory of Critical Being that frames the current work. The current research context is again small group teaching, this time on an undergraduate MBChB\(^2\) programme in which resources (teachers, rooms, time) are dedicated to cultivating student thinking and values, as learning outcomes, across two papers in years 2 and 3. While this MBChB programme is also my place of work, I selected this site because, via the structure and contents of its medical curriculum, the University of Otago makes a significant philosophical and logistical commitment to educating a student in thinking and values.

The next logical step into research about cultivating student thinking and values seemed to be to study teachers who aim to do this, who also inform their practice with a theory developed from Barnett’s work and who are happy to commit to using this theory to inform and enhance practice in a collaborative action research project over one academic year.

Thus, to be clear, the theory of Critical Being which frames this thesis is based on Barnett’s initial (1997) work, *Higher Education: A Critical Business*, and also incorporates my developments to it. This theory is also developed further (see Chapter 4) as a result of the current research.

To discuss results and conclusions of the current study, I traverse several vast literatures. For example, I traverse the literature about theories of critical thinking, critical thinking pedagogy, values and character education as well as professional development in higher and medical education. As I also talk about in my conclusions chapter (Chapter 8), I would dearly have wished to delve yet further into many of these literatures. However, I was limited by the

\(^1\) MBChB: The degrees of Bachelor of Medicine and Bachelor of Surgery in Latin.
size of this project, and because I approach this theory, and my own practice, from a clinical practitioners’, not a philosophers’, perspective and expertise. With my next Chapter (2), I offer the reader the necessary knowledge about the literature to understand current thinking and knowledge about the topics in this thesis, to understand my ideas, and any contribution that they might make to literature.

In summary, the literature that I review is connected to the literature of critical thinking theory in Western higher education. The research is also situated amongst the literature of critical thinking pedagogy, thinking pedagogy and small group pedagogy in medical education. I also draw to a smaller degree on the literature about cultivating student values which contains some literature derived from the high school education context and the literature of teacher development, and medical teacher development.

The main question I seek to answer with the current research is:

What are some ways that a teacher might teach for Critical Being?
Chapter Two

Literature Review
INTRODUCTION
I now introduce my thesis further with a review of literatures that are relevant to this research and upon which I draw and build in later chapters (5, 6 and 7). In short, in this current chapter I offer a critique of three main areas of the literature: (1) theory about thinking and critical thinking; (2) pedagogy of critical thinking and cultivating student thinking (to include also cultivating student thinking and values in medical education). Because I utilised a form of professional development in order to work with the teachers in the current study, and report about one method of providing development to medical teachers in Chapter 6, I also include a brief overview of a third broad topic (3) which is professional development opportunities for higher education and medical teachers.

In its entirety, I offer this review so the reader develops a further understanding of why the research question is asked (e.g. why some of the difficulties cultivating thinking and values might exist and what might be done about them), an understanding of the research context, and also so the reader can clearly identify possible contributions to the literature and the understanding of the pedagogy of student thinking and values I might make as a result. This review is, in brief:

1. THINKING AND CRITICAL THINKING IN WESTERN HIGHER EDUCATION

The first section of this literature review contains a brief examination of what might be meant by thinking and a description of some common conceptions of critical thinking found in the Western higher education literature. As the latter is exceptionally complex, a comprehensive review is outside the scope of this thesis. Thus, I intend this review to be indicative of some common conceptions of critical thinking and the complexity of the literature about it. For completeness of this section I also include some relevant detail about Barnett’s ideas, which I elaborate further in Chapter 4, and some ideas about what some authors might mean by uncritical thinking.

2. PEDAGOGY OF CRITICAL THINKING AND DEVELOPING THINKING

This section of the literature review contains a critical review of some approaches to critical thinking pedagogy, and what it might mean to educate for thinking in a higher education

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3 Some of this literature about critical thinking theory and educating for critical thinking is also reviewed and presented in a different format in my Masters’ thesis (Blakey, 2011).
institution. Headings divide this section into six segments and I also include more specific ideas about educating for thinking in the Western Medical Education context.

**Pedagogy to cultivate student thinking in the Western Medical Education context**

This subsection introduces some specific approaches to educating for thinking in the context of Western Medical Education.

**Pedagogy to cultivate student values**

This subsection introduces some ideas about how values might be cultivated in the classroom.

**3. PROFESSIONAL DEVELOPMENT OF HIGHER EDUCATION TEACHERS AND TEACHERS IN MEDICAL EDUCATION**

The final section of the literature review contains a brief overview of some approaches to teacher development in higher education and medical education.
1. THINKING, CRITICAL THINKING AND WESTERN HIGHER EDUCATION

The first section has five segments:

a. General introduction to the ideas of thinking and critical thinking

b. Conceptions of critical thinking
   - Critical thinking as a composite conception
   - Critical thinking as a more simple conception

c. Critical thinking, disposition, attitude and emotion

d. Barnett’s (1997) ideas of critical thinking, critical action and critical being, in brief (elaborated further in Chapter 4)

e. What some authors mean by uncritical thinking.

a. General introduction to the ideas of thinking and critical thinking

Many theories have been proposed about what critical thinking might entail. To introduce some of these theories, I examine a distinction that might be made between thinking and critical thinking.

While the human capacity to think is a common topic of discussion in Western academia and in other educational circles, it is exclusive to neither. As Dewey (regrettably) puts it, even ‘silly folk….think’ (1997, p. 2). Dewey also makes reference to ways the terms thinking and thought might be used:

Everything that comes to mind, that ‘goes through our heads’ is called a thought. To think of a thing is just to be conscious [my emphasis] of it in any way whatsoever.


Thus, according to Dewey, thinking might be understood as ‘simple wondering’. However, Dewey also tells a story of a candidate for election who makes a statement to his electorate:

I hear you don’t think I know enough to hold office. I wish you to understand that I am thinking about something or other most of the time.


That this man thinks seems obvious, but we might also wonder why his statement seems unconvincing (or, perhaps, what Dewey’s joke might be). Our lack of confidence in this
candidate’s words might be because he might not understand what is meant by thinking, but also that we need to know more about his thinking: for example, how disciplined, about what he thinks and to what use he puts his thinking. Further consideration of his words raises several other ideas, such as why the act of thinking might, in isolation, seem insufficient for the office which he pursues, that thinking might be judged against standards and, somewhat implicitly, that some believe they think ‘well’ when this might not be so. These ideas about thinking have been discussed in the literature. In particular, the idea of what ‘more disciplined’ or ‘better’ thinking might be. Better thinking has come to be known, especially to many in Western academia, as critical thinking. What critical thinking might entail, how it might be conceptualised or defined, now forms the basis of a diverse and vast literature.

**Critical thinking in Higher Education**

Critical thinking seems to have become, and remained, highly valued to many of those who work and research in Western higher education. This valuing is despite the various definitions of what critical thinking might be and consequential issues around the usage of the terms.

For example, critical thinking has come to be known as a foundational concept of a Western higher education and the ‘critical thinker’ has, in part, also come to define the university graduate. While not exclusive to the Western world, the distinctly Western concept of critical thinking is also said to be central to what might be called a liberal higher education. Such an education might be said to be embodied in a person’s critical thinking but also in freedom of thought and expression, autonomy and the pursuit of positive social change. All these, in addition to the more customary acquisition of specialised knowledge and skills, are said to be what make an education a liberal one (Axelrod, 2002; Harland, 2009).

The association between critical thinking and higher education has endured many obstacles. For example, this association has endured educational reforms in some countries (e.g. in the UK and US, 1960-70’s) and more recently a general financial adversity experienced by many Western universities (Salter & Tapper, 2013; Harland, 2009). Critical thinking remains one overarching goal of a higher education (Stassen, et al, 2011). However, as I described in the introduction to this thesis, some difficulties in developing student thinking have arisen as a result of some of these obstacles. For example, as a result of financial adversity, and the wish to improve access to higher education, there has been a vast increase in the use of some
teaching methods such as mass education programmes. While such a mass education programme might offer an institution one solution to financial adversity, the existence of such programmes might also be seen by a teacher in practice as a threat to both the physical and philosophical spaces, i.e. the opportunities to cultivate thinking (Axelrod, 2002; DaRosa, 2011).

b. Conceptions of critical thinking

In the introduction to this thesis I talked about challenges for teachers who aim to cultivate student thinking, and also that some of these might be due to either the vast numbers of proposed definitions of critical thinking in the literature or lack of consensus in it (e.g. see Facione, 1990; Pithers & Soden, 2000). To offer the reader an understanding of why this lack of consensus might be so, I now offer some specific examples of definitions of critical thinking that are found in the literature.

I describe two overall trends that I can identify among definitions of critical thinking: one trend is for conceptions that are more composite (i.e. that contain two or more kinds of thinking), and the second, more unitary (i.e. contain one or two kinds of thinking, or that are components of other conceptions). In both trends, however, a common thread is that such a theory of critical thinking is described with the aim of clearly describing what it might entail, and thus to move on and better cultivate thinking in practice. That authors continue to do this raises the idea that, in practice, there are still difficulties cultivating thinking. However, I describe some conceptions of critical thinking that are more composite, and some of the more unitary descriptions that make up some definitions.

Critical thinking as a more composite conception

One example of a more composite conception of critical thinking is given by Cottrell:

Critical thinking gives you the tools to use scepticism and doubt constructively so that you can analyse what is before you... is associated with reasoning or with our capacity for rational thought

(Cottrell, 2003, p. 2-3).
As I illustrate with this quote, some conceptions of critical thinking I identify as more composite than others. In other words, they seem to contain a number of more precise ideas about thinking, and combine them into one larger proposition about what critical thinking might entail. For example, several precise ideas about thinking can be isolated from Cottrell’s words: sceptical thinking, doubtful thinking, analytical thinking, reasoning and rational thinking. Another example of a composite conception of critical thinking is the work of Facione:

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Critical thinking is purposeful, self-regulatory judgement which results in interpretation, analysis, evaluation and inference, as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which that judgment is based.
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(Facione, 1990, p. 10).

From this quote, several ideas about thinking can also be identified: interpretive thinking, analytical thinking, evaluative thinking, drawing inference and thinking about evidence and methods (etc.). However, some definitions of critical thinking are more unitary or simple.

**Critical thinking as a more unitary conception that makes up other definitions**

A number of authors (e.g. Paul, 1993, Ennis, 1987) define critical thinking in less complex terms. These definitions are often found in combination with one another, and as part of other conceptions, or alongside a requirement that the thinking is of a particular character (see later); some descriptions of critical thinking isolate it to more specific ‘kinds’ of thinking, in other words, to more specific cognitive ‘moves’. Such definitions comprise a vast proportion of the academic literature. I offer three popular examples: logical thinking/reasoning, reflective thinking and lateral/creative thinking.

**Logical thinking and reasoning**

Paul (1993) defines logic and reasoning as containing:

- reasoning: to draw conclusions on the basis of reasons
- logic: quality of reasoning and the rules by which it takes place
Conceptions of critical thinking as logic and/or reasoning are often presented in handbooks and on websites about critical thinking. Such theories suggest that critical thinking might ultimately be about problem solving, or seeking a correct answer. Such theories are reported to be popular because they offer students and teachers a clear framework around which thinking can be developed, and a sense of rules that often appeals to ‘beginner’ thinkers (Moon, 2008).

**Reflective thinking**

Some authors define critical thinking as including reflective thinking:

…critical thinking is reasonable, reflective thinking.

(Ennis, 1987, p. 10).

Definitions of critical thinking that contain reflective thinking are also common and have become especially popular since the 1980s. Reflective thinking has been defined in many ways, which range from more loose descriptions that mean simply to look back on one’s experiences and thoughts, or ‘wonder about’, to a slightly more analytical-sounding ‘looking beyond what is there’ (e.g. Phillips & Bond, 2004, p. 283). Reflective thinking is also described in terms of depth of reflection: superficial or deep and also as secondary reflection which, roughly, means to reflect again on something (Moon, 2008).

In contrast to logical thinking, reflective thinking more explicitly focuses on thinking ‘about’ the ‘I’ – our experiences, interactions and feelings, rather than purely factual knowledge or description. Reflection is usually used to find meaning to our experiences, begin to pursue possible solutions and improve the quality of future situations and interactions, and overall, improve our personal qualities. In particular, reflective thinking involves reflection on and analysis of one’s emotions (Moon, 2009). In summary: ‘to reflectively think about what to do and believe’ (Ennis, 1987, p. 10).

**Creative and lateral thinking**

Several authors (e.g. Paul, 1993; de Bono, 2010) define critical thinking as, or include in their definition of critical thinking, *creative or lateral thinking*. These authors suggest that they do
so because valuable ideas might be generated by independent or new thinking rather than thinking that comes about by known processes or systems. For example, Paul claims that:

…there is no way that we can generate creative geniuses nor to get students to generate highly novel ground-breaking ideas, by some known process of systematic instruction.

(Paul, 1993, p. 21).

De Bono further defines lateral or ‘new’ thinking by making a contrast between it and what he terms ‘vertical’ thinking. By ‘vertical’ de Bono seems to mean thinking based on logic processes which he refers to as traditional, sequential justified thinking ‘steps’ or ‘moves’ that lead to a conclusion. In contrast, he describes creative or lateral thinking as involving ‘breaking out of the concept prisons of old ideas’ (2010, p.8) with the deliberate aim of using a different approach to generate new ideas.

In summary, many different definitions of what critical thinking might be have been proposed, and these can be found in an increasingly complex literature. I have described several of the more common definitions, and sub-definitions in order to inform the reader about the nature of the complex literature and about how some common conceptions of critical thinking (or parts of it) might be defined. As I describe in Chapter 5, participants in the current study found ways to cultivate student thinking as a learning outcome in response to this complexity.

**Purpose of critical thinking**

One common thread that can be explicitly or implicitly identified in, or interpreted from, many definitions and theories about critical thinking is that the purpose of such thinking is *good or positive*. However, in many of these cases it is also unclear what might be meant by these terms (see Chapter 4, in which I explore an alternative way that the idea of ‘positive’ might be explained).

That critical thinking might have a positive purpose can be identified in the first recorded works that refer to ideas about critical thinking:
…it actually it is the greatest good for a human being to get into discussion, every
day, about goodness and the other subjects…and that for a human being a life without
examination is actually not worth living…

(Socrates, b. circa 470 BC, in Plato’s Apology: Rowe, 2010, p. 57).

More recently:

Critical thinking is a productive and positive activity.

(Brookfield, 1987, p. 5).

The latter example of the purpose of critical thinking seems to be about creating an outcome,
and about a person being productive in doing so (Brookfield, 1987). In an attempt at
interpretation of Socrates’ words, I might suggest that ‘positive’ or ‘good’ might mean to use
thinking to provide a better life. However, more dramatically, Socrates states that without
thinking (what he calls examination), a life would not be worth living.

Others (e.g. Paul, 1990; Pithers & Soden, 2000) suggest goodness in respect to critical
thinking is about protecting against erroneous thinking, or, more broadly, about improving
learning, or about the rigour of academic research (Vardi, 2013). If one uses an example of
critical thinking as reflective thinking, such as one given by Schön (1987), the purpose of
thinking might be argued to be good on the basis that its aim is ‘self-improvement’.

The idea that critical thinking might, generally, have a good purpose seems to exist in tension
with some other uses of the term ‘critical’. For example, one tension is between an
assumption that critical might, as well as meaning ‘thorough’; might also be taken to mean to
criticise. As criticism can have negative associations (Cottrell, 2005), such as to mean
‘having a negative opinion of’, ‘critical’ thinking might then be associated with a person
‘being cynical’ about something. For example, the act of critical thinking might come to be
associated with a person who seeks to undermine the efforts of others rather than make a
more productive contribution to what is going on (Brookfield, 1987), such as a discussion
about a pilot research project. The idea that critical thinking might be associated with
criticism or negativity is also illustrated by the findings of my last study (Blakey, 2011) in
which a student participant, upon remembering it was the day that I hoped to collect data
from them, said: ‘ah. It’s the bad thinking day!’
To understand the potential for tension between what one person might mean by critical, and another, is important. This is because these tensions might further confuse those who wish to identify a theory of critical thinking to use in practice or why they might want to learn to think critically, or find out what exactly thinking critically might entail.

Another tension can be found between some broader meanings of the terms ‘critical thinking’, the use to which they are put, and what some authors mean by critical thinking. For example, the overarching purpose of critical thinking is often seen as a positive activity, but also ‘critical’ is used as a fashionable or buzz-word, apparently as a marketing aid (e.g. critical appreciation used to aid the ‘sales’ of a course) or to impart an intellectual air. Such use of the words is denounced by some on the basis that the media in question often offer little guarantee of quality or suitability to purpose and as such might be rather deceptive (Tucker, 1996; Moon, 2008).

c. Critical thinking, disposition and emotion

There are theories about critical thinking that suggest it has a certain character (e.g. is reasonable thinking) or that it requires a certain personal disposition or attitude (see Brookfield 1997). These theories coexist within literature that also makes reference to critical thinking having a positive purpose. As it seems rather abstract to claim that thinking itself has a character, I feel it is clearer and more useful to suggest that it is the person doing the thinking that has the character rather than the thinking itself.

According to some (e.g. Golding, 2011; Vardi, 2013), a particular disposition is a vital part of critical thinking. These authors describe this vitality to be the result of the possibility that a person might possess the ability to think critically, or know about thinking critically, but fail to undertake it. Thus, to be effective, critical thinking must be combined with a willingness to carry it out. For example, Vardi illustrates such willingness in a somewhat mathematical relationship with critical thinking; that knowing about or being able to think critically is but one aspect of it:

\[
\text{Complex set of reasoning skills} + \text{Complex set of dispositions} = \text{Critical thinking}
\]
Figure 1. Vardi’s 2013 illustration of the critical thinking and disposition

Millman (1988) describes the connection between attitude and critical thinking as a fundamental willingness to engage in thinking. There are various other suggestions about what character or dispositions might be needed for critical thinking:

- willingness to engage in and persist at complex tasks
- habitual use of planning, and suppression of impulsive activity
- flexibility/open-mindedness
- willingness to abandon non-productive learning strategies
- awareness of social realities (e.g. need for consensus or compromise)

(Halpern, 1998).

Other authors suggest that critical thinking also needs dispositions such as:

- confidence in one’s reasoning
- an open mind
- fair-mindedness
- humility and courage
- independence and objectivity
- empathy and ability to see different perspectives
- intellectual commitment to use critical thinking skills to guide behaviours
- personal and academic assertiveness

(Paul, 1990; Paul & Elder, 1997).

These authors (above; Halpern, Paul & Elder) offer diverse ideas about attitude or disposition (or spirit, character, etc.) that might be necessary in order to think critically. They also suggest various descriptions for the actual relationship these dispositions might have with critical thinking. For example, Paul and Elder (2006) argue that character is simply a ‘part’ of thinking critically. Some more specific ideas about relationship specify disposition as antecedent to thinking (e.g. Elder & Paul, 1998), or that dispositions might accompany critical thinking e.g. Halpern (1998). Alternatively, Facione (2009) argues a particular disposition needs to be used alongside other thinking skills (e.g. logical thinking).
There is also a literature about a number of dispositions that might negatively influence critical thinking, in other words preclude it where there is an ability to think critically. In particular, certain values, prejudices or simply laziness that might result in failure to engage in thinking critically (Perkins, et al, 1993; Halpern, 1998).

Emotion and thinking
In the literature there are also several descriptions of the possible relationship between emotion and (critical) thinking. For example, Dewey (1997) describes this relationship as one in which emotion might precede thinking, in particular emotion associated with negativity in relation to personal understanding: ‘the origin of thinking is some perplexity, confusion, or doubt’ (p.12). Emotion and thinking also feature as part of de Bono’s popular ‘Six Thinking Hats’ construct (1985). De Bono makes reference to emotion with both the red hat (gut reactions, such as being pleased, etc.) and black hat (more cautionary emotion or negative sides to an argument).

De Bono’s ‘Hats’ construct seems to infer or attribute potential equal importance to each of the hats. For example, within the thinking processes that de Bono describes, red hat (emotion) is considered as necessary as the more pragmatic white hat (facts). While this author indicates that the emotions are necessary for thinking, he makes little further indication of what relationship emotion might have with thinking (e.g. is it good for thinking, or bad, or something to think about?). Possibly, this lack of detail might be because the Thinking Hats are intended as a teaching tool to ‘get people thinking’. In another work, de Bono notes the importance of emotion and thinking:

In the end all thinking is emotional….decisions, choices and courses of action are all determined by emotions, feelings and values. The purpose of thinking is to serve us as human beings and feelings are the best judge of effectiveness of that service…


Emotion is also mentioned throughout much of the teaching literature in relation to how groups and classes learn, and learn to think. For example, Biggs and Tang (2011) talk about class ‘climate’ and how this might engender certain feelings in a student. Also, that if these feelings are negative (e.g. fear, anger) they might hinder thinking and learning.
More specifically, Millman (1988) talks about emotion in the sense of its effect on our action; that emotional awareness is required in order to respond well to some aspects of learning experiences e.g. to inform our response to an annoying group member.

Moon also summarises the potential relationship between emotion and thinking. She summarises that emotion might:

- be the topic of thinking (e.g. we might think about what it is to be afraid)
- be associated with thinking about another topic (e.g. feel a fear that is associated with a discussion about a war)
- add to understanding of how our actions impact on others (e.g. via our perception of our action, or our understanding of how someone might feel about what we do)
- impede thinking processes and their expression (e.g. mean that we fail to think well, or talk about our thinking)
- arise as a result of thinking processes (e.g. thinking processes can feel challenging and so you might get frustrated or angry)
- be seemingly irrelevant but have a positive or negative impact on thinking (e.g. anger at what someone has done can mean our thinking about an incident is impeded)
- trigger thinking processes (e.g. happiness can lead to us thinking about occasions that we were happy)

(Moon, 2009).

However critical thinking might be defined, there seems to be significant evidence that it has a strong relationship with our emotions. Perhaps not surprisingly, given the range of ideas about what critical thinking is in the first place, there are various ideas about the relationship that emotion might have with critical thinking. Some (e.g. Perkins, et al, 1993) report that this area of the literature has been neglected and that to further establish the relationship between emotion and the thinking that we aim for in the classroom would be useful for those who wish to cultivate thinking in practice. As I explain in more detail in Chapter 6, a student’s emotion (e.g. fear) can result in a failure to engage in thinking (however it is defined). In the current study, teachers found this relationship was important to understand, in order that they move on to manage a student’s emotions and help them learn.
d. Barnett’s arguments for proposing his ideas of critical thinking, critical action and critical being.

The outstanding characteristic of Barnett’s approach to critical thinking is that he places it in relation to the development of the person and their practical reactions and actions in the world. For Barnett, critical thinking is a step along the path towards [or an aspect of] critical action, and critical being. This section is a brief description of Barnett’s arguments for proposing his trifecta of ideas of critical thinking, critical action and critical being that he discusses in his 1997 book, Higher Education, A Critical Business. I explain these arguments in a little more detail than in the introduction, so the reader continues to build their understanding of what Barnett means. Such an understanding is important as Barnett’s (1997) ideas and philosophical positioning frame this thesis. I also explain these dimensions in more detail in Chapter 4 alongside how I used the result of my 2011 research to develop the Theory of Critical Being.

In his 1997 book, Higher Education: A Critical Business, Barnett uses a dramatic example to introduce the underpinning philosophy for his ideas of critical thinking, critical action and critical being: the protestors who stood in front of tanks in Tiananmen Square, 1989. Barnett chose such an illustration because this student seemed to exhibit evidence of what he meant by all three dimensions of a critical being: the student’s act of defiance to the tanks seemed to stem from thinking about and gaining a deep understanding of principles of politics, sociology and political science. The act of defiance seemed to have been informed by his thinking because he acted on an apparent understanding that the tanks should be stopped. The protestor also seems to have used his thinking to reflect on himself, his values and place in society, to act in a context outside of his work or study life. Thus, the student’s action also seems to embody what Barnett seems to mean by a critical being; one who thinks and acts critically in all walks of life. Barnett (1997) therefore uses the example of the student to illustrate what critical thinking might be used for and what a critical being might look like.

According to Barnett, critical thinking should therefore be about how we think, how we act and who we are and he had several reasons for developing his ideas. One of his arguments for developing his three ideas was to respond to the protracted debate about what critical thinking might be. Barnett claims the complexity of the debate about critical thinking is symptomatic of narrow definitions that might limit a person’s cognitive development. For example, if one bases the development of their thinking solely on a unitary definition of critical thinking (e.g.
critical thinking as logic) they might or cultivate thinking that is limited or superficial: ‘Higher education, which prides itself on its critical thought, has done no adequate thinking about critical thinking’ (1997, p. 2). Barnett is also concerned that to make such theories central to higher education’s curricula might limit a student both educationally and personally (e.g. fail to help a student think about and develop themselves). In short, Barnett seems to think that some definitions of critical thinking have ‘missed the point’ of what it might be to think well.

Barnett also argues that we should instead encourage students in a wider critique of ‘taken-for-granted worlds’, most particularly, to engage in a critique of *themselves* (Barnett, 1997; 2000). Barnett maintains that such an education should be one purpose of a *higher* education, and that while universities promise to educate students as competent professionals and *educated people*, the latter more often fails. For example, those in industry claim that graduates who they employ often fail to display the thinking skills or values which their employers see as vital to their work (e.g. Casner-Lotto & Barrington, 2006; Paterson, 2012). Barnett argues further that if these claims are true, a higher education fails a society that needs people equipped to deal with the 21st Century’s vast challenges (Barnett, 1997; 2000; Facione, 2009).

e. Uncritical thinking

It is important to note that some authors who talk about critical thinking also explicitly or implicitly make reference to the idea of *uncritical thinking*. I finish this section with a short discussion of what some authors consider uncritical thinking to entail.

One idea about thinking that is *uncritical* is that it contains errors (e.g. error in a logic process). I infer this idea from works in which it is suggested that to develop critical thinking might protect us from errors in our own thinking and that of others (e.g. Paul, 1993). To a lesser extent, such an inference can also be deduced from other texts (e.g. Brookfield & Preskill, 1999; Biggs & Tang, 2011) that describe teaching methods that allow a student to be exposed to new ideas and knowledge in order to examine and re-examine their thinking.

A second idea about what is uncritical thinking is that authors argue that some *kinds* of thinking are uncritical in themselves. For example:
• thinking that simply follows rules, e.g. logic (Barnett, 1997)
• brainstorming (that contains no evaluative thinking about these ideas) (Huitt, 1998)
• aimless thinking (coming across ideas by chance) (Facione, 1990; Paul, 1990; 1993)
• creative thinking (putting facts together in new ways) and
• emotive thinking (responding to emotional messages rather than content) (Huitt, 1998).

Also, some dispositions have been termed ‘uncritical’:

• habitual thinking (habit, as I talk about later, can be viewed in a positive and negative sense. In this case, the author seems to mean a negative habit, based on past practice rather than current data which might be more appropriate)
• prejudicial thinking (to evidence a position without questioning it) (Huitt, 1998)
• passive thinking (to adopt ideas without also using independent thought) (Barnett, 1997).

It might not be helpful to discuss in more detail what might represent uncritical thinking, as this debate is potentially as complex as one about how critical thinking might be defined. However, the idea that some authors consider some ways of thinking to be uncritical raises two points. First, that the various ideas about uncritical thinking might be as hard to choose between (e.g. to avoid, perhaps) as the many proposed theories of critical thinking; as with critical thinking, what might represent uncritical thinking could be argued from various standpoints (e.g. argued by a different profession or context in which such thinking might be practiced). Each profession (for example), argues different kinds of thinking or attitudes to it as either central to practice or to be avoided. There are also examples of kinds of thinking (e.g. creative thinking) that are argued by different professions to be both critical and uncritical. On this basis, it is difficult to judge any kind of thinking or attitude to it as valueless without knowing what it is for. As I discuss in more depth in Chapter 4 (although not as exhaustively as I would like), teachers in the current study were also unable to find any ‘kind’ of thinking as without value, unless the thinking is based on an unconscionable ideal, such as racism.

If most kinds of thinking and attitude might be valued, dependant on context, it might be more accurate to determine critical or uncritical thinking as a result of the context of that thinking. This idea is supported by Huitt (1998), who remarks that some kinds of thinking are
appropriate to some contexts and not others. For example, when thinking about a patient’s emotional response to a medical treatment, logical thinking might not be the best thinking for a doctor to use. Huitt also suggests that creative thinking might at times be uncritical; although this is not necessarily because he disvalues it. Barnett, on the other hand, would argue creative thinking to be critical thinking because he also argues that thinking that ‘just follows the rules’ such as logical thinking, is not critical thinking. What has been raised, I think, in this discussion about uncritical thinking is that only being able to think in a few ways is not what is valued in practice. Our students need to think in many ways.

Summary of section 1

Critical thinking might be conceptualised differently from other thinking: ‘even silly folk….think’ (Dewey, 1997, p.2). Various authors suggest different conceptions of critical and uncritical thinking and much of the literature is concerned with what such thinking entails. Despite the many ideas about what critical thinking might be, many kinds of thinking seem to be valued in practice. There is also a substantial literature about the possible disposition or character required for critical thinking, and about a potential connection or relationship between critical thinking and emotion.

The complexity of, and lack of consensus about, critical thinking might lead to significant difficulties for those who wish to develop it in others or themselves. For example, a practitioner might struggle to choose an appropriate definition with which to inform their practice or a student might be unsure what a teacher means when they make reference to ‘critical thinking’. Barnett responds, by asking ‘what is critical thinking for?’ (1997, p. 65). Barnett’s argument is that any theory of critical thinking should allow a practitioner to educate in ways that do not lead to narrowed viewpoints of thinking as one ‘kind’ of thinking. He specifies that critical thinking should, instead fulfil one key purpose of a higher education, and the needs of 21st Century society; a theory of critical thinking should also allow an education for the whole person, as a ‘critical being’. Critical thinking should also be thinking for being a whole person. Barnett’s arguments that informed his 1997 work in turn informed my 2011 thesis, and the current research.
Questions raised

Three main questions are raised by that which I present in this section. First, there seems a need for a better understanding of how to better define, and therefore cultivate, student thinking in the light of such a complex literature; such an understanding might help a student better develop their thinking as a learning outcome. Related to this there also seems a need for a better understanding of how to educate for what we see as useful thinking and one that also addresses the potential for students to adopt ‘narrow’ viewpoints about thinking (e.g. to learn to think logically but not reflectively). Lastly, it would be helpful to better understand how emotion and critical thinking might be linked in situations that arise in practice (e.g. in small group teaching or clinical practice), and how to use such an understanding to achieve learning outcomes.
2. CRITICAL THINKING PEDAGOGY in the small group

This second section is in six segments:

a. Constructive alignment
b. Time
c. Class size
d. Atmosphere
e. Modelling
f. Difficulties cultivating student thinking

A definition of critical thinking describes what it entails, but to cultivate student thinking in the classroom will also require an understanding of how to teach it. I now review teaching methods that might be used to cultivate student thinking. These methods are also among those thought to be effective in cultivating student values. I review some of these methods in more detail in Chapter 6, in which I describe what I found about developing student values from the current study.

Practices that are aimed at developing a specific kind of thinking will depend on personal and organisational conceptions of critical thinking (McPeck, 1990). An in-depth review of all such methods would be beyond the scope of this thesis. Therefore, in this section (2) I describe general features of how to teach something (thinking), in a particular context (the small group in higher education).

Teachers might experience challenges with any teaching method, and in any context, therefore I also include some specific examples of what these challenges might be in the context of cultivating thinking in the small group. In doing so I hope to offer the reader a more detailed understanding of the practical context in which the current study is set, and how I might add to the literature about it.

Note
In general, it is considered that a teaching method employed specifically to cultivate student thinking is one that is significantly different to what might be called a more traditional

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4 To reiterate, in the introduction I explained that I use the term ‘cultivate’ to indicate a process of growth or ‘getting better at’ thinking.
method (Biggs & Tang, 2011). For some teachers, to effectively employ such a teaching method will therefore require that they make a cognitive shift in how they think about their work, in order to adopt a role that might be rather different to that which they have become accustomed. As Barnett also does in his 1997 work, some authors (e.g. Golding, 2011) have recently termed this shift in role one in which a teacher becomes an educator or a ‘guide on the side’ rather than a ‘sage on the stage’ (King, 1993, p. 30).

In general, in alignment with the general focus on ‘guiding’ a student, a teaching method used with the aim to cultivate student thinking have been variously termed ‘student centred’, ‘process focussed’ or ‘active learning’ methods, depending on what exactly it is about the teaching method that is being described (while not all student centred processes, etc., might be aimed at cultivating student thinking). For example, student centred can mean a teaching method is designed to focus on the student, their learning, and how they might best learn (Robson, 2006) rather than the knowledge of the teacher and what they need to teach (Brookfield & Preskill, 1999; Kuhn, 1999). Process- focussed (as opposed to content- focussed) methods are used with the aim to engage a student in a specific process which will help students learn, and in the case of the current research, learn to think. For example, to engage students in discussion, field work or debate (for example) rather than singularly ‘with a topic’. Active learning refers to similar methods, but which have a specific requirement that a student is an active participant in a learning task. Often, student participation might take the form of interaction between classmates and their teacher, and also would also require that the student takes much responsibility for their learning. For example, a student might be expected to prepare for a classroom debate by doing some pre-reading or research of a topic.

In a theoretical and in a practical sense, Biggs and Tang (2011) seem right. This is because, theoretically, the traditional ‘stand and deliver’ approach seems to emphasise teaching rather than learning. Practically, traditional teaching methods, such as the lecture, don’t necessarily preclude cultivation of critical thinking but face difficulties in being student-centered, process-focussed and in the promotion of active learning participation. A change in attitude or orientation in teachers and in modes of teaching that they might use seems required to enable critical thinking to be cultivated.

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5 For example, the lecture, although I acknowledge that many teacher-centered strategies can be engaging and do not preclude thinking.
I now move on to describe some characteristics of this group of methods with which a teacher might aim to cultivate student thinking.

a. Constructive alignment
To be effective, teaching methods used with the aim of cultivating student thinking and values need to be ‘constructively aligned’. Shuell explains what constructive alignment might mean in practice:

If students are to learn desired outcomes in a reasonably effective manner, then the teacher’s fundamental task is to get students to engage in learning activities that are likely to result in their achieving those outcomes.

(Shuell, 1986, p. 429).

To constructively align teaching with how a student might best learn is a way to improve the effectiveness of teaching (see also Biggs, 1996; 2003). Such an improvement draws on the ideas of a constructivist understanding of the nature of learning; the assumption that knowledge cannot exist outside our minds or be given from one person to another in thought, but that new knowledge is constructed or created within an individual through their experiences (Hendry, et al, 1999). It also draws on a design for all teaching methods that ensures all methods within a teaching programme fully align with such an understanding.

In other words, a method employed by a teacher in the classroom need to match what the teacher would like to achieve, but particularly match the current understanding of how a student might best learn. While it could be said that the overall effectiveness of constructively aligned teaching might depend significantly on the quality of the current research into it, constructive alignment can be understood as vital to what students learn, how well they do so and, on occasion, whether they learn at all. Thus, a teacher can have a significant impact on student learning via how they teach them, despite having little control over some components that can also influence a student’s learning, for example, the content of curricula (see Biggs & Tang, 2011).

In summary, the idea of constructive alignment emerges from constructivist theory and the idea that a student can use their own activity to construct knowledge, and curriculum theory which is about designing assessment to match what is to be learned (Biggs & Tang, 2011). In
a fully aligned curriculum, the required student outcome would determine all aspects of teaching design, from learning environment and methods to monitoring student learning and assessing for it. Fully aligned teaching is designed about both what students need to learn but also, importantly, how they might best learn it (Biggs & Tang, 2011).

An example of how teaching methods can be constructively aligned can be found in the case of learning disciplined thinking. Some current research shows that logical thinking might be best learned when a student is cognitively active or engaged and needs to take place regularly and frequently to develop a thinking ‘habit’ (see Golding, 2011). Logical thinking is less likely to be developed from an isolated activity or event (Moon, 2009). Thus, a teaching method that is as constructively aligned as current understanding of learning logical thinking currently allows would be interactive, engage teacher and student and also allow thinking to be practiced.

A system of teaching that is completely aligned would also give a teacher opportunity to assess whether the desired student outcomes have been achieved, e.g. to assess student reflection in a reflective writing project (if this is the best way to assess it). Thus, constructive alignment of teaching methods can be important to the effectiveness of teaching thinking; see Chapter 5 for a gap that teachers in the current study identified within their own teaching methods, and methods that they developed to more fully align with the ways their students might learn.

b. Time
Learning to think, and learning to develop values, like learning to understand a topic, can take time (Moon, 2009). Dedicated curriculum time is therefore a common feature of teaching methods to cultivate student thinking. Time can be dedicated to cultivating thinking in different ways. For example, substantial time (e.g. two hour class) or planned ‘spaces’ dedicated to developing thinking (e.g. a 30 minute discussion) within other teaching methods. Together, these ways might offer:

- an opportunity to engage students deeply with a topic and explore tangential ideas to enhance understanding
- a chance for the teacher to use different methods to suit the different needs of the student group (e.g. discussion in pairs as well as a group for those who are less
confident talking in the group)

- the opportunity to attend to the maintenance of good general group process e.g. to use humorous exercises to develop ongoing rapport (Biggs & Tang, 2011) and
- the opportunity to revisit either process or topic as often as necessary to develop student thinking as a habit (e.g. see Delaney, et al, 2013).

c. Class size
Small class size (e.g. 10 students) has also been shown to be effective where a teacher aims to cultivate student thinking or values. In comparison to a larger group of students, a small class can offer a teacher better chance to:

- detect, understand and respond to emerging issues about learning
- gain knowledge about what their students might need and address other issues such as barriers to learning to think
- hear and see evidence of students’ learning progress in speech, action and the written word and
- offer more detailed feedback to a student so that they understand their progress.

(Brewer, 1985; Brookfield & Preskill, 1999; Moon, 2009).

A smaller group might also offer a student a better chance:

- for the anxious or shy to develop skills to take part in discussion or discourse (because smaller groups can feel less frightening than larger ones)
- to participate and learn to be mindful of what others bring (Brookfield & Preskill, 1999) (which can help a student learn by hearing about other perspectives)
- to test or change thinking and learn productive ways of contributing (Blakey, 2011; 2014).
d. Atmosphere

Another important factor in effectively cultivating student thinking can be the atmosphere of a class. In other words, how the classroom environment feels to a student. Atmosphere can have a significant influence on how well students learn (Biggs & Tang, 2011) and therefore also how well a student might learn to think. For example, a class that feels ‘safe’ or ‘right’ allows a student to engage in the many activities that aid learning to think, e.g. discussion, discourse, independence and collaboration, tolerance of ambiguity, complexity and differences (Pithers & Soden, 2000; Robson, 2006; Brookfield & Preskill, 1999).

The ‘right’ atmosphere has also been described to be one product of a successful relationship between group members. With this in mind, many teachers undertake ‘icebreaker’ and ‘team building’ exercises in small groups that aim to develop such a relationship. However, it seems hard to pinpoint exactly what a successful relationship might entail in practice. Students who ‘know one another well’ might enjoy better discussion (e.g. find it easier to contribute and discuss) and also that a teacher-student relationship needs to be one of ‘high quality’ (Biggs & Tang, 2011). A successful relationship has also been described as one that allows a teacher to foster or nurture a student (Moon, 2009) or is generally ‘balanced’, i.e. not based entirely on a teacher-student power differential (Blakey, 2011; 2014). However, what it is about the teacher-student ‘relationship’ that makes it more ‘productive’ and better cultivates student thinking, seems otherwise elusive. In Chapter 5 I discuss one way in which the participants created a productive environment for cultivating student thinking; the research I report investigated in very practical terms how these ideas could be operationalised.

e. Modelling

There is a strong literature that supports the idea that learning to think requires that a teacher ‘practice what they preach’; that a teacher needs to ‘model’ processes or ‘doing behaviours that they wish students to engage in (Swennen, 2008). This is because modelling can significantly influence what a student learns to do (hooks\(^6\), 1994; Brookfield & Preskill, 1999; Browne & Freeman, 2000) and as with constructive alignment, can also influence whether a student learns\(^7\) at all. Modelling goes beyond a teacher telling students how to do

\(^6\) Lower case preferred by author

\(^7\) By ‘learning’ I mean in relation to specified learning outcomes. What a student learns as part of such experiences could of course be defined in any number of ways, e.g. learn about other students.
something or that they need to do it, to actually doing it themselves. Modelling can be especially important to do well where a student is sceptical about taking part in a teaching method, or experiences barriers to participation such as those based on anxiety, perceived risk or if a teaching process (e.g. debate) is new to them (Brookfield, 1987).

For example, when cultivating student thinking, ‘to be wrong’ can be understood as an essential component of the process of discourse for student and teacher. Therefore a teacher needs to effectively model being wrong as part of discourse – which can be risky venture (Brookfield & Preskill, 1999). Teachers need to show students they can be comfortable being wrong: ‘if my teacher can, I can!’ However, as Trilling (2006) notes, the ways that we act can also be understood by our students as ‘inauthentic’. In other words, modelling might at times be understood as ‘acting’ and not as a ‘real’ behaviour. The research reported on in this thesis had a strong element of self-reflection on the teachers’ behalf built in, allowing this issue to be raised and discussed: see Chapter 7 for how teachers in the current study identified this phenomenon about their own practice, and the influence that their own behaviour therefore had on their students’ learning.
Educating for thinking in Western undergraduate medical education

To educate Western undergraduate students for excellent medical practice is now acknowledged to require active learning methods to cultivate student thinking, as I describe above (e.g. small student numbers, extended contact time with students and modelling what we wish a student to do) (Cooke, et al, 2010). These methods have in many cases been instigated in addition to, or instead of, customary lectures and commonly take the physical form of the small group. It is becoming better acknowledged by members of the medical profession that a student might need to learn to think in such a small group environment, as this more closely resembles that of the clinical practice they are being educated for. On this basis, some medical schools have begun to restrict lectures to less than 50% of formal class time, some focus almost entirely on problem based learning (PBL, in the case of medical education, is a method in which small groups of students are facilitated to discuss problems that might occur in clinical practice). Other medical schools have ‘banned’ the lecture entirely (Cooke, et al, 2010).

For example, at the site for this current study, for almost a decade, medical students in years 2 and 3 have taken three small group classes per week that specifically aim to cultivate their thinking (Clinical Skills, Healthcare in the Community and Integrated Cases).

The medical practice that students are being educated for requires a student who can function well in a small group, and has a strong foundation of knowledge and skill:

…clinical education involves far more than outfitting individual physicians with scientific knowledge and technical skills. The clinical work and other professional activities of physicians are social practices and physicians must be prepared to work in relationships with the patients and with other professionals…


As I have already discussed, the small group is now also commonly used to teach skills of clinical practice, such as the patient interview or consult, and as part of this, clinical reasoning for diagnosis and treatment. However, small groups are now also used as a way to teach the skills of communication and reflective practice (e.g. by small group role-play or discussion) and to develop a student’s values (Paterson, 2012; Wilson & Cunningham, 2013).

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8 ‘Banned’ is a rather judgemental term which might imply a lack of valuing of the lecture. Obviously this is not the case.
Part of a medical education is now one that, necessarily, aims to develop students’ thinking and values with small group teaching practices.

I now outline one particular approach to educating medical students for thinking in the Western medical education context. I offer this review to give the reader an understanding of the context of medical education in the small groups I have talked about. Because this thesis is centred on the small group classroom context, I talk about teaching in a ‘classroom’ rather than teaching in clinical practice, the laboratory or lecture.

**Problem based learning (PBL)**

To address concerns that the lecture (one of medical education’s primary teaching methods) might be a limited teaching method and that some things might be better learned in other ways, PBL was introduced into medical education. PBL allowed more of a focus on developing student thinking (as described by Barrows, 1980).

For example, a lecture can be an ineffective way to teach because it is boring for some students and they might disengage from learning: a medical school might ‘attract some of the most able young people in the country and …simply bore them to death (Fraser, 1991, p. 41). The lecture has also been criticised for a focus on ‘fact delivery’ (Bereiter & Scardamalia, 1993). In other words, the lecture might lead students to simply become passive recipients of the knowledge of others rather than a more active participant in constructing their own. To learn to think will also usually require active participation from the student (such as in a discussion); thinking is ‘not a spectator sport’ (Halpern & Riggio, 1997, p1.).

PBL often involves a small student group discussion of (for example) a patient vignette which stimulates learning, thinking and inquiry. PBL can variously involve the teacher and requires few specialist materials or, according to some, special teaching skills (Barrows 1986). Despite its popularity and the requirement for few specialist resources, those who administer PBL have reported problems with teaching this way. For example, that they feel confused or unclear about what their role in its processes should be; when to intervene in a problem-based discussion, or when more directive teaching might need to be used (Haith-Cooper, 2000). After its instigation, research indeed began to show that PBL required significant professional development for its teachers in order to best achieve its goals. For
example, development that helps a teacher to understand that PBL methods are not simply ‘teaching as telling’ (Creedy, et al, 1992) as they might in a lecture.

This finding suggests the need for professional development opportunities for those involved as teachers in PBL and other small group teaching situations in medicine, and raises the question whether such opportunities can clarify any of the confusions which have been recognised. In the research reported on in this thesis, professional development of the small-group tutors became a central focus.

Otago, the context for the current study, does not identify its small group work as PBL, but its group work shows evidence of many of the characteristics of PBL. For example, Healthcare in the Community and the Integrated Cases papers at Otago use patient vignettes as a starting point for discussions, and on occasion these discussions will involve a real client who is present in class. Thus, the experiences of teachers in the current study seem similar to those I identify here in relation to PBL.

Cultivating student values
Cultivating student values, under the guise of educating for ‘professional identity’ has experienced a recent resurgence in medical education (see Cruess & Cruess, 2014) and there is a rapidly growing discussion about how to best educate for values in the classroom. (I define what I mean by values more fully in relation to study data in Chapter 6). There are also other fields that are related to values, which have grown in popularity over the last decade. For example, ‘humanism’ which can include values as part of its definition (e.g. see Branch, 2001).

Note
I base the discussion in the current section on two assumptions about the practice of medicine and the work of a medical teacher: that some values are important or desirable for effective practice as a doctor in the Western world, and that a medical teacher in Western medical education might need to cultivate these in their students. I will not further address whether or not those in higher education and medical education should educate a student for values. Whether a teacher should educate for values clearly has ethical aspects/elements surrounding it that I will not address further. For example, one ethical issue might be that a student holds a
value that is cultural in origin and which those in Western medical practice might not recommend for effective practice.

**History of values education**

To understand a little of the history of values education might be helpful for the reader to understand some influences on teachers in the current study. To do this I mainly use the work of Lickona:

Character education is as old as education itself. Down through history, education has had two great goals: to help people become smart and to help them become good.

(Lickona, 1993, p. 6).

Literature about cultivating student values can be found in writings about schools as well as the higher education and medical education literature (e.g. Lickona, 1993). As much of this literature extends to the adolescent, in other words to a young university student, I feel it has relevance here.

Through the 20th Century the popularity of values education was varied, and several trends influenced what values were taught and how this was done. For example, at one point, schools were substantially informed by the Bible for what was called their ‘moral curriculum’; after this trend followed discourse about which version of the Bible to use for this. Later, there were concerns that teaching values in schools might threaten the more conventional separation of church from state. As a result many schools retreated from values education. In the 1970s, educating for values as ‘individualism’ began to surface, which could be characterised as a way of educating for values that had a focus on allowing students to freely choose their own. In the 1990s several concerns about the structure of society (e.g. the decline of the ‘traditional’ family structure) drove a new resurgence of values education in schools, which was considered vital to ‘fill the gap’ that some perceived to exist in the education of children in the home (Lickona, 1993).
Specific advice for teachers who aim to cultivate values
Guidance about how to cultivate values seems to centre on the provision of an ‘educative environment’. This environment seems, in many ways, to mirror that which is recommended for cultivating student thinking (for example, to create an environment in which a student feels comfortable to discuss their values). There is however little specific advice on how a teacher might interact with a student when they aim to cultivate a student’s values; it is possible to read some works about values in higher education that do not contain guidance about how to teach values (e.g. Harland & Pickering, 2011). In my opinion, this lack of guidance might, in part, explain why some teachers might, at least at first, try to cultivate student values by explaining them or telling a student about values (see Chapter 6, section 3 for more on this), which can be ineffective.

The literature about how to cultivate student values indicates that there are several aspects of educating for values which are confusing for teachers. For example, there are concerns that some teachers confuse clarifying what a value might be (e.g. talking about what it might mean to be empathetic) with developing a value in that person (e.g. helping a student to develop their empathy with the patient) (Bills & Husbands, 2005).

However, despite this confusion and lack of specific guidance about how to teach values, values education has surfaced in various guises in medical education (e.g. as ‘professionalism’, see Cruess & Cruess 2014) and thus has become a more accepted part of what medical teachers need to do. For example, Cruess and Cruess recently reported that:

Teaching medical professionalism is a fundamental component of medical education.
The objective is to ensure that students understand the nature of professionalism and its obligations and internalize the value system of the medical profession.


In Chapter 6 and 7, I talk more about how teachers in the current study chose to cultivate student values, and what an ‘educative environment’ for values might entail in a small group classroom.
Values education in the small group setting
As I have already introduced, the small group, or ‘tutorial group’ is a:

…place where values were often brought to the surface…we can exploit tutorials in all disciplines for the express purpose of learning values because learning becomes and inquiry made public and experiences are shared.


As it does for cultivating student thinking, the small group offers somewhat better opportunities to cultivate student values than some larger groups (Harland & Pickering, 2011). For example, a smaller group offers closer contact between students and the teacher, and as a result both can feel more confident to discuss ideas that might be rather personal or sensitive. In the smaller group there is usually more time to discuss values than in a lecture. Because of this close contact and time available, and as I also discuss in Chapter 5 (the teacher of the small group can have a powerful influence on students in it. What a teacher does in the classroom can significantly shape the development of the ‘future physician’ because in it, their values can be more apparent to the student than those of some other teachers (Reiser, 1994). Who their teachers are can significantly influence what a doctor might become. What Barnett specifies as his Critical Being seems to have some connection with this literature. As I discuss further in Chapter 7, there were two factors of who teachers were that significantly influenced the learning of students in the current study.

I now examine some more specific ways from the literature that values have been identified to be taught.

Developing student values: how a student is treated
There is a literature about ways that a student might develop values, even though there is little to be found in the literature about specific methods that teachers might use to cultivate student values. Some of the ways a student might develop values cannot be attributed to ‘teaching’, but rather to ‘influences’ on the student; a student can develop values as a result of their experiences (e.g. in education), in particular, as a result of how they are treated by a teacher (Berkowitz, 2002). For example, if a student experiences a nurturing supportive environment during their education and a positive relationship with their teacher, this student
would be likely to develop different values to one who has not. A student’s experiences of the ‘significant others’ in their education (e.g. their teacher) can have a significant influence on how they develop as people:

...students are indeed watching [the teacher]. What is worse [my emphasis] is that they are also imitating.


Berkowitz does not go on to talk about whether ‘imitating’ might lead to ‘developing values’, but does seem to infer this somewhat. This author discusses teachers who might have some doubt about whether or not they would like to be a ‘values educator’ or perhaps (as Harland & Pickering, 2011, might agree) whether they consider values education part of their remit:

Many educators argue that they are not character educators and often that they do not want to be. If you work with or around [children], you cannot not be a character educator. Abstaining is not an option. Your behaviour will affect children’s character development, for good or for ill. Cleaning up our acts and walking the talk is necessary for character education to be effective.


Developing student values: Teachers as people
Another idea about how values might be developed by a student is suggested by Noddings (1994). This author offers some detail about what might happen between teacher and student that helps a student develop their values, especially in the context of ‘ordinary conversation’. For example, a discussion that might emerge from ordinary talk rather than a teacher’s deliberate attempts to cultivate a particular value. Noddings explains that as part of ordinary conversation, who a teacher is can significantly influence a students’ value development and that a teacher might need to be a good person in order to help a student do this (as Barnett also infers). For example, a teacher should respect their students in order to help them develop their values; how respect might be shown by a teacher is not elaborated further but Noddings elaborates this latter statement a little; that a teacher might help a student develop values by treating their student with more importance than the topic matter at hand (Noddings, 1994). In Chapter 6, I talk about one way that teachers in the study found that they could help a student develop their values, and in Chapter 7, I talk about two specific
values that were identified by teachers in the current study as being important for cultivating a student’s thinking.

**Practical ways a teacher might cultivate student values**

In their examination of the influence a teacher has on a student developing their values, Noddings (1994) also offers some insights into how a teacher might approach cultivating student values in a practical sense: about how a teacher might help a student cultivate their values when there seems to be a sense of conflict between what a teacher would like to cultivate and what a student values. Noddings (1994) suggests that in essence, a good approach might be one that takes ‘a constructive approach to conflict’; for a teacher to approach values education in such a way that they ‘consider their effect on others’. Such an approach essentially refocuses the conversation on the value itself, the value conflict (if there is one) and the pursuit of a resolution. This is instead of ‘trying to win’ or being ‘in contest with an opponent’ (p. 115). In Chapter 6, section 2, I identify one way that a teacher might be supported to resolve such a conflict.

**General factors in the classroom that might help a student develop their values**

There are some general factors about the classroom that might help students to develop their values. For example, Lickona talks about:

- how a teacher should act as caregiver, model and mentor to treat students with love and respect and set a good example
- how a teacher might create a ‘moral community’ that might help students know one another as people and feel valued as members of, and responsibility to the group
- how a teacher might help students develop a moral discipline (as a value) by the creation and reinforcement of rules
- how teachers might create a democratic classroom environment
- how teachers might use cooperative learning to encourage students to understand about and learn from another’s perspective

(Lickona, 1993, p. 10; also expanded by author: Lickona, 1996).
Having given some general examples about how a teacher might help a student develop their values, I now give some examples of ways to develop student values as part of a medical education.

**Developing student values in medical education**

There have been specific concerns expressed by some (e.g. Stern, 1998) about how a medical education might train a doctor as a scientist, but not as a doctor who can contend with whatever else a patient might need. For example, Stern expresses concerns, that are also shared by many within the profession itself, that in the classroom there might be any of:

- values that are recommended in curricula and taught (e.g. accountability)
- values that are recommended in curricula but not taught (e.g. honesty)
- values that are recommended in curricula but taught as the opposite (e.g. interprofessional respect as interprofessional disrespect).

According to some (e.g. Cuban, 1984), some teachers routinely ‘modify the curriculum’ by acting in a way that is different to that which they are asked to teach ‘behind the classroom door’. For example, a teacher might teach about good interprofessional communication, but show a student that they cannot or will not communicate with another professional well themselves.

**Role modelling**

In the past, there has been a strong reliance on the use of positive role-modelling in medicine to teach desired core values. This mode of ‘teaching’ is highly valued by some students (Byszewski, et al, 2012). For example, values used to be simply ‘taught’ by the presence of a respected role model under the apprenticeship model of medicine (McCullough, 2004). As students also now learn under a model of ‘competency’ rather than exclusively under the care of one physician, they are offered significantly less opportunity to learn values in this way. For example, a student might be taught to perform a procedure, and assessed as competent to do it, by several staff members. As a result it has been argued that, more than ever, a medical
curricula needs to include specific activities that allow students to develop and reflect on their values (Byszewski, et al, 2012), and especially because some staff implicitly or explicitly teach values which are not recommended for practice, such as disrespect for the patient (Stern, 1998).

What makes a ‘good’ professional, and thus what students need to aim for, is also becoming harder to discern. For example, students now see clinicians involved with pharmacological companies, and hospitals run as businesses. These aspects of medicine add vast complexities to the values they might discern to be part of ‘good’ practice (Cooke, et al, 2006), such as whether an expensive clinical procedure with marginal evidence for its effectiveness should be offered to a patient instead of a cheaper one. Branch (et al, 2001) advocates the small group as a place for teachers to create ‘mini vignettes’ based on such issues which can be used as a stimulus to discuss the complex array of values that might arise in them.

Those in medical education might experience more difficulties cultivating student values. For example, values can simply be hard to talk about, and as a result there are reports that such discussions are rare outside circles related to philosophy or ethics (Harland & Pickering, 2011). Not only are values hard to express, but the process of cultivating values can be exceptionally off-putting and at times involve passing through ‘crises’ of realisation. For example, a student might value their role as physician as being one of ‘healer’ but then needs to learn to value what they might do for a client in the chronic processes of disease, dying and death (Jarvis & Salinger, 2012). If a crisis (and emotion) is a natural function of values development, an education for values this must be one that allows a student to manage this well and transition from one state to another (Jarvis & Salinger, 2012). In Chapter 6 I hope to offer one way that a medical teacher might help a student negotiate the emotion associated with such a crisis and in Chapter 7, one way that a teacher might mitigate some unwanted value influences (section 3).
Summary of section 2

There are many ways that teachers might cultivate student thinking in the small group. These are mainly called active learning strategies and are used when they align with current understanding of how students might learn to think.

From the literature about cultivating student thinking I also identified that a teachers’ intention to educate for thinking and the instigation of teaching methods with this aim is no guarantee a student learns to think. To learn to think, teachers and students will need to negotiate many other obstacles, for example, concerns or fears students might have about teaching methods themselves or what a teacher believes about their work (e.g. that teaching is telling).

A medical education now commonly contains teaching that aims to cultivate student thinking and there are also a growing number of specific methods (e.g. PBL), that aim for this. The first years of undergraduate medical education are now, in many institutions, commonly characterised by a combination of teaching methods that are much more varied than has been customary (e.g., methods limited to the lecture and laboratory) and as part of this variation, what students need to think about: patients, communities and families and medical practice in less scientific terms, has also expanded.

Values education, in its many guises has also taken a firmer place in the curricula of medical education; albeit against some persistent financial pressures that threaten its inclusion (e.g. the inclusion of small group work more generally) and difficulties that can exist cultivating values in practice. For example, that values can be difficult to express, conversations about them sensitive for some and also because some teachers might fail to make the distinction between ‘talking about’ a value and actually developing it.

Despite these numerous problems that persist in practice, those who administer an undergraduate medical education seem now more concerned than it once was with what students can do, how they do it, and also who they are.
Questions raised

A number of questions are raised about cultivating student thinking and values as a result of what I discuss in this section (2). This is both in a general sense and more specifically in a medical education sense.

Difficulties might arise as a product of the size of a small group that is primarily aimed at cultivating student thinking. For example, a teacher might have to deal with students who have a personality clash or exhibit problematic behaviours in class. Such issues can be tough to deal with and especially as teachers have ongoing contact with these students throughout the year.

Active learning strategies with which to cultivate thinking and values seem to thrive on many aspects of a ‘good atmosphere’ but especially a productive relationship between student and teacher. However, is not yet clear what ‘good’ or ‘productive’ might more specifically mean. To clearly establish what a successful relationship for developing thinking entails, how it is achieved and maintained would offer further guidance to teachers in practice. If a productive teacher-student relationship is so important for learning to think, we need to know what it might ‘look like’.

Educating for thinking, however well aligned teaching methods are with this goal, might still fail to engage some students. To better understand both the cause of this failure and how to pursue a solution would prevent lots of angst in terms of teacher distress, improve student outcomes, but could also possibly prevent chronic disengagement and perhaps offers ideas about how we might support teachers during such times.

The next and final section of this literature review will begin to develop ideas about teacher development, with a short discussion of various approaches to teacher support and development in higher and medical education. These ideas will be drawn on in subsequent chapters of this thesis.
3. PROFESSIONAL DEVELOPMENT OF TEACHERS IN HIGHER AND MEDICAL EDUCATION

Medical teacher participants in the current research undertook a form of professional development (PD) in a higher education teaching setting. While the PD itself did not form a major part of the research questions, some ideas about teacher development did emerge from results of this study. For example, the research group were able to evaluate aspects of their development and support as well as develop ideas about the theory that they used and its pedagogy. Some of these findings about PD feature in a small section of Chapter 6, which is about how these teachers used a form of PD to control their emotion about their students, and thus teach them better.

A basic understanding of what PD in higher education, and in medical education (faculty, educational or academic development, etc.) might entail is therefore important for the reader, so they might understand any contribution I make to its literature.

There is an extensive literature on PD of teachers in higher education and a more focussed literature on PD in medical education which centres mainly upon medical students. However, there is a small literature on PD in relation to teachers who aim to develop student thinking, which might indicate that this is an emergent area of the literature. There is a yet smaller literature on the professional development of teachers of medical students who are aiming to develop student thinking; this is one area that the research reported on in this thesis can add to. The final section of the literature review is thus in three parts: PD in higher education, in medical education, and a short section about PD for teachers who wish to develop student thinking.

Professional development in higher education

Teaching is arguably higher education’s primary concern, but it is possible to be employed as a higher education teacher without formal teaching qualifications (Nicholls, 2000).

PD for those in teaching practice is also varied and inconsistent despite views that it is essential to this role and can have significant implications for students’ lifelong learning. Variations are in terms of what is offered, format, and what is required or recommended for practice. While PD is becoming increasingly commonplace in some countries (e.g. UK, Norway) such programmes are seldom compulsory (Gibbs, 1993; Nicholls, 2000).
PD for teachers in higher education has often been small scale and poorly supported. However, significant improvements in structure and ensuring that PD is linked to a teacher’s probationary period have meant that PD is apparently better valued by institutions as part of the scholarship of teaching and learning. For example, it seems to be better understood by teaching institutions that professional development of a teacher is a vital process for their optimal lifelong learning (Nicholls, 2000). Teacher development has come a long way from times when employment was based on an assumption that topic knowledge implied teaching expertise (Gibbs & Coffey, 2004) and many express views that PD quantity and quality will continue to improve (Biggs & Tang, 2011).

Professional development of university teachers is pursued in a number of ways and common foci might include:

- skill acquisition/enhancement of skills, e.g. voice projection
- institutional focus, e.g. planning to support general teaching improvement
- method focus, e.g. teaching method mastery such as problem-based learning
- reflection on practice, investigate and support change in individual conceptions of teaching and learning
- a research focus, e.g. action research to pursue individual/group questions of interest or problems
- disciplinary focus, to develop pedagogical knowledge

(Reeves, 1988, p. 18).

Staff development programmes are of varied lengths; one-offs, workshop series or university courses (e.g. HEDC, 2013) delivered across semesters. There are also several methods of delivery and I present four common ones here, some of which contrast with what I found in the current research (see Chapter 6):
Common delivery methods of PD

Common methods of PD delivery can include specialist staff developers who offer one-to-one consultation services. These staff might be Faculty-based or part of a specialist Teaching and Learning facility. Referral can be by self-referral, Faculty recommendation following a teacher evaluation or as part of an induction/confirmation programme. Consultation aims to improve teaching practice but frequently has other foci, e.g. career planning, increasing a teacher’s confidence levels and general teacher well-being (Webb, 2012). Thus, professional developers might approach clients as a:

- professional service provider (learning aids, media)
- counsellor (conditions for teachers to explore and improve practice) or
- colleague who jointly collaborates with teachers with the aim to improve teaching
  (e.g. action research)

(Boud & McDonald, 1981).

Each approach has its critics. For example, the developer who uses a professional service provider approach might be criticised for an exclusively technical focus that does not meet all a teacher’s needs; a ‘counsellor’ for having a potentially ‘remedial’ feel, which might dissuade participants, and the latter for possible repetition. In response, some recommend developers be skilled in each approach to use as necessary (Webb, 2012). As with student-teacher relationships, the teacher-developer relationship is argued to be crucial to effective enhancement of teaching practice (Webb, 2012). However, it is argued that such a relationship needs to be more like peers than teacher-student, and depends on developers gaining a sense of who they are working with. Reeves sums this relationship up with his comments about the teacher as a ‘whole person’ (and as I also talk about in Chapter 7):

To shrink the human person…down to the hardened substance of a purely mental activity is to deny reality and make a travesty of learning. Universities and colleges have to be concerned with whole persons.

(Reeves, 1998, p18).

A second mode of delivery of PD to teachers in the higher education setting involves workshops and one-off PD, which and are among the most common opportunities for a
university teacher. Their focus is usually not simply ‘knowledge delivery’ but rather to help
staff to investigate and learn about teaching; workshops provide active learning for teachers,
usually by discussion, and commonly involve a small number of participants. Workshops can
be valuable and enjoyable and offer other benefits such as chances to network and socialise
and when done well support a teacher’s current practice and encourage further learning about
it (Harland, 2012). As Harland indicates, workshop ‘success’ (e.g. adoption of better practice)
might be dependent on how well they are administered; workshops can be highly variable in
terms of quality of delivery, content, theoretical grounding, purpose, duration and audience.
Such variation can make workshops difficult to categorise and formally evaluate (Amundsen
& Wilson, 2012). Some report that workshops are also the least likely PD delivery method to
courage lasting positive changes in teaching or improvement of student outcomes
(Levinson-Rose & Menges, 1981). Why a workshop might be ineffective for PD is complex,
as are the many factors that might impede change of practice (e.g. a lack of interest in change
might impede a teacher learning about practice). However, those who would be likely to
benefit most from workshops are usually the most reluctant attendees; and when they do
attend, apparent duress often results in their failure to engage in these active learning
strategies (Webb, 1993).

A third method of delivery of PD to higher education teachers involves the seminar, which
can have a similar number of participants to a workshop but usually has a rather different
focus, such as delivery of information, e.g. results of a research project. Because of this, a
seminar might have rather less participant involvement than a workshop. As with lectures, a
seminar might be given well and be enjoyable and engaging but because of the lack of
involvement, some of the audience might find them unengaging. Again, the effectiveness of
seminars is hard to determine as these also have varied foci and may or may not be directly
relevant to a teacher’s practice.

The fourth common method of PD in HE consists of informal or casual PD. There are many
casual methods of PD, such as a simple conversation, which can also significantly influence
teacher practice:
Good conversation feeds the spirit; it feels good; it reminds us of our ideals and hopes for education; it confirms that we are not alone in our frustrations and doubts or in our small victories.

(Clark, 2001, p. 173).

Conversation and serendipitous contact between teachers can play a big role in a teacher learning about their practice and conversations are often reflective and include stories about practice. Conversation has advantages over more formal PD in that it is more likely to be undertaken by reluctant workshop or seminar attendees, and offers the opportunity to spontaneously share knowledge or comment about worrisome topics such as problem students. Conversation can also offer a non-threatening, non-hierarchical place to explore solutions and seek assistance (Haigh, 2005).

Conversation can be especially useful to teachers new to practice as it allows opportunity to ‘make sense’ of their new role, ‘rehearsal space’ for strategies and a place to express related emotions (Spiller, 2002). On the basis of such evidence, some departments have created initiatives to encourage collaborative new-teacher meeting groups (Rogers & Babinski, 2002). However, the ability to undertake such effective conversation is not universal and can be hard for some (Senge, 1990). Conversation can be a complex social act to initiate and sustain and not easily learned by models and exemplars (Zeldin, 1998). Even those who find conversation easy, can find themselves effectively shut down by ‘conversational narcissists’ who inappropriately dominate, e.g. with expressions of factual knowledge (Stone, 1993).

Despite such problems, the social function of conversation is valuable. Conversation offers teachers the opportunity to discuss the tricky emotional issues of teaching practice, the physical and mental isolation of the role itself and offer many opportunities to develop their teaching (Clark, 2001; Haigh, 2005).

Training programmes that are more structured and comprehensive than single workshops (etc.) have been termed ‘multiphasic’ (e.g. see Wilkerson & Irby, 1998) and could comprise any of workshops, seminars, retreats, counselling, mentoring and evaluation of teaching practice. The structure of any of these methods can be matched to a teacher’s experience or requirements. According to Benor (2000) the advent of such programmes is one indication that the principles of education that have been applied to what and how we teach a student, have finally been applied to what and how we teach a teachers. However, there remains a vast
variation in what development opportunities an employer might offer new and existing teachers. Such variation could simply be by virtue of economics, or logistics of teaching such a varied and busy staff.

**Specialist centres that offer PD**

Specialist departments that offer PD are also increasingly common, as are formal higher education courses in teaching (e.g. postgraduate certificates or diplomas in tertiary teaching). Most commonly, such programmes offer teachers the opportunity to reflect on their practice or learn about process such as constructive alignment of teaching methods (Biggs & Tang, 2011). These courses might lead to postgraduate qualifications and often contain flexible online or distance components to cater for learners in employment.

The literature about teacher PD and research into it are said to be developing but are currently also considered to be in flux. For example, three major reviews over the last few decades show continuing doubt about what makes PD effective (Levinson-Rose & Menges, 1981; Steinert et al., 2006; Stes, et al, 2010). In particular, there are concerns that research needs to ask more specific questions about teacher development practice; to ask ‘what are the features of educational development that make it effective?’ rather than ‘what practices have the biggest impact?’ (Amundsen & Wilson, 2012).

Recent research into PD has pursued such questions. For example, Oleson & Hora, (2014) found effective teachers learn from a variety of sources: from formal PD but also their own student experiences, research projects and other life roles. As a result, these authors suggest effective PD needs a personalised approach, in contrast to more customary ‘spoon feeding’ or ‘fill the gaps’ courses.

**Professional development for teachers in medical education (ME)**

Preparation for, and support for teachers can be essential for effective practice. In other words, successful student outcomes, which are vital for effective practice and the continued advancement of the field of medicine, can depend on teacher development (Nichols, 2000; Steinart, 2002). This is because medical teachers have substantial power over the ‘mental habits’ of students, in other words, how, and how well, they might learn (Cooke, et al, 2010).
As with PD more generally, development of medical teachers can be approached in many ways.

Medical teaching staff also come in various forms. For example, some are specialist topic teachers or instructors in a related department (e.g. anatomy). Staff also teach students by virtue of students being taught in their workplace (e.g. on the ward) and others do such teaching in a more official ‘clinical teacher’ roles. Medical teaching staff are thus diversely qualified and include allied health professionals, academic and non-academic medics and clinical staff. Any of these might, or might not hold formal teaching qualifications.

As in higher education more generally, there has been an upturn in availability and quality of PD for medical teachers. For example, in the late 1970s, less than 4% of Western medical schools had dedicated education units concerned with teaching quality but in the 1980s began to become more common. At this time, evaluation of teaching also began. Both more available development and the opportunity to evaluate teaching offered medical teachers chances to increase the quality of their work (Benor, 2000).

In the 1980’s, teacher evaluation began to be seen as useful feedback on teaching quality. However, teacher evaluation in medical education, as in wider educational setting, has been criticised because often the intention of those who instigate it was to change a teacher’s practice simply by scrutinising it. For example, it might have been hoped that a teacher would teach better because they knew their students would be commenting on what they do. A decade later however, it began to become more common to discuss teaching as a result of student evaluation of it (Benor, 2000).

Professional development in medical education is as much an evolving field as in higher education more broadly (e.g. Steinart, et al, 2002). The few reviews of the medical education staff development literature indicate there are still questions about what makes development effective, and the impact of such training on institutions themselves. With the advent of such groups as Best Evidence in Medical Education (BEME) medical education research continues to take a systematic approach to these questions and also what PD works to positively influence teacher practice over time (Steinert, et al, 2002).

Medicine is a rapidly changing field and one that is also entering more complex areas (e.g. the science of organ transplant), thus the skill of a teacher to deal with such issues also needs to grow. Technology is also rapidly taking over some of a teacher’s work (clinical skills
simulation, the internet as an information source, etc.). At the same time, teachers need to continue to educate doctors to relate with others, negotiate anxieties, dilemmas and relationships. All these skills are becoming more essential for our medical teachers, to support them in this has been, according to some, a ‘secondary mission’ for medical education (Benor, 2000).

Value of teaching
I include this next section in this literature review because it might reflect the experiences of a medical teacher in their work, and thus impact their practice. Medical teachers were a substantial focus of the current research.

Those who teach in medical education might experience the general negative views of teaching and learning that can at times be apparent in the university more widely. Clinical educators especially can find themselves being questioned in terms of the value of their academic work. Also, clinical teaching can be undervalued in a financial sense; educators’ salaries are often inadequate (Reilly, 2007).

Despite recent breakthroughs in the provision of PD, a medical teacher might experience another form of negativity, especially when they seek to support or improve practice. This is the result of some PD research literature that seems based on tacit assumptions that teachers are ill-prepared for teaching, lack skills for effective practice and use very basic conceptions of teaching and learning to support it (Webb, 1996). Naturally, this is not universally the case (Evers & Hall, 2009) but might have a negative effect on how a teacher feels about their work and how well they carry it out.

If one purpose of a university is to teach, this work should be implicitly and explicitly valued. However, whether an institution values teaching is also in doubt. For example, teaching and research roles might be offered equal status in theory but not in practice; promotion might be offered on the basis of publication rate but teaching practice or research not ‘counted’ (e.g. in a CV or departmental publication list for funding). Such a culture is currently being challenged (e.g. by the provision of specialist grants for the improvement of teaching and learning) and, for the benefit of teachers and students, needs to be changed (Biggs & Tang, 2011).
How well a teacher practices is a combination of formal teaching but also as a function of their experiences more generally (Oleson & Hora, 2014). For example, a teacher can be motivated by how their seniors perceive their performance (van den Berg, 2013). It is therefore possible that, if a senior staff member expresses the view that a teacher does not teach as well as another, this view can impact how a teacher views their own work and how they carry out their teaching.

Issues with ‘valuing’ might also arise as a result of departmental processes such as the induction of a staff member. Induction usually comprises a selection of staff development and information-giving activities which prepare a staff member to work in a department and is also meant to be a meaningful, social process to offer new staff members support. For example, to help a teacher understand the teaching methods they might be asked to use, and administration processes. Such programmes are often perceived as an outward expression of how members of the faculty value staff (Bligh, 2005) but can often be neglected:

And the head of the department said….of course we give [academic] staff a very good, thorough induction. And I was sitting there thinking: I’ve missed it. Where was it? When was it? I said to ‘Neil’ afterwards… and he said: ‘well, you got the staff handbook’.

(Staniforth & Harland, 2006, p. 189).

If they are not inducted effectively, a teacher might feel undervalued (Harland, 2012) or struggle to form ideas about practice that align with what the faculty might wish (e.g. might choose to ‘tell students about’ a topic where faculty might instead aim for a learning outcome which would not be achieved by this method). Because teacher practice is a result of formal learning and more general experiences (Oleson & Hora, 2014) lack of induction processes might negatively influence their work.

Ineffective, or lack of, staff induction procedures might result from:

- lack of useful communication between staff and head of department
- the head of a department understanding what induction processes a staff member should undertake but not ensuring these are done
- no evaluation of induction experience or process
• new staff not taking initiative for their own induction processes (e.g. if they miss one, making sure that it has been rebooked to do)

(Harland, 2012).
Summary of section 3
There are many methods of PD delivery for teachers in higher education. Over the last two decades there has been an increase in the availability and diversity of what and how PD is offered but there are currently still large variations in what staff in different institutions experience. For medical teachers, there are large variations in the roles which they take in medical education and specific difficulties such as availability for professional development due to workload.

Specialist teaching and learning facilities that offer PD can occupy either a central or peripheral role in educating a university teacher. As do departments who wish to offer their own PD, such departments suffer issues with gaining sufficient funding.

As a result of these, and various other factors, a teacher might experience issues as part of their work that are the result of some who perceive that teaching lacks value. For example, if faculty fail to effectively induct a teacher, the teacher might interpret this lack as a failure to value their work.

A medical teacher can suffer from the same issues as part of their practice as a teacher who works in higher education more generally. In addition, medical teachers are under pressure to teach at the same time as work clinically, which can constrain the PD they might undertake.

Questions raised
A medical teacher might experience those who either tacitly or explicitly ‘devalue’ their practice. Such experiences might negatively influence how teachers feel about their work or whether they take up offers of PD. Thus, it might be helpful to understand how such feelings, or the opinion of their work by others, might be mitigated. This would be so that a teacher maintains their effectiveness in achieving student outcomes in such a climate.

Informal conversation and relationships seem useful forms of PD, especially because they allow teachers to talk about and get ‘free therapy’ about current issues. Workshops and seminars are also useful but difficult to gauge in terms of effectiveness and how well they reach the target audience. It would be useful to understand how the current study might offer an insight into what effective and available PD might mean for a medical teacher.
Literature review conclusion, research aims and structure for this thesis

As was suggested in Chapter 1, a medical education is more than a passing on of information or knowledge but involves preparing a person to be a doctor. A doctor needs to be a professional, capable of applying scientific knowledge, responding to patients as people needing help, and understanding wider social and cultural contexts of ill-health. In short, medical students need to be dedicated to becoming Good Doctors. The role of ‘good doctor’ is captured in a more general way by Barnett’s notion of critical being. For teachers of medical students, their route to being a ‘good doctor’ requires what I have termed the cultivation of thinking and the values deemed desirable for Good practice.

However, teachers and students in Western higher education and medical education might experience problems with the idea of critical thinking, to include issues with communication of what is meant by critical thinking, as a result of the complex debate about what it might be. Some aims of a higher education, e.g. to develop student thinking, might thus be not be achieved. There are also various ideas about how to educate for thinking and values in the classroom, and what might make effective PD for teachers. I hope the current research might clarify how to usefully define critical thinking, what pedagogical strategies in the classroom might be effective for this and how to educate students for critical being.

The Methodology is described in Chapter 3 which is followed by a description of theory of Critical Being, and how it has been developed by myself and the participants in the current research, in Chapter 4. Then, Chapter 5, 6 and 7 contain results of the current study, analysis and discussion. The work is brought to conclusion in Chapter 8.

With this research I aim to contribute to the understanding of critical thinking and values pedagogy in medical education and how to support some of these teachers in practice. To do so I draw evidence from the experiences of teachers over an academic year who learned to educate their students with a particular theory of critical thinking: they learned to educate for Critical Being.
Chapter Three

Methodology
INTRODUCTION
In this chapter, I describe in detail the methods I used for this research and justify why I chose them. As I suggest in Chapter 1, a medical education is more than a passing on of information or knowledge, but also involves preparing a person to be a doctor. A doctor needs to be a professional, capable of applying scientific knowledge, responding to patients as people needing help, and understanding the wider social and cultural contexts of ill-health. In short, medical students need to be dedicated to becoming ‘good doctors’, the role of whom is captured in a more general way by Barnett’s notion of Critical Being. For medical students, their route to being a ‘good doctor’ requires what I have termed the development of their thinking and their values. In this thesis, I investigate what this cultivation might involve for teachers who work with these students, under the framework of the theory of Critical Being.

I begin the current chapter with a description of my overarching research question and aims, and what I mean by the foundational elements of the research: its ontology, my epistemological position and resultant relationship with participants, research methods, and data sources. I also explain what I specifically mean in this thesis when I refer to ‘data’ that I collect and when I talk about ‘themes’ that I develop from data and which I describe in the subsequent chapters. I describe each of these elements to demonstrate that I address my research question in a manner which is as aligned and appropriate as possible (see Grix, 2002). In explaining these things, I also aim to fully inform the reader about my meanings so the analysis and results chapters make sense.

Next, I briefly introduce the research methods with which I collected my various data and I also illustrate the timeline of the collection with a diagram (p. 87). This timeline is followed by a justification for my choice of methods in relation to phenomena I wished to understand, and a more detailed description of methods so the reader might understand exactly how I carried these out. Then, I write about some methods that I might have used for this research, but did not because they would, I believe, not allow me to collect data about the phenomena that I wanted or to the depth that I required.

The details I describe here build on Chapter 1, in which I introduce the argument for this thesis and the context of higher education and medical education in which it is set. I also build on Chapter 2, my literature review, in which I discuss key ideas about authors’ conceptions of critical thinking, ideas about how critical thinking and values might be best be taught and approaches that have been taken to teacher development in higher and medical
education. In the literature review I also briefly introduce Barnett’s ideas of critical thinking, critical action and critical being (1997). These ideas frame my Masters’ thesis and the theory of Critical Being which I developed from this subsequent work. The theory now frames the current research and thesis and I describe it, and its development, in Chapter 4.

**Research question**

The main question I seek to answer with this research is:

> What are some ways teachers might teach for Critical Being?

**Research aims**

I would also like the answer to this question to:

- Make a contribution to higher education and medical education literature.
- Specifically contribute to literature for medical teachers who wish to cultivate student thinking and values in practice.
FOUNDATIONAL ELEMENTS OF THIS RESEARCH

Broadly, I chose to undertake a qualitative action research project to pursue my research question. The project is also in part a naturalistic study of individual medical teachers in their normal small group teaching environments. I undertook a qualitative action research project because I had a research question but no firm hypothesis to pursue; neither did I identify specific numerical data that I wished to collect. I also needed the help of teachers to develop my ideas about teaching with a theory, and about the theory itself (action research). This research type and design (see later for more detail) was the best fit that I could anticipate for my initial aims. Where I judge that my data does not allow me to fully answer my research question, or fulfil my aims, I suggest directions for further research about these in the final chapter, Chapter 8. I now explain why I call this project a qualitative action research project and what I mean by some of the terms I used within the thesis.

This is a qualitative project because there was no intention to collect or analyse data in quantitative terms. Quantitative data could have been collected in relation to the development of teaching for Critical Being, for example, the students being taught by teachers in this study could have been asked how far they had moved towards becoming a Good Doctor on a scale of 0-10, and data might have then been used to judge how well their teachers had taught. However, with this research project I sought instead to understand the developing thoughts and beliefs of medical teachers about their teaching practice, about the obstacles there were to student learning and, ultimately, how these obstacles might be overcome.

Of note at this point is what I mean when I refer to 'data' that I collected and analysed in order to make the conclusions that I do. As I indicate above, data can be collected and recorded in numerical terms; data can also be words written as text, or the spoken word recorded on audio disk, or the same recording transcribed and written on paper. For the current thesis, data include several forms of the latter as well as DVD recordings of teachers working with students in the classroom. Data include transcriptions of participant’s comments, written words in the form of personal journaling by participants and notes taken by me about interpersonal interactions between myself and participants. I also include (with express permission given for each) words and phrases taken from emails between myself and research participants. As fits with the qualitative methods, data have little numerical or measured components apart from an occasional reference to the development of an idea or a change in behaviour over the
period of the study. It may have been possible to subject the data collected to a numerical
analysis as one might do for a quantitative study, for example, to count how many times a
teacher undertook a teaching practice. However, in the current thesis it was more appropriate
to organise the material ‘thematical’ or, in other words, in groups of ideas about a particular
teaching practice (‘theme’).

When I use the term ‘themes’ to describe what emerged from my data, what I mean are ideas
or problems about teaching that were identified from what teacher participants said and did as
part of the research and in their pursuit of answers to my research question. Essentially, each
of these problems that I describe formed a ‘smaller’ research question to be answered under
the umbrella of my major research question. These ideas or problems and the proposed
solutions to them that teacher participants went on to describe form the teaching practices that
I describe in the following results and analysis chapters. For example, in Chapter 5, I describe
how teachers in the current study addressed difficulties cultivating student thinking in the
small group in medical education.

What is action research?
This research is action research, which is appropriate to research in which a group of
practitioners is faced with a problem, or question, in the context of something they are
collectively engaged in. Action research can be described as a process by which a group of
researchers or practitioners then ‘design the plane while flying it’ (Herr & Anderson, 2014, p.
69). In the case of the current research, the ‘plane’ was methods we used to teach students for
Critical Being. Action research can be further described as a type of study carried out during
the process of an activity or occupation, in this case teaching medical students over one
academic year, that aims to improve methods or approaches for those involved in it (Herr &
Anderson, 2014). The subject of an action research enquiry is usually a problem or question
that arises for the group involved. In this case, we began with a question that related to the
theory of Critical Being. In response to this question, teachers talked about problems that they
had teaching for Critical Being. In turn, this theory was based around Barnett’s ideas about
critical thinking, critical action and critical being, and that I used for my 2011 research. The
theory of Critical Being seems to capture in general and theoretical terms what is required for
a medical student to become a good doctor and what is required for a teacher of medical
students to become a good teacher.
The current study is an example of action research in several different respects. First, it is centred around an ongoing research process which allowed participants and researcher to visit, revisit, intervene, assess and reflect on ideas about teaching practices over time (see Herr & Anderson, 2014). In this case, data were collected over one academic year. Second, this project is also action research because it does not test a hypothesis (i.e. does not aim to prove or disprove a proposition) but rather uses ongoing enquiry to pursue unspecified outcomes related to a question. Third, this project also explicitly used both participants and researcher as part of data generation (e.g. data in the form of discussions between teachers and I in group meetings) and the development of conclusions (e.g. those developed during group work) drawn from it. This project therefore uses an action research methodology.

This research is also in part naturalistic in that I observe teachers in their usual classroom ‘habitat’ teaching their usual programme; research began with teachers engaging their usual teaching methods. However, as I began to introduce participants to the theory of Critical Being, they came to better understand it and further develop their own ideas of how the theory might be best taught as part of their practice. I also observed this influence on their teaching practice; one might argue that any evolution of teaching (e.g. to include new method) might influence a teacher’s ‘naturalistic’ position, however, it is important for me to be clear that this research began with teachers’ using their original classroom practices but also began to include those that evolved under the influence of the theory of Critical Being with which I frame this research.

**Commitments in research**

At the outset, a researcher who undertakes a research project makes some basic commitments. These commitments are that research is always research into some thing or things, and the researcher is committed to the existence of that thing or things; this is referred to as the ontology of the research. As research also often aims to produce knowledge, the researcher is also committed to a view about how this knowledge might be produced; this view is referred to as the epistemology of the research. I now describe what I chose to do with this research and why I did so, in relation to these foundational elements.

**What phenomena did I wish to study?**

When I designed this project I also needed to consider what exactly I wanted to study; research needs to be specifically designed to seek particular phenomena. These phenomena became my research ontology; what Creswell (1997) also calls the ‘reality’ I wanted to
discover, interpret and come to understand. I identified several phenomena that I wished to study:

- phenomena that enhance or constrain teaching practice in relation to developing students’ thinking
- what and how relationships between staff and student might influence the effectiveness of teaching
- what and how human nuance might influence effectiveness of teaching; for example subtleties of language, body language
- the relationship between emotion and learning for students, and emotion and teaching for teachers

I designed data collection method(s) in a way that I anticipated would best illuminate these kinds of phenomena. In my results and analysis chapters, I represent these phenomena by describing them, quoting from a text or transcription of the spoken word, or by representing a phenomena in a more abstract form such as a heuristic. I do this to communicate my meaning as clearly as I am able to the reader.

As I am interested in multiple phenomena, I also chose mixed data collection methods to use within the overall action research structure (e.g. I am interested in what teachers think about teaching, so I interviewed them; I also wanted teachers to discuss alternative approaches to teaching with other teachers, so I chose also to get teachers together to talk about teaching in monthly group meetings). I did this in particular to increase the chance that I illuminate each phenomenon as best as I could and to offer a sense of triangulation and thus confidence between sources.

**My personal epistemology**

My choice of methods with which I plan to identify and study phenomena for this research is influenced by my own beliefs. For example, my choices are influenced by how I believe we might come to know such things. Thus, my personal epistemology informs my choice of methods: how I believe we might best come to know and understand these phenomena (see also next section on researcher position).

In a general sense, my epistemological beliefs align with a social constructivist paradigm which describes how knowledge can be constructed from human interactions, and is
influenced by culture, circumstance and experiences. To reflect on our experiences can lead to construction of the mental models with which we make sense of them. Thus, as part of such a process, learning can result from adjusting our mental models to accommodate new experiences (Carter & Little, 2007).

More specifically, to align my personal epistemology, research questions and their ontology, I made several more detailed considerations that led to a study design with mixed methods. As a study with mixed methods, I acknowledge that these methods resulted in what Lewin\(^9\) (1952) describes as the ‘chaos’ that might eventuate in action research, at least at first. While this chaos could be argued as a disadvantage of the action research approach, as data can take a significant effort to ‘unwind’ and identify ideas from, the chaos I see as a necessary one; I had little idea from which part of practice my data (problems and ideas about teaching) would first emerge. Here is a brief overview of the methods that I used and what data I wished to get from them.

**Brief overview of what I wanted from each method**
First, I needed data about teachers in the study; I wished to learn about what informed teachers’ practices at the outset of the study, which I aimed to elucidate with a loosely structured interview.

I also needed to understand a teacher’s interactions with their students, so I needed to observe the teacher in a classroom teaching situation. I also needed information about how this teacher’s practice might change over time, under the influence of the theory, so I performed two observations of teachers’ practice with a few months in between. Thus the teachers’ interview and the first observation that I made of their practice formed a baseline for comparison of phenomena if required. I also wanted teachers to have as much information as I did about the observations I had made, in order that they could discuss and reflect on what I thought I had seen. For this reason, I chose to discuss my notes with teachers after the observation and also gave them a (de-identified) summary copy.

I also wanted teachers in the study to observe their own practice and reflect and comment on it from their perspective and with the detail that their reflections might bring after the fact, with time to describe what they were thinking. Therefore I chose to add in the Interpersonal Process Recall (IPR) method. Interpersonal Process Recall (IPR) entails recording

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\(^9\) Lewin is said to have coined the phrase ‘action research’.
participants in a naturalistic situation and to replay the DVD to the person at a later date or time. Participants are invited to stop the DVD, to comment and discuss what they see, and these comments recorded and transcribed verbatim. This technique is discussed in more detail later in this chapter.

I also needed to understand how teachers’ thinking about their practices changed over time and learn about their reflections on their own practice so I encouraged them to keep a reflective journal in which to record such things; what they thought and felt about what they did, and how useful the theory of Critical Being was to them as a medical teacher. Thus, I hoped they would make comments about their practice in the classroom, and also about developments they might suggest for the theory of Critical Being.

The theory of Critical Being itself also needed to be tested and developed further than what I found in my Masters’ study (this process is explained in full in the next chapter). I had been working on the definition of the theory of Critical Being for some time prior to the current study and understood it to still be evolving, and such refinement extremely likely (and to continue after the current study). Thus I needed to allow the theory of Critical Being to be tested over time, which was another reason I chose action research, and why I chose to conduct the research over a year. At the outset of the study I was unsure how teachers might best learn the theory (or, how it would be best taught) so I used a combination of methods to cater for different possibilities:

- hard copy ‘Teacher Resources’ which contained an introduction to my Masters’ work about the theory
- introductory meetings which gave participants a forum to discuss and refine thinking about teaching methods and about the theory of Critical Being

I also found that my personal journal worked well for refining my own thinking about the theory of Critical Being.

I needed participants to be keen to use the theory to inform their own practice. Thus, I chose to purposively approach teachers who were already engaged in developing students’ thinking, who had some experience in doing so and who indicated they were keen to improve their practice. I chose one academic year for this project as I understood that my own practice around the theory took some time to develop and thus I wanted to allow teachers sufficient
time to think about, and develop their ideas. I also understood that new ideas and behaviours can take some time before they come more easily, i.e. form a habit.

While Professional Development for these teachers was outside that which I wanted to understand as part of this project, I needed to approach teachers in a way that was productive and allowed discussion of teaching practice. Thus I approached teachers as a peer, based on what I had found in some of my previous work (my Masters’ thesis, Blakey 2011) which was that such a relationship worked well for developing thinking and ideas in small group work.

**Researcher position and relationship with participants**

I was an active participant in the construction of knowledge in this research and my position was also one of observer-researcher. I try to reflect my dual position in the analysis and results chapters by reference to myself as ‘Jane/researcher’. While this pseudonym does not serve in any way to preserve my identity, I do this because I feel it is important to acknowledge that my position in relation to data is one of both participant and analyst.

So, as an active member of this action research project I influenced its processes. In my position I did not simply observe and gather data, but was influenced by participants’ responses and guided to pursue subsequent ideas for them, with them, and in my own practice. For example, I was guided by a participant’s description of the theory that was somewhat different to my own but seemed to make more sense. After testing the description further as part of a group discussion (sometimes with the many iterations that action research can allow), I adjusted the definition of the theory and fed this information back to the group for further testing. Thus, teacher participants’ responses and contributions to discussion gave me direction for further inquiry and construction of knowledge. Data therefore consist of my own responses as well as participants’, as part of a dual teaching and learning process.

At times during this study, I experienced a tension between the two positions of observer and participant; at these times I felt I needed to choose whether to interact as an individual contributing to research or as an interpreter for what was happening, or to guide processes (e.g. between the participant group). How to best negotiate this tension was a great source of learning for me about what worked and what didn’t and as a result, also an important contribution to the some of the conclusions I make about students in the study (see Relationship, Chapter 5).
For example, in the monthly research meetings, teacher participants discussed their experiences of teaching with the theory of Critical Being. In discussion I needed to bring aspects of how I used the theory of Critical Being in my own practice and at the same time facilitate the group for others to do so. My practice necessarily became a negotiation between two positions; of leading the group or group member. In essence, this action research involved both participant and researcher in a project that we hoped will also influence the practice of others. As Reason & Marshall, also state:

All good [action] research is for me, for us and for them: it speaks to three audiences…


Data sources
I have multiple data sources (e.g. words written on a page, spoken in a group meeting) that I gathered within an action research framework:

- teachers’ personal reflections on their teaching in the form of a handwritten journal, including my own
- audio recordings of teacher interviews, transcribed verbatim
- audio recordings from post-observation discussions, and discussions about interpersonal process recall (IPR), also transcribed verbatim (see later for detail)
- audio recordings of the group of teacher participants from each of the introductory meetings and subsequent monthly meetings, transcribed verbatim
- field notes about interactions with teachers that I wrote during the study period and during teacher observations
- DVD footage from IPR, used to check my understanding of the context of comments made during recordings and participants’ body language
- a review of literature on critical thinking published in the Western world, critical thinking pedagogy and higher education and medical education staff development literature.
METHODS

Research design

I employed several interrelated methods for this research, each for a specific reason. These methods overlapped during the research period (e.g. a personal journal might have been written at the same time as a monthly meeting was held). However, for the sake of clarity I discuss each method separately. First, I offer a diagram of the research timeline over the year that the data collection took place.

Timeline

This research took place over the academic year January to October 2013 in which teacher participants learned about the theory of Critical Being and then tried and tested ideas about how to best teach with it for the academic year. In the results and analysis chapters I represent ongoing processes of a research group who ‘designed the plane while flying it’ (Herr & Anderson, 2014, p. 69) but at the same time, might also have been unsure of how to fly it.
<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Activity</th>
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<tbody>
<tr>
<td>2012</td>
<td>November</td>
<td>Ethical approval sought and granted</td>
</tr>
<tr>
<td>2013</td>
<td>January</td>
<td>Recruiting by advert – email to Early Learning in Medicine (ELM) tutor database</td>
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<tr>
<td></td>
<td>January – February 2013</td>
<td>Information given to potential participants, consent sought.</td>
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<td></td>
<td></td>
<td>Individual teacher interviews as convenient</td>
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<td>Reflective Journal hard copy given out to teachers</td>
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<td>Teacher Development Resources given out</td>
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<td>February</td>
<td></td>
<td>First group meeting</td>
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<td></td>
<td>Second group meeting (one week apart)</td>
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<td>March</td>
<td>Monthly meeting</td>
<td>Observations of teachers in practice</td>
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<td>April</td>
<td>Monthly meeting</td>
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<td>May</td>
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<td>June</td>
<td>Monthly meeting</td>
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<tr>
<td>July</td>
<td>No meeting</td>
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<tr>
<td>August</td>
<td>Monthly meeting</td>
<td>Observations of teachers</td>
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<td>September</td>
<td>Monthly meeting</td>
<td>IPR recordings</td>
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<tr>
<td>October</td>
<td>Monthly meeting</td>
<td>IPR playback</td>
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<tr>
<td>November</td>
<td></td>
<td>Reflective Journals collected in by researcher</td>
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</tbody>
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**Figure 2. Timeline for data collection**
Data collection, in brief

Data collection took place over a year-long action research project on an undergraduate MBChB programme in 2013. I gathered data from five purposively selected teachers of small groups, all of whom taught on the first two years (‘Early Learning in Medicine’ years) of the programme. In brief, the stages of data collection were:

- after consent, five medical teachers on the programme were interviewed about what they think critical thinking might be, and how they might teach it in the small group, with an open ended/unstructured questioning technique of approximately one hour duration. Teachers’ responses were recorded and transcribed verbatim
- immediately after the interview, the same teachers were given a hardcopy of ‘Teacher Development Resources,’ that I developed, see Appendix A
- the same teachers were also given a hardback journal in which to record personal reflective thoughts about their teaching throughout the research period
- the same five medical teachers took part in two initial group discussions (approximately one hour each, one week apart) with me as facilitator, in order to introduce them to the theory of Critical Being, and the methods used for this research, which may have been unfamiliar to them, e.g. personal journaling. Both group sessions were recorded and transcribed verbatim
- the same five medical teachers took part in monthly group discussions about the theory of Critical Being in relation to their practice and discussions recorded and transcribed verbatim
- four of the same medical teachers were observed in two of their usual small group classes, (approximately six months apart, e.g. March/August), during the academic year. Observation notes were discussed with the participants, and their comments on these recorded and transcribed verbatim (one participant was unavailable to be observed or filmed)
- the same four medical teachers were DVD recorded in a naturalistic small group teaching situation, approximately two hours in length
- the same four medical teachers were each played the DVD of their own teaching in an interpersonal process recall (IPR) session, their responses recorded and transcribed
verbatim. I was not present for the IPR recording, but facilitated the IPR session in order that teacher and students might be observed in as naturalistic a situation as possible.

- I kept field notes about interactions between the researcher and teachers in the study.
- I was also available by email to the teacher participants throughout the study. This was in order to clarify aspects of theory and practice after monthly meetings, or to discuss phenomena we had experienced as part of our teaching practice. Participants used this means of communication on a regular basis.

So that participants had access to data for further reference and reflection, I summarised each monthly meeting into a short document which I sent to all teacher participants as a reminder of what we agreed and achieved. Both emails and notes formed data for the study. While these two data collection methods were not on the initial ethics consent form, I ensured that each participant gave written consent by email for their use.

**Justification for data collection method selection – why chaos?**

Overall, I planned my research methods to allow me to gather data about how a teacher might best teach for, and use the theory of Critical Being. After some thought, I was able to address the smaller research questions about how teachers in this study cultivated student thinking and values using the theory as a framework for their practice. Thus, the methods that I used needed to allow me to develop an in-depth understanding of how exactly teachers cultivated thinking and values as part of their teaching practice; I needed to understand their reasoning for teaching this way and I also needed the research group (me, and the teacher participants) to be able to evaluate how effective this teaching was.

However, to do this I chose to assemble what might appear to be an almost chaotic combination of data collection methods for this study, in contrast with some methods which might seem more straightforward to administer. Lewin (1952) argues that such a sense of ‘chaos’ is normal for action research projects in general, and that this sense of chaos can feel uncertain and overwhelming to the researcher and study participants at least at first. Such an argument is reassuring, but I also need to express to the reader why I deliberately chose to take the ‘chaos’ route. I did this because I knew that the possible answers to my research question might emerge from any of several parts of teacher practice, and each of these parts
of teacher practice might be best understood with different methods of data collection. I also understood that the answers to my research question might be complex, and that at the outset of the study almost all the answers to my research questions were unknown to me.

I knew that the answers to my research question might emerge from any aspect of teacher practice and that they were likely to be complex and ‘unknown’ to me because of my prior Masters’ study which also involved the theory of Critical Being (see Blakey 2011; 2014). In this study, I found that knowledge sources about both theory and teacher practice were diverse. For example, I knew that knowledge about theory or practice might emerge from a teacher’s reflection on their own practice, from reflection in the action of practice (see Schön, 1987) or from the discussion of practice with a critical peer. I had little idea which method would reveal what it was I wanted to understand, so I had to cover many possibilities with my choice of methods.

My justification for using a ‘chaotic’ collection of methods is further supported by the emergence from data of several ‘smaller’ research questions, all related to the overall, and very broad, research question. If I had not used particular methods, these questions might not have emerged, or been answered, as clearly. For example, one teacher explained to me in their interview that they experienced several challenges in effectively cultivating the thinking of the medical students that they taught. As a result of this discovery, I was then able take this knowledge to a research group meeting and ask the other teachers how they might understand and overcome these challenges; to ask the ‘smaller’ research question that had now become clear: ‘How might a medical teacher better cultivate medical student thinking?’ This question was eventually answered by virtue of data collected from further methods still: from watching a teacher in practice, from comments that this teacher made about their practice in the group meetings, from ideas that the teachers wrote about in their reflective journals and discussions about the teaching practice in which teachers discussed and evaluated what they had done.

As well as deliberately choosing a ‘chaotic’ combination of methods for this study, there are many methods that I specifically chose not to use for this research. I made these decisions because I believed that certain methods would not allow me to gather data likely to offer a deep enough understanding of phenomena. While I cannot give a full explanation of why I did not use every other method available to me, I, offer some examples of methods I chose not to use, to help the reader understand my reasoning.
One example of a method that I did not select to use in this case is a fully structured interview method when I talked to each teacher individually. I declined to use this method as I needed teacher participants to be able to think about, develop and express ideas about practice that were extremely likely to be unknown to me. As these ideas were likely to be unknown to me, I would be unlikely to be able to frame pre-chosen questions around such an idea to use in an interview. At the same time, to use a more firm structure for an interview, with more specific questions, would likely yield data that were limited simply due of the absence of sufficient opportunity to describe and develop ideas (and therefore the data that I collected about them) further.

Another example of a method which I did not use in the current study was to one which would entail me simply introducing the teacher participants to a specific teaching method that I had developed myself at the outset of the research. For example, I might have introduced teacher participants to the classroom exercise I had already developed as part of my own practice, called ‘The Good Doctor’ (see Chapter 5 for detailed explanation of what this exercise entailed). Introduction of a specific exercise to practice and its testing through that practice is a common way to use action research (see Herr & Anderson, 2010) but I chose not to do this. I chose instead to allow all participants to think about, develop ideas about what might work in their own practice, and to raise my own ideas only when they seemed relevant to these. As a result, the method that I actually chose (to have research meetings with a sparse agenda and to bring ideas suggested by participants) meant that I was able to gather ideas for practice from sources other than simply my own, to hear about more ideas for teaching better, and, importantly, test each idea by discussion before we all tried it for ourselves.

The more specific questions that were raised, and answered as a result of this research, form the basis for the three results and analysis chapters (Chapters 5, 6 and 7). In these, I describe how teachers in this study explained and solved challenges that arose in their teaching practice.’
STAGES OF RESEARCH IN DETAIL

I now describe the stages of the study in more detail, together with methodological influences on their selection.

Initial stages

Participant recruitment and selection: who were my participants?

I had several criteria for participant selection. In the main, I needed teachers who aimed to cultivate critical thinking in their students. I thought teachers who had critical thinking as one aim of their teaching, whichever conceptions they might have had about it, would be likely to want to learn about the theory of Critical Being, willing to apply it to their practice and thus allow me to gather data on those practices. I also needed teacher participants who could access resources that allowed for them to more easily cultivate critical thinking (e.g. access to smaller student groups with time dedicated to cultivating student thinking). Such access was needed to ensure teachers had ample chance to develop and test ideas about teaching with the theory in practice over the research period.

In aiming for an enthusiastic, committed and relatively well supported group, the research inevitably had to forego opportunities that engaging with other groups of teachers might have offered. For example, to recruit participants less keen on, or resistant to cultivating student thinking could have yielded interesting data, as could teachers who wished to develop thinking but had less opportunity to do so, such as those who worked with larger groups of students. However, I also understood that the teachers who were resistant to cultivating thinking might have been harder to recruit, on the basis that such teachers might be less likely to willingly participate in staff development, as I had framed my advert for the research, or to give their time to research about cultivating thinking.

However, data did contain issues information that related to non-compliance with what I wanted to do. For example, some aspects of the theory of Critical Being were strongly challenged. The teacher participant group, as did the student groups, also did not universally function well. In other words, there were problems and challenges that arose around learning. That this happened made sense because any group that gathers together, even with a unifying purpose, is not guaranteed to be a functional one, either at the outset or as a result of the potentially complex group dynamics that might develop. Luckily, the teacher group was able to use such challenges productively and these challenges offered useful data about how these
teachers managed each challenge. In essence, I was able to eliminate some distractions to my main question and I was glad to be able to observe the effects of, and develop the theory, under the most propitious conditions I thought possible. I reserve ideas about less compliant teachers or how the theory might be taught with a larger student group for future research.

I also needed to select participants who would have reasonable experience of, and proficiency in, small group work to enable them to cope with being both observed and DVD recorded. To approach and recruit teachers known to me with whom I had a pre-existing professional relationship was in order to aid access to naturalistic situations. I wanted to explore their knowledge and experiences of these situations via discussion (Kitzinger, 1995; Merriam, 1998) and I hoped that a pre-existing relationship (a good one!) would mean that participants would feel relaxed in my presence. I also needed naturalistic situations in which teachers might develop and use their own practices around the theory, rather than use practice exclusively prescribed by me. Teachers’ own ideas are an important part of this action research project.

‘Teacher participants in the current study were therefore partially purposively selected (see Kitzinger, 1995) from a specific group of teachers at one medical school. Further information about these participants (specifically worded to maintain their confidentiality) is as follows. I describe this in order that the reader gains a sense of ‘who the teachers were’. The importance of ‘who they were’ becomes more apparent in Chapter 7, the final results chapter in this thesis.

Teacher participants were employed as Professional Practice Fellows (PPFs) employed by the Faculty of Medicine or a related department (e.g. from Public Health). These positions involve teaching (only, no research requirement) on the medical program on three specific papers, each of which demands small group (about 10 students) teaching. A PPF is usually a person who holds a professional qualification to practice a branch of medicine or the allied health professions.

Some of the participants in this research also held positions as PPFs or Lecturers on other papers in the medical program or another program in the university. Some were engaged in various types of clinical practice at the time of the study, some were not; participants were variously qualified in the allied health professions and branches of medicine. The qualifications of the participants reflected this variation; all had achieved a degree which
enabled them to practice an allied health profession or medicine and some had completed further degrees (this information further guarded to maintain participant confidentiality).

The teaching experience of the participant group ranged between 5 years and several decades and included teaching in clinical practice (various professions), teaching medical students in the small group classroom, lecturing, and teaching trainee health professionals in the community setting. Clinical and teaching experience was also not universally limited to New Zealand but all participants had worked in another country’.

While PD was not a major element of my research question, I framed the research as a professional development opportunity so that if participants agreed to take part, they would more likely be self-reflective, keen to learn and develop their practice, interested in the research and happy about its ongoing time commitment. My aim was to teach the participants ‘my’ theory, but at the same time allow participants to refine its definition. Processes by which these both took place became some of my research outcomes.

All teachers employed on these papers were emailed an advert, see Appendix B, the research proposal as a guide to the study, and allowed a reasonable time to consider participation and whether to respond to me.

In the research proposal I advised teachers that the study would take the form of a professional development activity over one academic year, that I would also require a group of students, to be willing to be DVD recorded as part of the study, that I would request to observe teachers in classroom practice twice over the year, and ask teachers to keep a reflective journal about their teaching practice over that time.

I recruited five teachers into the current study. I had initially considered three to be an adequate number in terms of the amount of data that would be yielded. This calculation was based on a number which would allow me to observe contrasts and similarities between teacher practices, allow for discussion in our small group and for teachers to learn from one another and hone their ideas. However, of the initial three teachers who were keen to take part in the study, some had doubts about being able to attend all meetings. Thus, I elected to include two more teachers than I had originally planned, with the view that the additional data I might collect from them would be a bonus. I also hoped that in the case of absences, most meetings would still be well attended with a quorum of three teacher researchers, plus
myself. Because I also worked on the early learning in medicine (ELM) programme as a medical teacher, all teachers in the study were known to me.

‘In summary, I approached and recruited teachers whom I thought likely to help me to answer my research question, who would possess particular knowledge about teaching for developing student thinking, and abilities and attitudes that would allow for this (see Kitzinger, 1995). As I also discuss further in the results and analysis chapters, teacher participants seemed to hold similar views to mine about teaching practice. For example, we all seemed to hold the view that professional development for teachers can be important to the quality of teaching, at times essential for good practice with a curriculum that is rapidly changing to include new things (e.g. educating for values). We all seemed to have similar ideas about teaching practice in the classroom, for example we all seemed to think that ‘teaching as telling’ might be of mostly limited value (see also Chapter 7). Participants in this study also seemed to value reflection as a way to learn about and improve their practice, but acknowledged that the effectiveness of their own reflection might also limited by how well they had learned this way of thinking (see how teachers tackled this problem in students in Chapter 5). Teacher participants also seemed to value learning through experience as a way to learn about medicine – that students need to ‘have experiences’ to learn about themselves, the object of study, and various aspects of practice (e.g. how they might feel about undertaking a clinical procedure, how they might understand a disease, or how they might apply their knowledge of anatomy in practice).

Consent process and ethical considerations
Teachers and students in the study completed a staged consent process (see Appendix B) before they became participants in this research. Teachers who were keen to take part initially responded by email to my advert, and I entered into conversations (in person and by email) with each about the study’s purpose, its theoretical basis and the logistics of methods I planned to use. Teachers became participants by signing their consent forms, one for general data collection, the other for entry into their classrooms for observations and interpersonal process recall (IPR) and began their participation in interviews and group introduction to the theory just prior to the academic year.

Students in the study were selected by virtue of their teacher’s participation in it and all students also completed a consent form prior to data collection. Data gathered from students
was part of the DVD recording and proxy reports of their comments at other times. Consent for a student entailed a teacher participant making information sheets (see Appendix B) available to all the students in the class, answering any questions and seeking verbal consent a week prior to planned data collection and meeting me. Thus, immediately prior to data collection, I checked all potential study participants had received an information sheet, answered any further questions about the research and finally checked whether they wished to formally consent, and completed their consent forms.

With this part of the consent process, I sensed it might be possible for students to feel coerced to take part in the research. I felt this coercion might be because they understood teachers had already committed to the project which was well under way. For this reason, I felt it exceptionally important to ensure students had opportunity to easily decline participation. To tackle the potential for coercion, I also made it explicit to students that they might change their mind about consent after I had collected data from recording the class; I did this by checking after the recording that the students were happy for me to use the specific data that I had collected in it, for example to use the exact conversations that had occurred in class at that time.

At all stages of the study, teachers and students were offered opportunity to decline participation and I was available in person, phone or by email to answer questions.

I also added the following more detailed considerations to the process by which I sought consent:

During each teacher’s interview (see next section) I reiterated several times that the interview would involve an open-ended exploratory method and that questions I would ask might be led by both teachers’ and researcher’s descriptions and experience. I also reiterated to each teacher participant that they could leave any question unanswered, or I could remove anything from data as requested (e.g. a teacher’ comments about an employer).

I also reiterated to teacher participants that there was no pressure to participate in any aspect of the study, e.g. if workload began to preclude it. This item was also stipulated by the Convenors of the programme at the outset of the study, due to their concerns about teacher workload. This only happened once; one participant indicated that they would be unavailable for data collection, such as observations, at the outset.
Confidentiality

Confidentiality for research participants was maintained by the following means:

- hard data (DVDs, paper transcripts, consent forms, paper analyses and field notes) were kept in a locked filing cabinet at the Higher Education Development Centre at the University of Otago
- digital data (audio recordings, electronic transcripts and data analyses) were kept in a password protected computer
- data analysis documents did not refer to teachers or students by name but in quotes, descriptions, results and analyses chapters, and papers referred to all participants by pseudonym (Jane/researcher, Frances, Lance, Elizabeth, John, Eleanor) and in paper or thesis text, pseudonym plus the source of the data or quote that I use
- if I deemed participant’s comments to be potentially threatening to their confidentiality or sensitive in another sense (e.g. if they made adverse comments about a colleague which they did not want to be public knowledge) I sought advice by email from them about whether to include that particular information in the data analysis. On occasion, I removed portions of data following such discussions. I did this by deleting the text in the NViVo© program or making a note in my personal notes as appropriate. For consistency I also actively monitored data as I collected it for cases where I might reveal something sensitive
- I also offered teacher participants the chance to review their interview transcripts in detail, to seek their approval.
Stages of specific data collection in detail
As I have indicated with my time line (fig. 2), I gathered data in the form of comments made by teachers about their practice, recordings of their practice (and so on) over a full academic year. Ideas about teaching thus emerged over this time, and were at times fragmented. For example, a teacher might have talked about a challenge in how to cultivate student thinking early in the study in their individual interview; all teachers might then have discussed this challenge at a later date at a group meeting and suggested ideas about how to address the challenge; one teacher might have then proposed a solution to the challenged and ideas about how to approach it as part of their practice in the classroom. That solution to the challenge may then been implemented in the classroom, and teachers would then evaluate how well the solution worked. Teachers, and I, would then be able to make conclusions based on this evaluation when it was discussed at the next meeting. My analysis therefore entailed drawing together related ideas, at times from diverse sources, to produce a conclusion. Thus, I drew my conclusions from information gained through the whole process of inquiry, rather than one specific event or comment.

1. Teacher interview
After consent, the five individual, audio recorded teacher interviews took place prior to the beginning of the academic year (January to February) at participants’ convenience. I began the interview with a brief recap of the study purpose and a description of the open-ended nature of questioning. I checked consent was still given for this stage of the research and sought participants’ questions about interview and study purpose. I then opened the interview proper with a broad enquiry about teachers’ beliefs about what critical thinking might be, their teaching experiences and then moved on to more specific questions about their experiences when aiming to cultivate student thinking. For example:

- ‘Can you tell me what you think critical thinking entails?’
- ‘Can you tell me about your experiences teaching, in this programme and before that?’
- And then questions such as ‘how do you think students learn to think reflectively?’ if reflective thinking was mentioned by the participant.
The purpose of these questions was to establish teachers’ initial understanding of critical thinking, how they hope to teach critical thinking with their current practices and what their experiences of using these practices had been. I then developed discussion around these ideas to also include ideas such as how teachers might solve any problem that challenged their attempts to develop students’ thinking. Interviews lasted approximately one hour, or less.

I chose to use an open ended questioning technique because it allows answers to be elicited and pursued, lateral topics to be drawn on and to develop discussion around both respondents’ and researchers’ ideas (as described by Merriam, 1998; Holstein & Gubrium, 2004). In this case, this method was also a good match with my choice of action research. This is because this method lends itself to obtaining information about ideas from participants and researcher and as such to obtain ideas that are new to the researcher. These ideas can then be developed further and be brought into later discussions, for example in the monthly meetings.

2. **Teacher Development Resources**: booklet given to teacher participants by the researcher, which is included in Appendix A.

While this document is not data in the sense of information from participants, I describe the teacher development resources here because I did gather a small amount of information about teachers as a result of using these resources. For example, I gathered data about how a teacher might learn from me in my role as developer during this research (see Chapter 5 for further detail about one way I did this.)

A week prior to group discussions commencing, I gave all 5 teacher participants the hard copy ‘Teacher Resources’. The purpose of this document was to introduce teachers to the theory of Critical Being and allow them to think about it before the first group meeting. The book also contained sections about methods and purposes of the study, its origins in the work of Barnett, 1997, and examples from my Masters’ research from which I developed the theory of Critical Being. I included blank spaces in the document for teachers to write their own ideas or to note a query about what I had written. I also included a three-minute reflection exercise that we undertook in the first group meeting.

My reasoning for choosing to write about the theory of Critical Being and also to talk about it with the teacher participants is various. I wanted teachers to think about the theory of Critical Being before our first meetings so their understanding and ideas about it had already begun to
develop; I didn’t want to ‘teach’ it to them. I chose to do this because my understanding of how a teacher might learn was by active methods (e.g. reading about it themselves) rather than passive, such as ‘being told’. I was also unsure whether reading about a theory would universally be the preferred method of each teacher; I understood that various methods of development can be taken up variously by staff depending on their preferences (as also described by Webb, 2012). Thus I chose to combine documents with discussion in the hope that most teachers would find either engaging or useful.

In terms of how I presented the theory of Critical Being in the resources, I was somewhat reliant on my personal teaching philosophy to inform design and overall structure; I aimed to offer teachers information without overwhelming them. I also presented the Teacher Development Resources as a hard bound paper copy, as I reasoned that paper copy is accessible, allowed teachers to take notes and to bring ideas to subsequent meetings. Overall, I was informed by my understanding of what it is to teach critical being that I developed in my Masters’ thesis.

I also included in the resources a short exercise on reflective thinking, which I did for two reasons. First, I needed to check participants understood reflective practice that I hoped they would use for their journal entries. I did this despite some of the teachers having taught reflective practice to others; reflective thinking is part of the remit of the papers which these teachers taught. However, I had no guarantee that they had formally undertaken such thinking themselves. Underlying my ‘double-check’ were experiences with some teachers who ‘preach but don’t practise’ reflective practice. Second, I needed to check that the teacher in the study had a full understanding of what reflective thinking might entail. For example, I have experiences of some teachers and students who understand reflective thinking to be about making comments about other people or things, rather than thinking also about themselves, or that reflective thinking should usually contain some thinking about our own emotion. The exercise thus took the form of a quick ‘refresher’ that allowed me to check teachers would be as effective as possible in their reflective journaling.

### 3. Reflective journals

Prior to the first meeting, I gave teacher participants a hardbound book in which to keep a reflective journal over the year about their practice. I left it up to them how much they wrote, when they wrote it and whether they did so at all. I encouraged the teachers to bring the books to monthly sessions (see below) to aid discussions.
The purpose of the reflective journal was to:

- Provide a space for individual reflection on teaching practice
- Offer an opportunity to work through issues arising
- Provide a place to record these thoughts.

(see Boud, 2001).

In particular, the reflective journals provided teachers in the study a means to record their ideas. Teachers could then bring the journal to monthly meetings to use as a source of discussion as well as to provide me with data for the study.

My reasoning for being less than prescriptive about how teachers used the journal has its origins both in my personal experience and was supported by some of the literature. I’ve met staff and students for whom journaling is simply ‘not their cup of tea’. If this was the case with my participants I did not want to inhibit their reflections by putting pressure on them; such participants might undertake such thinking less formally. Journaling can indeed preclude rather than encourage reflection for some, especially if they have a perception that the document in which they record their thinking might be scrutinised; reflective writing is profoundly shaped by our perception of the audience and for some audiences we change the content of our writing, and what we think about significantly (Boud, 2001). Because of such a possibility, I took steps to reassure teacher participants that their reflective journal would provide data for the study rather than be scrutinised by me in a different way. I also hoped that to allow teachers a choice about how, or whether they might use the journal might also avoid a teacher feeling they needed to withhold from recording their thoughts in it; that a sense of choice would indicate my lack of scrutiny, perhaps. For this reason I also indicated to the teacher participants that if by the end of the year they wished to keep the journal private, they may also do so (none did).

Data from reflective journals was in the form of written notes in teachers’ books. Books were returned to me after our final monthly meeting. I kept journals in hard copy (i.e. not scanned/entered into NViVo) to preserve the context of comments as part of a larger text in which teachers developed their practice. More specifically, data from these sources took the form of teachers’ reflections on their teaching, interactions with their students, interactions with other participants inside and outside the methods used as part of the research methods,
including interactions with me. There were also some comments about general employment issues and reflections on teachers’ past students and experiences of teaching.

4. Initial meetings about the theory of Critical Being
A week after giving the teachers the teacher development resources, I held two hour-long group meetings, a week apart. The purpose of these meetings was to allow teacher participants to discuss the theory of Critical Being that, up to this point, they had only read about, develop a sense of rapport and to begin to work together as a cohesive group.

I used two one-hour sessions to introduce the theory of Critical Being because I thought this format would:

- minimise disruption for busy teachers and their other work as health professionals because the maximum time available for many teachers to meet was limited
- provide a reasonable length of meeting that might allow focus to be maintained
- allow thinking and reflection about the theory of Critical Being, and how it might be taught, between each session.

5. Monthly discussions
After these initial meetings, teacher participants met monthly throughout the study period, which spanned one academic year (total nine meetings – one month was a holiday).

The purpose of monthly meetings was to:

- offer a dedicated space for teachers to bring ideas and problems about practice
- reflect on ideas about how to teach for Critical Being and about the theory of Critical Being itself, to discuss, seek advice from other group members
- discuss the theory of Critical Being in relation to practice
- offer the researcher a chance to seek ideas to refine the theory of Critical Being
- provide data over time in relation to the theory of Critical Being and how to best teach it, for example, so that I could track the development of a teaching method over the year.

Monthly meetings with the teacher research participants had a sparse formal agenda, like the interviews, which allowed topics to be brought and developed by participants and researcher.
After the first meeting I realised how rich the data set was going to be, as we had already discussed a vast amount of ideas about teaching and about the theory of Critical Being. For this reason, I chose to listen to the audio tape of each meeting, summarise it (into approximately one A4 sheet) and email this document to participants after each monthly meeting. My rationale in doing this was that I didn’t want to be the only ‘holder’ of data; if participants wanted to clarify and revisit ideas, summaries offered them an opportunity to aid their memory without compromising data security (I didn’t want to send Mp3 by email, for example). Thus, I chose to use an emailed document upon which I ensured that no names or revealing details were included. I also checked with each participant by email whether such a format would be acceptable, useful, and not compromise their confidentiality.

6. Teacher observations
In March and April of the 2013 academic year, I observed each teacher participant working in a naturalistic situation (two hour tutorial, ten students). I repeated this observation again approximately six months later (August/Sept 2013). The purpose of observation was to offer opportunities for:

- a different perspective on each teacher’s practice, to triangulate or compare with other sources used in the data analysis
- teacher participants to have a source of information about their teaching and another viewpoint on it
- a teacher to be offered opportunity to reflect on their teaching and/or inform their reflective journaling
- group members to make inquiries about how each teacher might have felt about their teaching practice
- a sense of change over time, by comparison of practice between two observations
- gathering data about ideas teachers had developed around teaching with the theory of Critical Being.

When I observed each teacher’s practice, I introduced myself to their students, checked the teacher still gave consent and that everyone was aware of the purpose for my visit, and simply sat quietly in the corner of the room, making notes and facing away from the group and teacher. I sat this way so that I didn’t distract students or become tempted to join in a
fruity discussion. After the observation had finished, I met in a private space with each teacher and we discussed what I had seen. The role of observer-peer rather than ‘reviewer’ allowed me to both offer the teacher information and invite feedback on the information; it was important to gain information from the teacher. This was because my information may have been incomplete (see Chapter 6 for one way that a teacher – Lance – added important information about one phenomenon that I had seen in his class). At times I had also misinterpreted the teacher’s intention or missed a vital nuance of the group dynamic, for example, I did not know that one student was notoriously outspoken, so had been left out of the question session the one time that I observed. I recorded these conversations by audiotape which was transcribed verbatim; data were thus a two-person discussion about teaching practice.

I found that to discuss an observation of a teacher’s practice was easier with a teacher-teacher relationship founded on a peer relationship rather that one in which one might make a judgment about the methods used by another. This relationship also allowed discussion about teaching method that aligned with my epistemological stance: conversation between teacher and researcher about teaching and as a result, the co-construction of new knowledge. Action research aims to solve a problem over time, thus it would also be incongruent to operate from a stance that I ‘knew’ the ways to teach with the theory of Critical Being.

Again, I realised that data were going to be complex and extensive. For this reason, I used the broad schema of the theory of Critical Being to frame my observation notes; I took notes about what teachers did under each heading. See Chapter 4 for further explanation of what each of these headings mean:

- Criticality
- Critical action
- Critical being

As well as making for tidier note-keeping, I found I could slot most teaching practices nicely into this framework. For example, I could write about how teachers aimed to cultivate student thinking under the heading ‘criticality’. I was then able to report and discuss with the teacher what I had observed with some sense of structure to the conversation. I sent a summary of these notes to the teachers by email, for their information and reflection. Again, my thinking behind this practice was that I didn’t want to be the only ‘holder of information’ from the
study so a teacher might usefully use it to further hone their practice or think about the theory of Critical Being.

7. DVD recording
Teachers and their chosen and consented group were recorded onto DVD in a naturalistic situation lasting approximately two hours. The researcher was not present for the recording.

DVD recording had the following functions:

- to stimulate discussion with the teachers during the interpersonal process recall IPR sessions
- to gather data about what teaching for critical action might mean in a group situation
- to gather information about teacher practices to compare and triangulate with data obtained by other methods
- to gather data about body language, inflection and non-verbal communication of the teachers in the study that can only be recorded by personal observation.

Following the DVD taping process, I retrieved raw data in the form of a DVD which I showed the teacher for the Interpersonal Process Recall (IPR) commentary (see below) at a later date with the purpose of gathering the participant’s comments about their teaching practice.

8. Interpersonal Process Recall (IPR)
IPR involves playing a pre-recorded DVD of a study participant (e.g. teaching a class) to them and encouraging them to comment on and discuss what they see, with a researcher. These comments are then recorded on audiotape. Data are thus in the form of original DVD, audiotape and its verbatim transcription.

In the case of this research I had three viable DVD recordings\(^\text{10}\) (1.5 - 2 hours each); one of each of three teacher participants teaching their student groups. I offered an IPR session to each teacher at a convenient time for them within a week of the original recording. Participants were encouraged to watch the DVD and stop it at any point of interest. ‘Interesting points’ were various; for example what they or I thought was teaching that could

\(^{10}\) One teacher out of five was not available for DVD recording, and one recording repeatedly failed.
be categorised as a dimensions of the framing theory of Critical Being; if a teacher was doing something new, challenging; or using a practice that worked particularly well; or didn’t seem to do what they had said they had intended to do. The teacher and I would stop the DVD and discuss the purpose of the teaching practice observed and also what the teacher was thinking or feeling at the time. Discussions were recorded on audiotape and for each time we stopped the tape, once discussion seemed exhausted, we resumed watching the DVD. Thus, the final transcript from each IPR contains sound from both original DVD and our discussions about it.

I began each IPR session with an example of how we might stop the DVD and discuss what we saw or heard on it; participants seemed to understand this process easily. As just a few minutes of DVD might mean many more minutes in discussion, in two cases I split the recording sessions into two parts over two days, to help the teacher’s focus.

IPR was chosen for the current study as it offers participants insights into experiences that are more difficult with other methods. In particular, IPR offers:

- insight into interpersonal interactions between teacher and student as well as
- a process of making a teacher’s thoughts about teaching explicit
- opportunity for researcher and participant to then discuss and gain insight into the participant’s underlying or tacit thought and feeling
- opportunity to learn about a participant’s thoughts and to learn from them
- time and opportunity to reflect on experiences not usually available in the moment itself
- the benefit of hindsight
- the construction of knowledge by reflective dialogue
- a critical process, for example to distinguish what did or didn’t work in teaching


9. Field notes
I wrote confidential field notes throughout the study in addition to my reflective journal. These notes were about thoughts that came to mind about the theory of Critical Being, about interactions with the participants in the research and about my own practice as a teacher. I
kept these notes in a small notebook which I carried around for the year of research and the data analysis phase. The purpose of these notes was to record my thinking at times that I wasn’t at my desk, in particular to aid construction of recurrent themes from the data, about which I began to think. I also made notes during interviews about things I wanted to go back to talk about), teacher observations (I used the theoretical dimensions as headings under which to note teacher’s teaching methods) and notes of interest to return to in the IPR if a teacher did not point them out themselves. I also kept ongoing notes about how to better define the theory of Critical Being.

10. Researcher availability to participants during study period
I was available to teacher participants by email and phone for the duration of the study. My contact details were also made available to every student who participated in the study via the consent form for students. There was no contact from students during the study period.

For teacher participants, my availability was a natural progression of our prior working relationship, however, after the study had begun I found that we discussed many interesting thoughts and ideas outside of more formal data collection methods. We found ourselves communicating by email and informal conversations. In each case, if I used such data, I sought and was granted explicit permission by the person concerned. In the thesis, I use such data mainly in the form of quotes in the text and to inform descriptions of teaching practices.

Quality of data collection
As described above, I gathered multiple forms of data about teacher practice, interactions between teachers and myself and about my own teacher practice. To summarise, these took the form of interview and observation recording transcripts, IPR transcripts, DVDs, field notes, reflective journals and emails.

As I have discussed, I designed methods and planned data collection to capture the action research process. However I also did this to allow confidence in my analysis of ideas that were sometimes complex and/or difficult to understand. I also understood that I needed enough ‘spaces’ to allow ideas to emerge. I hoped to gain rich and vivid descriptions from these various viewpoints and spaces. I also needed to design a strategy that allowed new or different ideas to be discovered, analysed and developed (as described by Lincoln & Guba, 1985; Merriam, 1998; Bowen, 2005).
Data verification
I compared all transcripts with audio recordings and edited them as necessary to ensure their accuracy. I had verbally offered teacher participants copies of any of their own (or group) transcripts and also asked if they would like to review these. I asked this in case participants were worried about anything they said being misconstrued, or that they had revealed a strong opinion (e.g. about employment issues). One requested a copy of their interview transcript but returned no further comment on it.

In the case of emails I wished to include in the thesis, I showed participants which words I was interested in including, checked with the participant that I had interpreted their meaning correctly and obtained written email consent for their use.

The supervisory team and I discussed themes that I developed from the data at length during the data collection phase, analysis and write up. My primary supervisor provided particular assistance at the level of final categorisation and organisation of themes. For example, this supervisor provided guidance about what order I should discuss the themes, for the thesis. I also discussed my data at length with the other members of my supervisory team who provided me with guidance around terminology and data interpretation.

Data analysis
As I briefly describe above, interview data, IPR recordings, monthly meeting recordings and the first set of observations were transcribed verbatim (20 manuscripts in total). Together with four reflective journals and emails from teacher participants and my field notes, all manuscripts were analysed using an inductive method (see Thomas, 2006).

An inductive method is a method which aims to create themes from ideas that become apparent when reading or watching data (here, as I have already described, I more specifically found that problems about teaching and learning emerged, as did potential solutions to these problems). These themes are created and developed in order to describe data and communicate to the reader what has been deduced. Themes which I use to describe data were developed throughout the action research period and the writing of this thesis. In line with a constructivist epistemology, the methodology is inductive and emergent (as also described by Conrad, 1982; Carter & Little, 2007); I sought answers to my research questions with little idea of what data might elicit. For example, in data I was able to identify that a teacher was experiencing an emotion about their students. Over time, teachers and I talked more about this emotion and after discussion in a monthly meeting, we identified that the
emotion was precluding the teacher from making sound decisions about how to teach. We were then able to identify that talking about the emotion helped a teacher make decisions and that to do this, the teacher had sought help from me as a peer. Together, these observations about data began to form one theme which I describe in Chapter 6, which I have also described under the heading ‘critical action’ which I take from the theory that frames this thesis.

The data handling program NViVo (©) was used to store transcripts and data from email and also as tool to search for words and phrases in data. I also used this program to record my themes as they developed.

The reflective journals written by teacher participants were kept outside of my electronic data files and I reviewed them by the use of highlighter pen and taking notes in the margins of the documents. I made notes about things teachers had written that seemed to fit under the framework of the framing theory, and also teaching practices that seemed to work well or not so well. DVDs remained in that format.

Over time, the themes (‘problems’ about teaching practice) emerging from data (the spoken word, what teachers did etc.) were reduced in number by identifying similarities and relationships between them, mainly by familiarity with the data and consultation with my supervisory team. For example, I identified that a teacher in the study used repetition of topic as well as repetition of thinking process to better develop a student’s ‘habit’ of thinking in a particular way or about a particular topic. Thus, I was able to draw these two ideas together as they were both about ‘repetition’. I was also able to begin to group problems (e.g. what to do about teaching and emotion) under the three parts of the framing work (criticality, critical action and critical being). For example, I was able to identify that how a teacher managed their own emotion, and that of their students, would fit under the ‘critical action’ theme. This was because these were both about critical decisions that a teacher made, and about how they acted.

As I wrote about problems that the teachers had, I returned to consider original data multiple times. To do so meant I began to better understand what these problems were about, and what teachers did about them, and represent these clearly (some, e.g. Thomas, 2006, when talking about themes in data, call this process one of reaching higher levels of abstraction, i.e. finding effective ways to represent or communicate possibly complex ideas). I could also modify or
confirm a theme depending on how it compared with the raw data. These processes were important because I wish to communicate my findings as clearly as possible, contribute to the understanding of the field of medical teaching and to support a teacher to enhance their practice.

I also analysed the DVD footage (in addition to getting each participant to comment on their DVD recording) in particular cases:

- in cases I needed to triangulate, elaborate or substantiate themes developed from the transcripts. For example, if I was not quite sure what a teacher meant when they discussed their teaching as part of their IPR, I would check the part of the DVD that they were referring to, and see if I could find additional information that would illustrate what they meant

- to provide information on body language, non-verbal clues and inflection not available on the audio tapes or transcripts, between teacher and student, and student-student.

**Participant pseudonyms and how data are represented**

In the thesis proper, I present data by the use of quotes and also indicate the data source (IPR, interview etc.) and by pseudonym (Frances, Lance, Elizabeth, John, Eleanor). Where contributions are made by me, in my role as participant-researcher, I refer to Jane/researcher. Where relevant, I indicate a student’s comments with the use of their teachers’ pseudonym and differentiate between each student when necessary also by pseudonym.

An important note at this point is about how I represent some of the data collected during this research in this thesis. As I have described, I present quotes from each teacher participant by pseudonym. A great many of the quotes that I use are from Lance and Jane. This is because Lance was one of the most eloquent of the teacher participants and was also particularly taken by the idea of personal journaling and chatting to me by email after our meetings. In his writing, Lance was therefore able to make conclusions based on what others had said; a lot of data from Lance ‘summed up’ the thinking of the wider group of teacher participants.

Similarly, I (as Jane) was also in a capacity to ‘sum things up’ as part of writing my own journal, which I continued to write after the official research period was over; I was still making conclusions and refining them for some time after the group had finished meeting. Because Lance and I often summed up the thinking of the other teachers, who were in
agreement (e.g. about a way of teaching better) all the ‘voices’ of teacher participants are represented in the thesis. In particular, voices of all participants are represented as part of the Socratic Questioning that I use to describe developments to the theory of Critical Being in Chapter 4. Because conversations between teacher participants about this theory were very complex (e.g. involved 6 people talking at once), I chose this method to communicate the developments we all made to the theory clearly to the reader and to represent the consensus reached by us in discussion.

**Issues arising with data collection during the study**
The most significant issue in this research was that one participant taught their students at the same time as I. As this teacher was also the one who expressed concerns about their high workload, in discussion we agreed that this teacher would not contribute to data collection by observation or IPR.

There were some minor equipment issues which meant that one DVD intended for use in the IPR failed. A different failure occurred when this DVD was redone. Given that having one’s class recorded can be a stressful experience for the teacher, I elected to not repeat the process.

The overall effect of the study on participants (especially teachers, with whom I had to develop long-term relationships) seemed to be positive which reassured me as to the quality of the data. The study in general, and the influence of all participants and their practice, also vastly enhanced my own learning and teaching practice.

**Limitations of study**
The validity or reliability of results from a study of this kind might be limited by any number of factors. In the case of the current research, I felt the most significant of these to be the possibility of researcher bias. I have already talked in detail about this; I felt this limitation was because I was not simply an observer of phenomena I studied, but a contributor and a part of them. I took several steps to reduce the possibility that my participation in phenomena would ‘damage’ what it was that I was trying to report. For example, it would be possible for me to only suggest my own ideas about teaching with the theory of Critical Being and not engage with the ideas of the other teachers.

First, I used my supervisors in the capacity of ‘critical friends’ on a four weekly basis. By ‘critical friend’, I mean I brought my reflective journal and any recent data analysis to the supervisory group, and we discussed these together. We did this to clarify ideas I had
misconstrued, mishandled or just plain missed. To do so was most useful in terms of critical interpretation of the group’s socio-cultural interactions and to identify problematic issues in my own behaviour of which I was unaware. For example, I was able to discuss my feelings of discomfort when I first brought the theory of Critical Being to the participant group for discussion. My supervisors pointed out to me that as a result of my discomfort, I was in danger of failing to consider ideas about the theory definition that participants suggested. To become aware of this danger meant that I could acknowledge it and work hard to overcome it and reduce possible bias in the data. I had also missed some clues about student emotion that were explained by a teacher in some email conversations with me. As a result of discussion with my supervisory critical friends, I was able to identify exactly what emotion these students seemed to express, and to more accurately identify what their teachers did as a result of these emotions (see Chapter 6).

I also ensured that I brought any idea I had during the project to the teacher participant group, as part of our monthly meetings. At times, such conclusions formed the loose agenda of these meetings and as a result of these discussions, I feel that ideas were tested and refined in such a way that potential bias was minimised.

The second significant limitation of the current study that I needed to mitigate was about the theory of Critical Being itself. I felt the participants might be reluctant to critique the theory of Critical Being we used (for example, for fear of offence to myself). While participants had indicated they were willing to discuss teaching practice, and develop ideas about the theory of Critical Being, I wondered if participants might feel obliged to ‘say the right thing’. I also wondered if this reluctance might have been exacerbated by all teacher being known to me prior to the study. To counter such a limitation, I discussed the limitation with all participants at the beginning of the study in the first group meeting and I also mentioned the possibility of this limitation regularly in discussion when teachers discussed the theory of Critical Being. I believe that I took many steps to reassure participants that:

- they could not say the ‘wrong’ thing as data was about their own reflection on practice
- I would not judge anything that they said (IPRs and observations were used for discussion)
- their input was valuable
that I was to learn from them and vice versa.

I also took steps to keep conversations with the teachers in the study collegial and be approachable as I would in any day-to-day relationship with a colleague. I think to ‘deformalise’ the research (and to offer cake) in this way helped ensure participants all felt on an equal, equitable footing. I understood such footing to be an important factor in allowing frank discussion (see Thomson, 2015) and later on in the analysis process I realised exactly how important this had been.

The third possible limitation to the current study is about how participants felt they appeared during observation, and DVD session. Some teachers expressed concerns that they looked ‘silly’, felt inhibited or practiced differently when observed. How we perceive data collection processes is important, because this perception can change what we might do. Thus, I took copious steps to ensure participants understood the purpose of data collection, which seemed to reassure them. I think this information was reassuring to teacher because they reported that they had begun to understand my purpose to be to gather information and not to critique their practice.

Following both observation and IPR, some participants expressed interest in these tools as part of a formal development process, which gave me confidence that they had relaxed during sessions and that these processes were useful to them. When I viewed the DVD, there were few indications of outward nervousness, which was also encouraging.

In general, I was also careful to structure the monthly meetings and meetings about teacher observations in such a way as I spent a lot of time out of the leadership position and let teachers examine and discuss both their own ideas and mine.

**Specific limitations of methods used**

With any approach to research there are specific potential limitations of the methods used. This is quite apart from limitations to the validity of data collected, the conclusions that are drawn about it and the use to which these are put. I feel that there are two main limitations to the overall method choices that I made.

First, I approached this research as a constructivist with the aim that teachers and I would construct ideas about the research question together, via methods that centred on discussion between members of the research group. With such a method, there is potential that the relationship between participants or between participants and researcher might fail to develop
sufficiently for such discussion to happen – or fail to happen to a degree that yields what it is I wanted to know. As a result, I would be left simply with my own ideas to report. While this issue might be better described as a difficulty to be taken into account, rather than a limitation of a particular method, I had to be aware of this difficulty and take steps to deal with it during the processes of the research. I did this in the main by working very hard on my relationship with the other research participants. For example, I was mindful to always be congenial, approachable and to outwardly respect all contributions that the teacher participants made to the research.

The other limitation that I believed might be an impediment to my goals, i.e. answering my research question and finding something interesting and useful for medical teachers to use in their practice, was simply the complexity of the methods and volume of data might have been preclusive to clear analysis. This was the main reason that I used nVivo (data analysis handling software) but also that I spent a substantial amount of the year of the research, and the following year, engaged in data analysis’. While I did experience a vast amount of ‘chaos’, it was this chaos itself that allowed my data, as a whole, to reveal the detail and nuance that I needed to understand some of the important phenomena about teaching practice.
SUMMARY of Methodology

For the current research I selected study methods that aligned with my ontological and epistemological beliefs, the overall purpose of the study and those that would negotiate possible logistical constraints. In other words, I selected methods that would allow study participants to develop ideas about how to teach for Critical Being and how to define it, as well as those that would also allow me to capture information about the specific phenomena that I was interested in. For example, I wanted to capture data about how a teacher might teach for Critical Being, but also about how the teacher and student might interact when they did so.

In the following chapters I describe my results from this study which are derived from data analysis. Where appropriate, describe data by reference to overarching abstracted themes (e.g. which were represented as problems about teaching practice) and against the framework of the theory of Critical Being. Themes (problems, and their solutions) are related to the main research question:

What are some ways that a teacher might teach for Critical Being?
Chapter Four

Theory of Critical Being

Description of most refined version of theory, presentation of the theory to teacher participants and the development and testing of theory of Critical Being prior to the current thesis,
INTRODUCTION

Overall, I intend this short Chapter to provide a link between the arguments I have stated for this thesis, my research question and the review I have made of the various appropriate literatures. At the same time I wish to more fully introduce the reader to the theory of Critical Being that frames this research and, if they would like, how the theory developed from the outset of my Masters’ research (Blakey, 2011) and as part of the current research. I need to offer the reader:

- specific detail about the version of the theory that frames the current 2015 thesis (and that will be further developed in subsequent research). These details can be read on their own without the other sections if the reader wishes. I also need to offer

- an idea of the version of the theory of Critical Being that I presented to, and taught my teacher participants at the outset of the study in 2013.

- an indication of the developments that were made to the definition of the theory of Critical Being as a result of the 2013 study. Specifically, these changes were made as a result of the teacher participants thinking about and discussing the theory in relation to their practice.

Because of the nature of these descriptions, in one way this chapter might be considered to be an addition to my Methodology chapter. This is because this chapter provides some additional detail and justification around what I did with the theory of Critical Being (e.g. presented it to teacher participants, analysed data against it, and developed the theory of Critical Being itself as part of the research). In another way, this chapter might also be considered in part a results and conclusions chapter, because in it I report developments to the theory of Critical Being made during both my 2011 research and the current study. However, for clarity I present these details about the theoretical framework of the thesis together in one chapter rather than including with other descriptions of conclusions that I make around teacher practice.

This chapter is divided into three segments that all relate to the theory of Critical Being. The first section is about the final version of the theory of Critical Being which I use to frame my thesis (2015). The second is about the theory of Critical Being in the form I presented it to teacher participants and the form it took after my Masters’ thesis (see also Blakey, 2011;
2014). The third section contains descriptions of developments that were made to the theory during the current research, in the form of Socratic questioning.

In this thesis and especially the current chapter I use certain terms that might be defined or understood in many different ways. While it would be possible to describe these definitions in more detail, consider objections, alternatives, detail and nuance, it is not possible to do this more fully here. Definitions I use fulfil the purpose of this thesis and I use terms thus:

**Thinking**  A conscious, spontaneous or deliberate act or process by which we might form ideas, beliefs or draw conclusions, which might also be called thoughts. Thinking can result in learning.

**Learning**  A process of coming to know, developing an understanding or skill, by being taught or through experience.

**Knowledge**  Facts or information that is retained and able to be recalled (remembered).

**Understanding**  A superior knowledge, allowing a functional personal interpretation of an idea or skill.
In summary, the theory of Critical Being was developed like so:

Barnett’s ideas of critical thinking, critical action and critical being (Barnett, 1997)

↓

Ideas applied and tested through Masters’ research (Blakey, 2011; 2014)

↓

Theory as presented to teacher participants (as the Barnettian Theory) 2013

↓

Theory developed by thinking about and discussion during 2013 study

↓

Emergence of refined version of Theory of Critical Being from current research (current thesis, 2015)

↓

Future research

Figure 3. Emergence of theory of Critical Being from research
I begin this chapter with a short abstract of the most refined version of the theory of Critical Being. In other words, I show the reader the version that frames the current thesis. This version might be read in isolation from the other two sections in this chapter if a reader so desires:

**Criticality**

*Criticality includes the following abilities: to think in many disciplined and undisciplined ways, about a wide range of things; to learn in many different ways and to use all of these to respond to context as one understands best and most appropriate. Criticality means also to aspire to learning to think in as many ways as possible but as context can preclude this, might also be an aspirational position. Criticality includes also the ability to be cognisant of our thinking and discipline our thinking as we see necessary.*

**Critical Action**

*Critical action is in response to conflicts of influences on our actions and is undertaken in response to that which is the most practically, ethically or morally constructive as possible. To do this can depend on one’s emotional intelligence and to respond in the ways that context might allow. As such, context might also constrain what we think is the best action and the outcome of our action can be uncertain. Critical action entails both what is done in a physical sense but also how it is done; what our actions might imply or communicate, to include our reactions to others. Critical action can influence our criticality and the criticality of others.*

**Critical Being**

*Critical being means trying to live one’s values fully but at times being limited by context in doing so. Critical being is also extending one’s criticality and critical action into all life contexts and to respond to these contexts as best possible, and may entail learning more about that context and re-evaluating values as appropriate.*

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*Figure 4. Theory of Critical Being, most refined version*
In brief, this chapter contains:

1. **DESCRIPTION** contains the current refined version of the Theory of Critical Being.

2. **FROM MASTERS’ RESEARCH TO TEACHER RESOURCES** This section is about the version of the theory of Critical Being that I developed prior to the current research (called the Barnettian Theory). This theory was, at the outset of this research, based on some of Barnett’s work, in particular his ideas that critical thinking has three components: critical thinking, critical action and critical being that he explained his 1997 work ‘Higher Education, a Critical Business.’ In this section I also describe the various developments I made to Barnett’s ideas as part of my Masters’ research. In order to avoid repetition in the text I describe these developments alongside how I presented the Theory to teacher participants for the purposes of the current research.

3. **TESTING** of theory of Critical Being contains various examples of how each Theory dimension (i.e. each part of the theory, such as critical action) was tested as part of the current project, as a function of the action research process. For example, as part of discussions between research participants, further analysis in the formal data analysis stages, and writing up this research. Testing thus took the form of questions and suggestions about the Theory from the research participants, emergent themes and ideas and also input about these from my supervisory team. Questions the research team (teacher participants, myself, and my supervisory team)\(^{11}\) asked each other about the theory of Critical Being were primarily based around practical experiences of using the theory in our teaching. These questions and our proposed answers allowed the opportunity to substantially refine the theory, although I acknowledge that the theory of Critical Being will be clarified and expanded further.

I include the various descriptions of the theory of Critical Being at each stage of its development for several reasons:

- the most current description of the theory of Critical Being as a resource for reader to refer to during the following analysis chapters
- to indicate the form of the theory that informed the research group’s initial practical applications of it \(^{12}\) at the outset of the research proper

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\(^{11}\) Permission to use these comments and discussions was expressly sought from each participant.

\(^{12}\) As well as personal beliefs about critical thinking, its pedagogy and related personal practices.
• to offer the reader specific examples of developments to the theory of Critical Being that were made as a result of the action research processes used in the current research

• overall, I wish to generally set the scene for my descriptions of results and findings of this research; in doing so I hope to further justify my research method and inform the reader of the degree of rigour offered by its processes.
1. CURRENT TENTATIVE DESCRIPTION OF THEORY OF CRITICAL BEING

Some significant changes were made to the theory of Critical Being as a result of the current research. For example, the descriptions of each dimension of the theory changed, and the interrelationship between each dimension also changed. There are thus notable differences between the theory which I report here (2015) and the examples of theory I gave teachers in the current study at the outset of the research (2013). For example, I gave teacher participants some written examples about how, for criticality, a student needs to learn in different ways, but in the current research the teachers made contributions to the theory that were instead about cultivating student thinking. Thus, a significant amount of the theory was refined, and its definition expanded.

As I summarise above, the method that I used to develop the current theory was to take the results from my Masters’ research, present them to teacher participants at the outset of the study (see Teacher Resources: Appendix A) and to allow teachers to think about and discuss the theory (e.g. its definition, its use in practice situations) over the period of the research. I then further developed ideas about the theory in my analysis of this data. For example, I analysed the discussions between teacher participants about dimensions of the theory. One particular example of such a discussion would be that the teacher participant questioned the existing definition of the theory, discussed alternatives to it, and suggested a replacement for part of the definition.

I now present the current tentative version of the theory that emerged from data and that frames this thesis (2015). I say ‘tentative’ as a way to acknowledge that the theory will be refined yet further subsequent to the current thesis.
**Dimension 1 Criticality – current description**

| Criticality | Criticality includes the following abilities: to think in many disciplined and undisciplined ways, about a wide range of things; to learn in many different ways and to use all of these to respond to context as one understands best and appropriate. Criticality means also to aspire to learning to think in as many ways as possible but as context can preclude this, might also be an aspirational position. Criticality includes also the ability to be cognisant of our thinking and discipline our thinking as we see necessary. |

**Table 1. Tenets of Criticality transposed into description**

**Tenet 1:** Criticality includes the ability to consciously think in many disciplined and undisciplined ways.

**Tenet 2:** Criticality includes the ability to think about a wide range of things.

**Tenet 3:** Criticality includes the ability to learn in many ways; in other words, criticality must contain the means to learn aspects of itself.

**Tenet 4:** Criticality includes being able to perceive, understand and respond to the context that one is in with appropriate thinking and appropriate ‘thinking about’ and if necessary, learning.

**Tenet 5:** Criticality means to aspire to as high a level of mastery of ways of thinking and learning as possible, and as much understanding as possible for each person but also that criticality can be an idealistic position; context can preclude thinking better.

**Tenet 6:** Criticality requires at least an initial cognisance of thinking in order to learn to think well, but also to be able to discipline one’s thinking when necessary.
Critical action is in response to conflicts of influences on our actions and is undertaken in response to that which is the most practically, ethically or morally constructive as possible. To do this can depend on one’s emotional intelligence as well as the capacity to respond in the ways that context might allow. As such, context might also constrain what we think is the best action and the outcome be uncertain. Critical action entails both what is done in a physical sense but also how it is done; what our actions might imply or communicate, to include our reactions to others. Critical action can influence our criticality and the criticality of others.

Table 2. Tenets of Critical action transposed into description

**Tenet 1**: A critical action requires conflicts of influences on action.

**Tenet 2**: A critical action is undertaken in response to the influence that would pursue the most practically, ethically or morally constructive outcome as possible.

**Tenet 3**: Critical action can depend on one’s emotional intelligence, and using this intelligence, and what one understands from it to inform decisions about what one does.

**Tenet 4**: Critical action needs to respond to, but can also be constrained by, context.

**Tenet 5**: In a context an action can be chosen for good reasons related to the context, but because the context is far from ideal, or complex, the outcome of the action may be uncertain or even unwanted.

**Tenet 6**: A critical action might entail considering what is done and how it is done: more than what it appears but also what else it might imply or communicate.

**Tenet 7**: Critical actions can also include our reactions and these also need to be with the best outcome in mind.

**Tenet 8**: Criticality can be dependent on critical action.
**Dimension 3 Critical being - current description**

| Critical being | Critical being means trying to live one’s values fully but at times being limited by context in doing so. Critical being is also extending one’s criticality and critical action into all life contexts and to respond to these contexts as best possible, and may entail learning more about that context and re-evaluating values as appropriate. |

**Table 3. Tenets of Critical Being transcribed into a description**

**Tenet 1**: Critical being means trying to live one’s values fully but this might at times be aspirational and limited by context.

**Tenet 2** Critical beings need to be able to extend criticality and critical action to all life contexts.

**Tenet 3**: Critical beings need to respond to context as much as possible, but must have the humility to learn more about that context and re-evaluate the values in question.
2. FROM MASTERS’ THESIS TO TEACHER RESOURCES

As I briefly described in my Methodology chapter, I gave teacher participants in the current research a hard copy of ‘Teacher Resources’, see Appendix A, prior to our first research meeting. These resources contained an introduction to the purpose of this research, its methods of data collection and a description of the theory of Critical Being. This section of Chapter 4 is about how the theory was then described, how, and why I presented the theory in the resources in the ways that I did.

I began the teacher resource document with a short introduction to Barnett’s 1997 work, *Higher Education: A Critical Business* which I hoped would offer teacher participants some insight into the work that informed my Masters’ thesis and initial theory, inform teachers’ reasoning for continued participation in the research and as a result help them to engage in the project.

However, as I find Barnett’s 1997 work theoretically complex, I felt concerned that this complexity might overwhelm or distract teachers in the study from the development of practical applications I primarily sought; that an attempt at ‘understanding’ the theory might, almost illogically, preclude ‘doing’ anything with it. For these reasons I chose to include simple quotes and brief descriptions from Barnett’s work only, accompanied by references for teachers to follow up if desired. For example, I used a simple quote to illustrate Barnett’s thinking about how a theory of critical thinking in higher education might best be applied to indicate why I had used his theory as a basis for my research:

> My thesis is that we should dispense with critical thinking as a core concept of higher education and replace it with the wider concept of critical being.


I then presented teacher participants with a short summary of what I had hoped to achieve with the research on which I based my Masters’ thesis. In short, I explained that I had wished to substantiate Barnett’s ideas by the pursuit of empirical evidence from practice situations and thus to develop a theory from them.

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13 I have stated a preference for ‘educator’ in the teacher resources text. At times in the teacher resource document I also use the term ‘teachers’ for research participants. I do this because I used ‘teacher’ on initial recruitment documents, as well as to offer some language variation. Any reference to ‘teacher’ in the teacher resource document should be understood as teacher participants in the study, rather than teachers more generally.
I then moved on to describe my reasoning for using certain terminology in the current research. For example, that I use ‘criticality’ rather than ‘critical thinking’ (also used by Golding, 2011) in order to draw a distinction between the first dimension of the theory of Critical Being and some other ideas of critical thinking. Also, that I used ‘educator’ (as also used by Golding, 2011) rather than ‘teacher’, because in some contexts the latter has come to suggest the practice of bringing a student to understand a body of knowledge rather than develop their thinking. At this stage of the research I believed an understanding of such a distinction might assist teachers to begin to develop new ideas about their own practice.

In the teacher resources document I next described what I then meant by the three dimensions of the theory of Critical Being: criticality, critical action and critical being. I described these dimensions alongside examples drawn from practice situations that I used in my Masters’ thesis (Blakey, 2011). In this part of the text, I left spaces to allow teachers to record their comments when reading alone, or to make notes from our discussions in the group meetings. Some of these comments were discussed as part of the subsequent monthly meetings. In the text, I also made an effort to emphasise that the examples I gave were only some of the ways the dimensions of the theory of Critical Being might appear in a practice situation, to reiterate the qualitative and emergent nature of the research and to indicate that I wished to elicit from teachers descriptions which might be different to those I described.

**Theoretical dimension 1: Criticality as described to teachers in the current study**

To illustrate to the teachers in the current study what I initially meant by criticality as part of the theory of Critical Being gave an example from my 2011 research, which originated from a very similar context to the current study (small group teaching in the health sciences). I felt that such an example might offer participants a sense of familiarity and thus aid their understanding of this dimension of the theory.

**Example of some aspects of criticality observed as part of Masters’ research (2011)**

Students in the classes of the 2011 research participants were set an essay which allowed scope for originality and allowed opportunities in the classroom to discuss ideas about their topic selection and how they might approach researching and writing about it. In my opinion, conditions in the classrooms of these participants allowed student to begin to develop their thinking and investigate ideas about how they might write the essay alongside their peers. For
example, their teachers allowed time for students to think about and discuss their topic selection with their peers, asked the students questions to elicit what it was they were thinking about, rewarded their thinking in person with praise and also indicated that their thinking, when expressed in written form would be rewarded with marks. From these discussions I found evidence of several characteristics or processes that seemed central to the idea of criticality.

These characteristics were that a student needed to actively engage with the task at hand; that when faced with a task, criticality could also be demonstrated by developing autonomy from peers and their teacher. Criticality would also be demonstrated by an appreciation of context, in which students considered ideas (‘what’s important here? What am I going to do? How much time have I got?’), which influenced both the content of the essay, and what work strategy that they might use. Students considered various ideas, for example, what they would like to communicate to the teacher, or whether they wanted to do something for personal interest. It was unclear what influenced students’ final choice of topic and approach, but it did seem apparent that criticality involved a student being able to appreciate their personal context. Students devised strategies to approach their essay depending on any number of ideas about success, risk they were prepared to take and the influences of peers and educators on them (etc.). As different responses to context meant various approaches to the essay, and learning, some students needed mastery of many different thinking and learning skills. While most of these strategies resulted in original topics or approaches, it was also possible that these were, at times, not. Students also demonstrated criticality by showing an awareness of what is reasonable and appropriate to the task and decided to stop ‘thinking’ about their essay despite chances to continue refining it (e.g. more research or discussions).

Because in my Masters’ research I thought I had observed students developing their criticality, rather than displaying it in a more developed form, I understood that it would be important for teachers in the current study to appreciate what such development might ‘look like’ in a practice situation. So, I included examples of behaviour that a student might display when they seemed to be developing, or struggling with developing criticality. I hoped these examples would help teachers identify behaviours of their own students in relation to what might be interpreted as criticality development, and take behaviours into account when considering how to teach the student.
What might criticality, developing criticality, or struggling with the idea of criticality look and sound like?

The following tables are examples of what I gave teachers to demonstrate what a student might say or do when they have developed, are developing, or struggling or resisting the idea of criticality. I the abstract idea that I had identified in my Masters’ research alongside more concrete evidence that a teacher might observe in a student:
| **Criticality**  
<table>
<thead>
<tr>
<th><strong>(abstract idea)</strong></th>
<th><strong>Students might be observed doing these things (concrete)</strong></th>
<th><strong>Students might say these things (concrete)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Active, autonomous decision to engage</td>
<td>Deciding not to copy friends.</td>
<td>‘I’ve read the guidelines and this looks interesting.’</td>
</tr>
<tr>
<td>b. Purposeful evaluation of task</td>
<td>Talks about a sense of purpose. Enquires about essay.</td>
<td>Questions about task: ‘What is this meant to achieve?’</td>
</tr>
</tbody>
</table>
| c. Examines wider context | Understands context and make appropriate judgments; generates original ideas based on personal values, beliefs, or personal situation.  
Might take risks in learning - miss out on grades, learning or experiences. Values ideas of others but doesn’t copy. | Talks about what a successful (essay, etc.) might mean to them at this time: ‘I think this issue is important here’ or conversely ‘I don’t mind getting a pass, I’ve something else I want to put my energy into this week’ |
| d. Formulates work strategies | Appears aware of and values different approaches to learning and thinking.  
Students learn new strategies to make a point of view or use a tested one, depending on context. | ‘I think that the way that we did the essay in English language might work for this point of view’. |
| e. Persistently works with a reasonable decision to stop | Shows willingness to invest *appropriate* effort in task, until conclusion. | ‘I think it’s time to hand it in now, I’ve reviewed it enough times.’ |

**Table 4. Examples of what criticality might sound like**
<table>
<thead>
<tr>
<th>Abstract idea</th>
<th>Resisting criticality might sound like</th>
<th>Struggling with criticality might sound like</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Active, autonomous decision to engage critically</td>
<td>What are my mates doing?</td>
<td>Asks: What should I do? I’m not sure what I should do here. Describes feeling overwhelmed. Evidence of other strong emotion (e.g. anger, fear).</td>
</tr>
<tr>
<td>b. Purposeful evaluation of task</td>
<td>‘It’s not black and white, it’s too hard.’</td>
<td>Struggles with many ideas. Expresses frustration with task. Expresses anger with you, or the task/course.</td>
</tr>
<tr>
<td>c. Thinking about context</td>
<td>‘But what is it ABOUT?! I can’t find anything about that’</td>
<td>What do you want me to write? Ex pressing uncertainty.</td>
</tr>
<tr>
<td>d. Formulation of strategies</td>
<td>‘They didn’t ask for this in health sciences.’</td>
<td>But I’ve always done it this way.</td>
</tr>
<tr>
<td>e. Persistent approach with a reasonable decision to stop</td>
<td>‘I can’t be bothered’. Just hand it in. Reviews work so long the deadline passes.</td>
<td>Wondering about how much is enough.</td>
</tr>
</tbody>
</table>

Table 5. Examples of how criticality might appear in practice for a student who might be struggling with, or on the way to criticality

After these tables, in the teachers’ resources, I then presented examples from practice which I had worked through to explain why I thought the student had (or hadn’t) showed criticality, plus one I asked teachers to work through themselves. I intended the latter as a check on teachers’ understanding of what I meant by criticality, and offer them a further chance to ask any questions. I closed this section of the resources with a brief discussion of wider contexts that we educate students for in higher education, e.g. society, professional and family life. I closed the section in this way for several reasons: broadly, to reassure teachers as to the pragmatism of the theory of Critical Being; I believed that to talk about life contexts would
illustrate some ways that the theory might be used in a practical situation. I have personally experienced frustration with theories about critical thinking that seem hard to apply in a practical situation, and I also understood from teachers’ interviews that they also seemed in urgent need of solutions to some problems developing student thinking in the classroom. I also included such a discussion on the basis of one fundamental premise of Barnett’s ideas – than an education for critical being should be one that has potential to extend outside of the classroom and prepare students for a lifelong contribution to society. I hoped that Barnett’s argument would appeal to teachers in the current study, whose charge was also to develop their students as medical professionals.

I concluded this section of the teachers’ resources with a description of my research question and a request for teachers to consider, and describe in our discussion, some initial ideas about ways we might best educate for criticality. My intention with both of these questions was to formally hand over some of the responsibility and ownership for the project to teachers, which was an important part, I thought, of the action research process; to assist teachers to feel they were beginning to develop a valid role in its processes. I also believed teachers would more likely engage in developing their own ideas rather than ‘mine’. In retrospect both approaches were driven by amateur, but successful, psychology.

**Theoretical dimension 2: Critical Action as described to teachers in the current study**

In the teacher resources I next moved on to talk about *critical action*. I initially framed this dimension of the theory of Critical Being as one that followed on from criticality, for example, that a critical action would be one that followed on from thinking as part of criticality. Again I illustrated this idea with examples from my 2011 research and described Barnett’s argument for including *critical action* in his original ideas.

Barnett seemed to mean that critical action should have two purposes: to take action based on our thinking as part of our criticality but also to learn from our actions. The latter idea was fleshed out in my Masters’ thesis to a more exact definition that critical action can more specifically mean making critical judgements about *how* we act (or interact), and that how we interact can influence what we learn as a result.
After my Masters’ degree, I had some success in my practice as a medical teacher when I had learned to teach students in ways that I thought would help them to consider ‘how’ they act. Thus I understood critical action to be an important idea, although one that still needed considerably more work to best describe. Therefore I wanted to place some emphasis on the idea of critical action early on in the current research. In particular, to find out how the action of a student (for example) might enable us to learn from our actions. The idea of ‘how’ we act developed significantly as part of the current research (see Chapter 6, which is about student and teacher emotion and action).

In summary, I found critical action, like criticality, to be multidimensional. Actions:

- could be informed by criticality
- were carefully considered by the ‘actor’
- positive in intent, although it was unclear exactly what positive might mean and
- driven by an awareness of and response to context

As I had with criticality, I also used examples to illustrate the idea of critical action. Again, I followed these examples with a short exercise in which I asked teachers what critical action might ‘look like’ or ‘sound like’ in practice. My reasoning for using this exercise was (as I had with criticality) to offer teachers a sense of ownership of the research processes and help them begin to consider how this part of the theory might be applied in practice. This exercise was followed by some more examples in case we struggled with the first exercise and I needed more evidence to help teachers understand what I meant by critical action at this stage. Here are some examples that I gave teachers about critical action:
<table>
<thead>
<tr>
<th>What might a student taking a critical action SOUND like?</th>
<th>What might an educator taking a critical action SOUND like?</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘I read a bit about that once [explains idea]. Does that sound about right?’</td>
<td>‘Can I stop you there and just go over those pathways one more time? It’s important that you guys get that bit, so we can carry on’</td>
</tr>
<tr>
<td>This example shows one aspect of critical action – that it allows us to learn from our action. The student explained his idea, but the way he phrased his explanation in a way that allowed others to add anything he did not yet know or understand</td>
<td>This is a critical action because the teacher has considered the student’s learning, and given them the information they need to carry on learning. While the teacher could have given the information because they wished to show off, this action was critical because they genuinely consider their student’s needs.</td>
</tr>
<tr>
<td>‘I think you need to get a hang of that one yourself, mate, you need to learn to do it yourself now’</td>
<td>‘You need to go think hard about the essay – take some time considering what you want to say in it. It might be tricky for a bit!’</td>
</tr>
<tr>
<td>While helping her friend learn to make a calculation, a girl thinks carefully about whether or not to help any more. Her action is a critical one as she has considered the context, which is about the other student’s learning</td>
<td>This example is critical action because the teacher has acknowledged that the student is finding the essay hard, but considering their learning by letting them</td>
</tr>
<tr>
<td>[keeping silent to let their colleague try to explain, even though they knew the answer]</td>
<td>‘Tell me about your presentation, how are you going to tackle it? Is there anything you think is missing, shall we get some ideas together from the group?’</td>
</tr>
<tr>
<td>This example is a critical action because the student thinks about the context in which they are acting, and that their</td>
<td></td>
</tr>
</tbody>
</table>
friend might need to learn by explaining and considered the learning of their friend in their decision to keep silent.

Table 6. Examples of how critical action might appear in practice for students and educators

As with criticality, I concluded this section with an open question put to the teachers which I took directly from my research question: What are the ways we might best educate for this dimension of the theory?

Theoretical dimension 3: Critical Being as described to teachers in the current study

This section details how I introduced teachers to the dimension of critical being. I did so with quotes from Patrick and Deirdre, participants in my 2011 research. I used these quotes because they each illustrated an important aspect of critical being. Clear ideas about what critical being entailed were sparse from my 2011 research, but one that I found was that a critical being ideally extends criticality and critical action to all life contexts. Patrick talks about how criticality can be learned but then its application should extend outside of professional life:

When you learn to apply critical thinking [criticality] it’s difficult to know what comes first. Your critical thinking as a professional is either a reflection of your critical thinking in your life...I think as you get older or further into your career, then one probably matches the other, or they run parallel or are intertwined or the same thing... the way you think about your life skills with your family or with, you know, the way you run your home or your sporting life or whatever and those things become intertwined.

(Patrick: Blakey, 2011).

The second idea that I found in my 2011 research was that critical being might be about trying to live one’s values fully. To educate for critical being, I found, might then be about educating for values. In my 2011 research, I found that a professional who lives out their values might appear slightly ‘odd’ in professional practice. In other words, perhaps ‘buck the trend’ or work differently to the prevailing culture:
…the lecturer…the white coat…I can’t be that kind of person…even in my practicing life I can’t be that kind of person. It’s alright…it’s sort of cool but it’s sort of scary too. I think I take risks in what other professionals within academia may think because I don’t speak professionally enough with the students at times and maybe because I laugh a lot and smile a lot…

(Deirdre: Blakey, 2011).

These two quotes seemed to work well in the group meetings, in that the teachers entered into a considerable amount of discussion about them. For example, we discussed how and why would anyone extend their thinking and action to other life contexts (e.g. outside of work), and how might we educate for this. Also, we discussed how we might educate for critical being, which might entail a student or teacher perhaps being set apart from more customary behaviours in practice. To begin this discussion, I again asked teachers some questions that I set out in their hard copy text. For example, I asked: Can you think of any examples of what Deirdre describes, from your own experiences? As a result, we talked about how what we saw as ‘good teaching’ or ‘good doctoring’ might be about living one’s values as best we can, and that those values have been evaluated and tested. I had made reference to the work of to explain the argument that critical being might be about living our values fully. I used this argument as it seemed to match what Barnett (1997) proposed, that critical thinking needs, necessarily, to be followed by critical action, but also that our actions in the world should allow us to examine and develop our knowledge and understanding – but also ourselves.

I introduced the idea of values to teachers at the beginning of the current study; that a critical being should aspire to realise and act on their values. I also introduced them to the idea that to educate for values might provide some means to allow students to re-evaluate and reform values if appropriate. At this stage I had also involved the idea of ‘conscience’ as part of the Theory. As Harland and Pickering imply, some decisions can be more or less informed by our conscience:

Values are about making choices, and all behaviours and thinking reflect our values. However, it is important to note that some value decisions are simply better…we know this intuitively.

(Harland & Pickering, 2011, p. 10).
As research progressed, I began to understand ‘conscience’ to be an idea that might be difficult to define from the data available from the current research. Thus, such an idea would be open to potential criticism (e.g. one might ask does conscience exist?). For these reasons I began to pursue alternate wordings such as ‘doing what is constructive’ for the current version of the Theory and to refine what I thought of as ‘critical being’ over the writing up period.

I drew the section about critical being to a close by asking teachers about ideas that might begin the current research. How might we educate for critical being, especially since a student might have a hard time in being this way? What might a critical being look like and sound like in the health care setting?
3. TESTING of theory of Critical Being during the current research

I now describe questions and answers about the theory of Critical Being that were raised and answered by the research group during the research proper. I describe these questions and answers in order to further explain the theory and each of its dimensions.

The content of these questions and answers are taken from ideas recorded in teacher participants’ reflective journals, conversations and discussions between research group members, my supervisory team and I, and also from my independent thinking. I present the question raised, an exposition of the answer suggested by research group members, give an example that I think supports the answer and then suggest a tenet (contribution to description of the theory) that results from these. In the final section of the current chapter I summarise all tenets and present them in a description of the theory as it currently stands. In the following analysis chapters I also indicate which dimension of the theory of Critical Being that the results might refer to, and the tenet to which they might also apply.

What I present here are only some aspects of the theory of Critical Being. I am aware that there are many more questions that might be asked about the theory of Critical Being and that it will benefit from significantly more additions and refinement. What I present here is simply representative of what arose during the research period and I fully anticipate the theory to be developed further still.

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14 Teacher participants and researcher.
1 Criticality – testing of this dimension of the theory

1.1 Kinds of thinking as part of criticality

Q: Teachers in the current study questioned what the various and varied descriptions of ‘kinds of thinking’ (e.g. logic or reflective thinking, see Literature Review for more examples) might mean for how criticality might be described. Teachers in the current study talked about how they understood thinking to be a mental process that might range from undisciplined thinking e.g. ‘wondering’, to a more purposeful or disciplined thinking e.g. logical thinking. Teachers were also aware that some ‘kinds’ of thinking are deemed more or less useful by various authors. For example, teachers understood that some ways of thinking have been criticised (‘uncritical thinking’) – such as thinking that might be deemed ‘aimless’.

A: In order to consider the relevance of ways of thinking, the teacher participants considered the value of all these ways of thinking. They found it hard to dismiss any way of thinking as lacking in value. In other words, what some authors might view as uncritical thinking might still be valuable. The teachers came to this conclusion as a result of discussing how useful thinking might be, and concluded that even what some might argue as ‘less disciplined’ or aimless thinking (e.g. wondering) might be useful for what it is we wish to achieve. For example, we might wonder as part of reflection or as speculation, or ponder about ideas at the outset of a project. Teachers in the current study could only identify thinking that is based on flawed ideals (e.g. racist thinking) to be of lesser value than any other. Thus, they argued there are many ways to think and that that each has some value. So, in turn we concluded that criticality must somehow include a person’s ability to think in many ways.

Supporting example In general practice, a medic might need to think in many ways. They might need to use clinical reasoning to reach a diagnosis, reflective thinking as a way to learn about and improve their practice, lateral thinking to solve a practical problem. The medic might also wonder about a patient and come to a realisation about their condition. While the medic might need to think about racist thinking (for example, they might think about the fact that it exists) it does not seem that racist thinking per se would be useful.

Tenet 1: Criticality includes the ability to think in many disciplined and undisciplined ways, and both conscious and unconsciously.
1.2 Thinking about and criticality

Q: Teachers in the current study raised the idea that when one thinks, one needs a subject – something to think about, in more or less detail. What might ‘thinking about’ mean in relation to criticality?

A: The research group talked about ‘thinking about’ and, in contrast to ‘kinds of thinking,’ we felt that topics that one is able to think about should be unlimited. For example, we would need to think about unconscionable ideas in order to do something about them. A person will need to think about a wide range of things to varying degrees.

Supporting example When presented with a patient, a doctor would need to think about the patient’s symptoms, what the diagnosis might be and how best to treat it. A doctor would also need to think about the patient’s family situation, what else the health system could offer them and practical issues relating to the person’s recovery, e.g. social support the person might need.

Tenet 2: Criticality includes the ability to think about a wide range of things.
1.3 Ways of learning and criticality

Q: Teachers in the current study were given some examples from my Masters’ research in which the Theory was first identified. They discussed one of these, which was about how I found that some students could choose how they learned about some things. For example, if they were pushed for time, they chose to learn about a topic in a superficial manner by rote learning, but in response to another context, perhaps when less pushed for time or really keen on the topic, they might choose to learn more deeply by another method. What does this finding mean in relation to the description of criticality? What about learning and criticality?

A: People naturally learn in different ways, and some topics/skills (etc.) are better learned in some ways than others. For example, a skill would be unlikely to be learned by listening to someone talk about it. Similarly, learning to think might be done in different ways. This finding would mean that criticality would include an ability to learn in different ways, especially when one considers that it is possible to learn as a result of many kinds of thinking. For example, reflective thinking can be a means by which one learns about oneself. To be able to do anything less would preclude optimal success in learning (e.g. might it be impossible to rote learn and understand a topic?)

**Supporting example** A student might need to learn by rote to get through some time pressures/exams. However, to understand more fully, they might need to learn by a different means, such as to learn by dissection.

*Tenet 3: Criticality includes the ability to learn in many ways.*
1.4 The relationship between context and criticality

Q: Teachers in the current study understood that how to best think, and what to think about, and how best to learn, would change according to the context a person is in. In other words, these teachers understood that certain ways of thinking, and what we think about, might change depending on the situation one is in. What, then, does context mean in relation to criticality?

A: Teachers proposed that a person would need to respond to the context they found themselves in, in order to know how best to think, what to think about, and how best to learn if this is the case. However, if they are to do this, the person would also require both a perception and understanding of the context they are in.

Supporting example One doctor is a skilful thinker, in that he can think in many ways. For example, he is great at thinking about scientific aspects of a patient’s care (e.g. what tests to order and check) and also reflecting on his practice in order to learn how to get better at it. However, one day he finds himself working with a patient who is wondering out loud about their death and mortality. The doctor responds by talking about the patient’s test results and how it would not be logical that they are dying. However, the patient really needed to have a conversation about spirituality; the context was not one in which logical thinking was required. The doctor has failed to perceive the context he found themselves in, and therefore to realise what was needed to best help the patient (e.g. to think carefully about a patient’s needs outside of direct medical treatment).

Tenet 4: Criticality includes being able to perceive, understand and respond to the context that one is in with appropriate thinking and appropriate ‘thinking about’ and if necessary, learning.
1.5 Mastery of thinking processes, thinking about, ways of learning, and idealism

Q: Teachers in the current study raised the idea of how ‘good’ we might have to be at thinking, thinking about, and learning. How much ‘mastery’ of any of these do we need for criticality? For example, how much of an understanding would we need to ‘think about’ something? What does all this mean for how we describe criticality?

A: From their practice teachers in the current study understood that at times they would be precluded from thinking ‘well’ by context (e.g. time) but at others not. Thus, they also understood that what they do, or are able to do might not align with each other. They also understood that ‘thinking’ might also have little measure of success (e.g. what is successful logic?). Each human brain also has various capacities for thinking, and learning to think needs to develop over time (Moon, 2009) as it does for understanding, and learning about learning. Teachers reported that it seems judgmental to impose a division on the definition of criticality that might be dependent on a person’s cognitive ability; this segment of the theory was identified as needing work to describe more fully.

Supporting example A student has learned how to learn by rote when they are under time pressure. However, this student has also developed their criticality and can also use other ways of learning for use in different contexts.

Tenet 5: Criticality means to aspire to as high a level of mastery of ways of thinking and learning as possible, and as much understanding as possible for each person but also that criticality can be an idealistic position; context can preclude thinking better.
1.6 Cognisance of thinking

Q: Teacher participants wondered about thinking – which, they understood, can vary from conscious to more tacit thinking. This variation suggests that at times we are more or less unaware of what we are thinking and how we are doing it. How much awareness do we need to be aware of our thinking processes for criticality?

A: If criticality means to engage in many kinds of thinking, and an ability to change what thinking is used as appropriate to context, this implies that a person needs to be cognisant of that thinking, at the very least at the beginning of learning to think. Therefore criticality would need a certain amount of metacognition. There may be cases in which a person engages more naturally in reflective thinking (for example) but it has also been shown that to raise awareness of thinking can improve it (see Golding, 2011) and ensure it is more likely to become habitual thinking.

**Supporting example** A student is learning to think reflectively. To begin to do this, a student will need to understand what reflective thinking entails, and how they might do this. However, to learn to think in these ways would mean that they first need to become aware that they think – to understand their own thinking.

**Tenet 6:** Criticality requires at least an initial cognisance of thinking in order to learn to think well, but also to be able to discipline one’s thinking when necessary.
2 Critical action – testing of this dimension of the theory

2.1 What makes an action critical?

Q: Teachers in the current study talked about what it might be about an action that makes it a critical one. They wondered whether a critical action might simply be about choosing one action or another, or whether there might be more to it.

A: Teachers made the suggestion that simply choosing one action over another would not constitute a critical action. They deduced that there must be something more than simply choosing, for instance that a judgement was part of the choosing. Teachers felt that in order to make a judgement, there must be various factors at play that would influence our actions, and also that there must be a conflict between these. What teachers seemed to mean by ‘conflict’ was the presence of reasons to act in competing ways. Conflict between reasons to do something might mean that we are faced with making a decision about what to do, and we need to choose one action over another. Such factors might be:

- personal motivations or emotion e.g. what we want, anger, kudos, pride
- practical factors e.g. time
- socio-cultural environment, e.g. custom, manners

In discussion about critical action, the teachers in the current study next talked about how we might make such a judgment about what to do. While it seemed that some choices would be easier to make, teachers expressed concern that some others would be incredibly difficult both to choose, and to understand upon what to base such a choice.

Note: To take an action where there are no conflicting options might still be considered a ‘good action’, but as what we need to do requires little consideration this would not be considered a critical action.
Supporting example

I feel very angry at a student in the group because they handed in an essay late. I am faced with two possible ways of acting that I can see. One is to get very angry at the student, and the other is not to. These actions conflict with each other because I cannot do both, but could well have reasons for and against choosing each action. In the case of the first option, to get angry with the student, I would probably feel better for a big vent, but the student might be offended. For the latter, I wouldn’t be offered an outlet for my anger but the student might offer me an explanation of what had happened, upon which I could then base any further action. I have to make a critical judgement about what to do, and choose the action that I wish to take.

**Tenet 1**: A critical action requires choices between conflicting alternative actions, each supported by reasons.
2.2 How do we make the choice between actions when we have conflicting influences on our decisions?

Q: Teachers discussed at length how we might best make the choice about which action to take, when there are conflicting influences on our actions. For example, we might note a conflict between two factors such as feeling better for having vented anger and aim to get an explanation re the late essay, but simply choose one factor over another without any reason for doing so. Having determined that a critical action is about making choices, it remained unclear how best to describe how we make those choices. Teachers reasoned that in many cases, the action they would choose would pursue the most ‘constructive’ outcome. What teachers seemed to mean by ‘constructive’ was an action that ‘achieved the most’ or the ‘best outcome’ for a situation. However, these teachers also understood that what might be viewed as constructive might vary. For example, constructive might be understood as a practical, or ethical. Thus, this aspect of the Theory remains unclear. I present an example, therefore, which has a more obvious choice of action than other examples might have.

Supporting example

I feel very cross at a student in the group because they handed in their essay later than the deadline I had set. I am faced with two possible actions that I can see. The possibilities are that I get angry and discipline the student, or find out a bit more about why they might have handed in the essay late.

I decide not to discipline the student (yet) but first talk to the student. In this case, I make a decision based upon what is best for the students learning, because I am employed to do this. This decision is based on a constructive outcome about the student’s learning. I make this choice because they might have some problems writing the essay, or understanding about the importance of a deadline, and I need to be able to discuss with the student what their needs might be so that can move on to complete their essays on time and manage their workload. If I acted in response to my emotion, I would be precluded from easily finding

15 Note: I use ‘pursue’ rather than ‘achieve’ as it is often impossible to accurately predict what an outcome might be.
out these things as a student is unlikely to talk to an angry teacher. Thus, I chose student learning over my own emotion.

**Tenet 2**: A critical action is undertaken in response to the influence that would pursue the most practically or ethically constructive outcome possible.
2.3 Compelling behaviour, e.g. one driven by emotion, and critical action

Q: What about times we feel compelled to act one way (for example tell a student off) but understand that this action might not be the best response to a situation? Does such compulsion have any implications for the description of critical action?

A: The group talked through this issue in one research group meeting. In their opinion, most would feel aware that if their acts are driven by an emotion that they aren’t doing their best, but not all would be aware of this. Pursuing this idea further, we found critical action seemed most likely when a person has some understanding of their own emotions, so that acting compulsively becomes less likely or is accompanied by critical thinking. For example, here, the teacher may or may not be aware that they perhaps feel rather insecure:

<table>
<thead>
<tr>
<th>Supporting example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Critical action</strong> A student asks the teacher a question. The teacher knows the answer but asks the student to work it out themselves. <em>The teacher understood that she often felt rather insecure and because of this insecurity she felt compelled to appear knowledgeable to their students. However, the teacher also wanted her student to learn. Her awareness of her own emotion meant she was able to also judge that acting in response to this emotion might not lead to the best outcome. She was therefore able to choose the action based on a good outcome for the student’s learning, which she judged as the most positive outcome for this context.</em></td>
</tr>
<tr>
<td><strong>Uncritical action</strong> A teacher knows the answer to a question posed by a student. Perhaps unaware of how she is feeling, she answers the question in order to respond to her need to be seen as ‘knowledgeable’.</td>
</tr>
</tbody>
</table>

**Tenet 3**: Critical action can depend on one’s emotional intelligence, and using this intelligence, and what one understands from it to inform decisions about what one does.
2.4 Critical action and context

Q: Following on from teachers in the study asking whether critical action is ‘just’ acting on our thinking, as Barnett (1997) seems to suggest, or is it about something different? In my Masters’ study I identified that critical action could be about making decisions, with which the teachers in the current study agreed. Teachers then queried how a decision might be made between actions with the same possibilities for action, but a different situation (context).

A: One of the biggest learning points for teachers in the current study was that they realised they had to change how and what they taught according to who they were teaching (see also Tenet 2). In other words, what seemed to be the best action would change depending on context. Teachers also discussed the idea that sometimes there is no ‘right action’ – that context can also limit what they would wish to do.

<table>
<thead>
<tr>
<th>Supporting example that shows how action might change with different context</th>
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</thead>
<tbody>
<tr>
<td>The teacher is asked a question to which they know the answer. There are (roughly) two choices that they can see – to give the student the answer, or not. Here are two examples of what the teacher might do, in two different contexts.</td>
</tr>
</tbody>
</table>

1. They make the decision to NOT give the student the answer. They do this because the teacher has been talking with this student and understands that the student needs to learn to figure some things out themselves, rather than ask someone else.

2. The teacher is asked a question to which they know the answer. They make the decision to GIVE the student the answer. The teacher has considered what the student needs to learn, but also many other factors. She is aware of the session ending very shortly and gave the answer so that student had a firm understanding of the topic before they undertake the homework she had set. In this example, the teacher made a different decision but was also limited in what she could do by the time available (context).

**Tenet 4:** Critical action needs to respond to, but can also be constrained by context.
2.5 Conflicting interests/idealism

Q: If a person’s critical action needs to respond to context, what if there are multiple compelling factors that might all influence a person’s action differently?

A: The idea that we might experience multiple compelling factors and conflicts between these arose during observations I had made of teachers’ practice and is one that teachers and I considered at length. I chatted to teachers about what I saw and found that at times teachers felt that to take critical action was impossible, or at the very least it was exceptionally hard to determine what to do. For this reason, I suggest that critical action can also be an idealistic idea. In other words, we cannot do what we would like, but what we can.

Supporting example

A student asks their teacher a question. Time is running out in class and the group is due to finish soon. The answer to the question is complex; there is no time to address it fully and the class is on holiday the next week. The teacher does their best to answer the question in the time they have, and asked the students to research the question over the break. While this action is not what the teacher would prefer, but it is the best they could do at the time.

Tenet 5: In a context an action can be chosen for good reasons related to the context, but because the context is far from ideal, or complex, the outcome of the action may be uncertain or even unwanted.
2.6 What form might a critical action take?

Q: Teachers in the current study talked about what might constitute the ‘action’ in a critical action. In discussion, teachers identified that our actions can be in the form of our words and physical acts, but also that action might be the more subtle ways in which we do things: for example, the inflection our voice, expression and body language.

A: As social and emotional animals, much of human communication is done in subtle ways, for example body language, word selection or inflection. Our actions are thus a combination of what we do in a bodily sense as well as these more subtle ways (‘how things are done’) of acting. The outcomes of our action (our influence on the environment and those around us) depend on all these things and a definition of critical action thus needs to include what is done and how it is done.

<table>
<thead>
<tr>
<th>Supporting examples</th>
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<tbody>
<tr>
<td><strong>Critical action</strong></td>
</tr>
<tr>
<td>What is done: To hold a door open for someone who has difficulty walking</td>
</tr>
<tr>
<td>How it is done: To hold a door open for someone who has difficulty walking, and to smile in the process</td>
</tr>
</tbody>
</table>

| **Uncritical action** |
| What is done: To hold a door open for someone who has difficulty walking |
| How it is done: To hold a door open for someone who has difficulty walking, and to roll one’s eyes in the process |

*The first example seems a critical act (seems to pursue a constructive outcome) because the person’s other actions, in the form of body language, also seem constructive in intent. The second example reveals that mismatch in intent – a helpful action but body language that reveals an intent to offend.*

**Tenet 6:** A critical action might entail considering what is done and how it is done: more than what it appears but also what else it might imply or communicate.
2.7 What about reactions to the actions of others?

Q: Teachers raised the idea that one person is not always the instigator of their action, but might act or interact in response to the actions of others. How is reaction catered for in the definition of critical action?

A: A critical action can include the ways we react to the actions of others.

Supporting example

A teacher is asked a question during class. The answer to this question had been given already. Feeling angry that the student had not been listening, the teacher might have expressed this anger to the student. However, the teacher chose to react by checking the student had understood the concept and repeating the answer. The teacher had chosen the critical action, in other words, reacted to the student’s action with the most constructive action (as they saw it).

Tenet 7: Critical actions can also include our reactions and these also need to be with the best outcome in mind, which again is considered and thought out.
2.8 Relationship of critical action with other dimensions of the theory of Critical Being

Q: What is the relationship between critical action, criticality and critical being, and how is this expressed as part of the theory of Critical Being?

A: Optimal outcomes seem to depend on both engaging in criticality and taking critical action. This is because critical judgement can be part of how we think. However, thinking is commonly flawed, and to take critical action means we are offered the chance to improve our thinking. For example, if a teacher takes a critical action which is to take their ideas to a colleague for comment, they are offered the chance to change their ideas and thinking. Thus, criticality can also depend on a critical action.

We also discussed Critical Being, and that educating for it can also depend on what a teacher does (for example, that what a teacher does can affect whether we evaluate our values – see also Chapter 7). Thus, we determined that Critical Being can also depend on critical action.

Supporting examples

A medic engages in a clinical reasoning process, comes to a diagnosis and delivers it to the patient, but rather tersely. The patient perceives this as unconducive to conversation and withholds additional information about their symptoms. *The medic’s action is uncritical because of their terse manner. In turn, their manner precluded the patient telling them the additional information about their symptoms, informing criticality (via the medic’s learning) and potentially improving the patient’s outcome.*

Illustration

A student works hard on a thesis chapter. Understanding the supervisor’s function in the writing process, she presents the chapter to the supervisor happily (i.e. she is cheery and supervisor understands that she is grateful for feedback). The supervisor then presents her feedback in a constructive fashion, without being too harsh which is gratefully received. *The student’s action is critical because of the manner in which she carried it out. As a result, she is offered opportunity to improve her work and develop her thinking.*

*Tenet 8: Future criticality can be dependent on critical action as well as being the result of criticality.*
3 Critical being – testing of this dimension of the theory of Critical Being

3.1 Idealism

Q: Teachers in the current study raised the idea that, according to many of the examples that they had been shown, it seemed that Critical Being is about living one’s values. They deduced this as a way that one might act critically in all aspects of one’s life. However, the group also noted that ‘critical being’ might often be hard because of context. How can the difficulty in living one’s values fully be taken into account as part of the Theory of Critical Being description?

A: The group came to a conclusion that Critical Being could often be an idealistic position or aspirational. This decision was a result of experiences in which they saw that some would be able to have a value, but not ‘live out’ values fully because of context. In making this decision, teachers were also informed by examples in which critical action could also be idealistic because of context. The group also observed that there will, for most, always be a context in which they cannot live all their values fully. As a result, participants understood that Critical Being might also be something that we achieve, but never in its ideal form.

Supporting example

Deirdre (see Blakey, 2011) lived her values in her work, i.e. she used her sense of humour, which she values, to teach. However, her behaviour is not considered professional by some in management, and she was pursuing a promotion.

Because she needed to get the promotion in order to support her family she chose to act more in line with what these management preferred and not use so much humour when she was being observed teaching by her boss. Deirdre did this because she also valued her family and her ability to support them. Because of her life context, Deirdre was precluded from living her values fully.

Tenet 1: Critical Being can mean trying to live one’s values fully but this might at times be aspirational limited by context or not undertaken in its ideal form.
3.2 Dimensional differences

Q: What is the difference between critical being and critical action?

A: It is possible that a person develops criticality and critical action well in one role (e.g. as a parent, as a professional) but not act critically or think well in another. Thus, critical being is not simply a product of either but one who aspires to do both these things to the best of their ability and context in all their life roles.

Supporting example

A medic thinks well (etc.) and acts well in her roles as a professional. However, at home, she is unkind to her family and fails to think about her family’s feelings.

Tenet 2: Critical beings need to be able to extend criticality and critical action to all life contexts.
3.3 Role of context as part of critical being

Q: Criticality and critical action seem to need to be done in response to context. What is the role of context in respect to the dimension of a critical being, who acts on their values as they see appropriate?

A: While in some everyday situations, critical being might be a simple matter of ‘just doing what one thinks is right’, because it is relatively easy (perhaps more intuitive) – it might be easy to consider the extent of the context in which one finds oneself. In more complex situations ‘what seems right’ might need more thinking about because the context might be more complex – and require a greater understanding. It seems unlikely that even the most worldly of people would understand every context, to include all its subtleties.

Supporting examples I value recycling. I value it to such an extent that I will take things home to recycle from people’s parties if they aren’t planning to. I will always recycle wherever I am, whatever other people’s thoughts on the matter are. However, I can also see that in some contexts, I might not have a full understanding of whether acting on this value is the best thing to do. Guessing at what some of these contexts might be – what would I do if I lived in an isolated community? What if the plastic I was saving to recycle would be useful to that community in another way, perhaps to re-use? I need to be open to such learning and thinking.

Tenet 3: A critical being needs to respond to context as much as possible, but must have the humility to learn more about that context and re-evaluate the values in question.
Finally - necessary or sufficient

Having considered these questions, discussed them and come up with what we all felt reasonable answers, there needs to be some consideration of what might be necessary or sufficient for these theoretical dimensions. This is one of the areas of this theory which needs a substantial amount of further work. What was unclear was whether each tenet was necessary for the dimension concerned. This is one reason why I changed ‘tenet’ from ‘rule’ which would more or less imply being necessary. The next Chapters of this thesis are devoted to what I found in the current study, about my research question:

What are some ways that a teacher might teach for Critical Being?
Chapter Five

What teachers do

Asking specific questions about thinking can be central to cultivating student thinking
INTRODUCTION

My first conclusion is that cultivating student thinking might depend on what teachers do. I call this conclusion what teachers do because it is about methods that teacher participants in the current study employed to cultivate student thinking. I describe this conclusion in more depth in the rest of this chapter.

When I talk about cultivating student thinking as part of this thesis, I do so with reference to general learning outcomes, with which teachers in the current study aimed for a student to learn, and get better at various kinds of thinking and to be more able to think about a range of topics. For example, teachers aimed for a student to learn and get better at reflective thinking, clinical reasoning, and logical thinking and to learn and get better at thinking about the ethics of practice and community health issues.

I use the term ‘cultivating’ to refer to how teachers help students achieve these learning outcomes because cultivating is representative of how each teacher aimed to encourage a process of growth or progress from a beginning point for each student. Teachers worked to few criteria in terms of ‘how much’ or ‘how good at’ thinking students needed to be, outside of ‘showing evidence of reflective thinking’ in an essay, ‘showing evidence of talking about reasoning’ about a clinical problem in discussion, or ‘beginning to show an understanding of’ (and so on) when in reference to ‘thinking about’ a topic. These teachers also understood that each of their students might have been at a different stage of thinking development.

The conclusion that asking the right questions can be central to cultivating student thinking is also about how one dimension of the theory of Critical Being in one person can depend on another dimension in another. In this case, based on tenet 1 of criticality in which I state that a student will need to learn to think in many ways, and about many things to develop their criticality; the cultivation of a student’s criticality might depend on their teacher’s ability to think as part of their criticality. In other words, teachers in the current study used several methods to better cultivate student thinking which centered about their own understanding of thinking.

Thus, in the first analysis chapter, I argue that, as part of developing a student’s criticality: Asking specific questions about thinking can be central to cultivating student thinking.

While asking students specific questions was central to cultivating student thinking in the current study, other methods I describe in this chapter were also closely related to this
method. I explain the relationship between each method, in detail in each section. In other words, how one teaching method might be related to another.

This chapter does not exhaustively explain all methods that teachers used to cultivate student thinking during the current study, as such a report would be outside the scope of this thesis. However, the methods that I do report, I chose because they were effective, interesting and in some cases essential for teachers in the current study to cultivate a student’s thinking.

I identified the teaching methods that I report in this chapter from various data sources: my observations of teachers’ practice and notes I wrote about these, video footage I took of the teachers working in the classroom and reports about their own practice that teachers and I discussed during their individual interviews and research group meetings.

I need to also note that data about students are mainly drawn from their teachers’ reports. For example, I talk about difficulties that some students experienced in developing their thinking during small group work, but I take these reports from their teacher’s descriptions of these difficulties. In such cases, I have no specific data from each student about what such difficulties might have been. Where I use such data obtained by proxy, I am offered confidence in it by the fact that I took steps to triangulate each conclusion between multiple sources.

I discuss the following five teaching methods in the current chapter. In summary:

1. ASKING SPECIFIC QUESTIONS ABOUT THINKING CAN BE CENTRAL TO CULTIVATING STUDENT THINKING

Teachers in the current study used their understanding about thinking (as part of their own criticality) in three ways. These ways were all about being specific about thinking with students. First, teachers would specifically describe to students the thinking they aimed for them to develop. They would then formulate and ask specific questions of students to elicit this particular thinking (e.g. reflective thinking). Teachers would then also offer students specific examples of how they might express their thinking in speech or writing. These methods were central to cultivating student thinking in the current study because, as a result, students learned three important things about their thinking: what thinking they were being asked to develop, what exactly this thinking might entail and how they might use language to express their thinking.
2. **TEACHERS HELPED STUDENTS TO REPEAT THINKING MOVES AND REFERENCES TO IMPORTANT TOPICS AND THUS TO DEVELOP THEIR ‘THINKING HABIT’**

Once teachers in the current study had understood their students to have a sufficient understanding of the thinking the teacher wished them to cultivate (see method 1), teachers then asked them to repeat ‘thinking’ and to ‘think about’ *topics*. Teachers did this with the aim to cultivate students’ conscious thinking ‘habit’. For example, teachers aimed to help students to habitually and consciously think reflectively about their practice and to habitually and consciously *think about* the effect of a patient’s social support on their response to a medical treatment.

3. **TEACHERS USED AN EXERCISE CALLED ‘THE GOOD DOCTOR’ TO HELP STUDENTS BETTER UNDERSTAND WHY THEY WERE LEARNING ABOUT THE THINGS THEY WERE AND IN THE WAYS THAT THEY WERE**

Teachers in the current study used a particular teaching exercise to help students understand why they were learning to *think*, why they were learning to think *about* the things they were, and why teachers were using the *methods* they were. For example, teachers aimed for students to learn to think reflectively by discussing their experiences at a General Practice rather than being told about what it might be like.

4. **TEACHERS IN THE CURRENT STUDY AVOIDED USING THE TERM ‘CRITICAL THINKING’**

Because teachers were specific with students about the thinking they wished them to cultivate (i.e. they told students exactly what thinking they aimed for them to develop), teachers were able to eliminate references to the term ‘critical thinking’ from language used in their practice (e.g. what they said in the classroom or feedback given to students in writing). As a result, teachers reduced significant problems communicating with their students, and other members of their teaching establishment about thinking. For example, teachers were able to avoid confusion about what thinking they wished their students to learn.
5. creating a friendly teacher-student relationship was useful to cultivate student thinking

Teachers in the current study experienced a tension as a result of using some of the teaching methods I describe here. This tension was between whether to carefully guide students to develop their thinking or whether to encourage them to do the work themselves; how much, when and for which students to administer some teaching methods. Teachers identified two features of the teacher-student relationship that were necessary to most effectively negotiate this tension and at the same time effectively administer these teaching methods. These features were that the relationship between teachers and students who worked together to cultivate thinking was ‘friendly’ but also one that could not be of ‘friendship’.

I now describe these five specific teaching methods that teachers in the study developed to cultivate student thinking as a learning outcome.
RESULTS AND DISCUSSION of these five teaching methods

If we are serious that university graduates should be critical thinkers, then we need to provide an educative environment where they can hone their critical skills...[and] understand the nature of critical thinking...

(Golding, 2011, p. 347).

1. ASKING SPECIFIC QUESTIONS ABOUT THINKING CAN BE CENTRAL TO CULTIVATING STUDENT THINKING

The first teaching method I describe is one in which teachers used their understanding about thinking to better cultivate it in their students. As part of this method, teachers used three ways to cultivate thinking, and each way was about using specific language about thinking with their students.

Teachers would specifically tell students what kind of thinking they aimed for them to cultivate. For example, tell the student that they were aiming to cultivate their reflective thinking. Next, teachers asked their students specific questions that would likely elicit the thinking they aimed for. For example, a teacher might ask a question such as ‘I want you to think about how you felt when you first started working on the ward’ to elicit a student’s reflective thinking. Then, these teachers offered their students specific examples of how the student might use language (e.g. in speech or in writing) to express their answers to questions aimed to elicit their thinking. For example, ‘I felt dreadful when I started working on the ward. I was as nervous as hell’.

Teachers understood that these three ways would help students learn to think in a particular way because these three ways would help students learn exactly what the teacher was aiming for: what it was they were being asked to do, what it entailed, and how to express it. These teachers aimed for their students to learn, generally, what Golding (2011) might describe as ‘the nature’ of [critical] thinking.
Teachers’ reasons for developing this teaching method

Teachers developed this teaching method to better cultivate student thinking, but also in response to specific difficulties they experienced when they aimed to cultivate student thinking. One example of such a difficulty was given by a teacher who reported about a student who had attended a whole year of weekly classes in which one main aim was for them to develop their reflective thinking. However, this student showed little familiarity with the term ‘reflective thinking’ but importantly minimal apparent understanding of what reflective thinking might entail. The student also reported that they ‘had never been shown how’ when they made reference to an essay that they had been asked to write, which required them to express their reflective thinking about a work placement in a rest home.

Teachers in the current study came to understand that the various difficulties experienced by this one student were also reported by several others in their classes. Teachers also began to understand that such difficulties were likely, at least in part, to be related to the language they (or another teacher) had used when aiming to cultivate student thinking (even when they avoided using the term ‘critical thinking’, see later).

In particular, teachers realised that their language had lacked specificity about the thinking they aimed for students to cultivate. Teachers understood that a lack of specificity might account for their students’ lack of familiarity with what they were being asked to do, poor understanding about what thinking might entail and also complaints that students had made about assessment tasks for thinking, such as having ‘never been shown how’ when asked to write about their thinking. For example, one teacher reported that when they aimed to cultivate students’ reflective thinking they had been asking students questions such as ‘I want you to think back’ to try to elicit this thinking. However, this teacher subsequently identified that these words were not specific enough for the student to understand exactly what they were being asked to do, to learn to do it well, or to express it.

Another example of language that teachers in the current study identified as lacking sufficient specificity was language that was too complex to elicit the thinking the teacher aimed for. For example, one teacher asked their students to ‘think critically’ and at the same time made reference to a definition of critical thinking that had several components (e.g. see Facione, 1990, which incorporates references to many kinds thinking such as analysis and evaluation, in one definition). After some time, in reflection about their teaching, this same teacher remarked that instead, they needed to:
… be clear about what it [x thinking] is, and ask the question that will get you what you want. These guys are beginners too, and some of the bigger [more complex definitions] ones will just confuse them. You won’t get anything done properly if you use those with year 2 [students].

(Researcher/Jane, monthly meeting).

According to Jane, complex definitions of thinking were of little utility when she aimed for cultivating student thinking because some of her students were yet to learn ‘the basics’ of what some kinds of thinking might entail. The use of complex definitions of thinking would therefore be likely to confuse the student and at the same time offer them little guidance to actually learn about thinking itself.

Teachers in the current study explained how they came to the understanding that students needed help to express their thinking in speech or writing. I talk specifically about this understanding because it seemed to be one of the biggest surprises for teachers in the current study. Their surprise seemed to be centred around an assumption that students who were high academic achievers (as their students might be termed) would already have the language skills to be able to express the kinds of thinking that teachers aimed for at this stage of their training (year 2 and 3). For example, teachers had assumed that high achieving students would be able to express their reflective thinking in writing. One specific example of when a teacher realised they had not been specific enough was when a teacher asked their students to ‘write reflectively’ (e.g. in a short report) after an experiential learning visit, with an assumption that the student would write about themselves and their feelings in it. These students had been taught in ways that helped them understand what the teacher was after, and what reflective thinking might entail, and that to express this thinking was the brief for their report. However, teachers realised that students’ work was based solely on facts about other people and events, with little written about the student themselves. Thus, students had failed to express what their teachers considered to be reflective thinking. Teachers realised that such a failure might actually be a result of neglecting to offer their students explicit examples of what reflective writing might look like.

However, teachers also realised that a failure to offer students specific guidance to express their thinking had implications outside of student learning itself: their failure had implications for assessment of their students. Specifically, teachers realised that they might have awarded
some students a ‘fail’ on written work that asked them to express their thinking, where the ‘failure’ might have instead been more accurately attributed to the teacher’s failure to provide students with specific guidance in how to write about their thinking.

In summary, these quotes show how Jane and Lance came to understand about students needing guidance to express their thinking, and also that they might give a ‘fail’ to a student who, in fact, had not been given the specific guidance that they needed:

Then you have to tell them how it sounds. They have no idea, most of them. I literally had to say ‘a reflective comment looks back in time, is about you and contains the ‘F’ word [feelings]’. Some of them need much more, though, so you could then help them to say things like ‘my supervisor was cross at me, which made me feel very angry…’

(Jane, monthly meeting).

You have this essay, right, which is all about reflective thinking. But some teachers must think their students know how to do it already, ‘cos [because] they don’t show them properly. Other ones, they need to learn how to write it all down too. But some teachers don’t tell them that either and then they fail them on it. It’s just not fair’.

(Lance, personal communication).

Teaching method in detail
I now explain the three tactics these teachers used as part of this method in detail. Teachers:

- explained to students that they would be helping them to develop X thinking, where X was a specific kind of thinking (e.g. logical thinking, reflective thinking) and
- asked students specific questions aimed to elicit thinking of X kind and
- offered students examples of what X thinking might sound like when expressed in writing or speech.

Teachers in the current study reported being better at cultivating student thinking when they used these three tactics. For example, Jane reported introducing into her practice specific questions, such as to ask students ‘can you think back to your first time on the ward and tell me what you were feeling at that time?’ Jane reported that this question, and others (see Table 1) were more specific than other questions she had been using before the study. Jane also reported that she understood that this question could better cultivate student thinking
than a less specific question because it contained specific reference to thinking back in time, to the student as a person, and the student’s feelings. Jane understood these to be important components of reflective thinking for a student to understand, and that her students seemed to ‘get it [understand thinking] much much quicker’ when she used them.

I now offer some more specific examples of what these three tactics entailed, and what exactly teachers thought a student would learn about thinking as a result of each. I use an example about reflective thinking, which was a common aim of classes taught during the study period. Rows in the following table marked 1, 2 and 3 are examples of data that I collected from teachers during the study (e.g. examples that I heard them use during observations of their classes). Rows marked 1a, 2a and 3a describe what teachers understood their students would learn about thinking as a result of the specific words they used.

<table>
<thead>
<tr>
<th>Example of how teachers would refer to reflective thinking they wished to cultivate</th>
<th>‘Today we will be using discussion as one way to help you develop your reflective thinking. Reflective thinking is means thinking back in time to something that has happened, or something you have felt, working out what these things might mean, and thinking ahead to what we might do in the future if something similar happens.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>What teachers thought a student might learn about reflective thinking when they heard these descriptions</td>
<td>That they were going to be learning how to thinking reflectively (as opposed to another kind of thinking)</td>
</tr>
</tbody>
</table>
| Examples of questions that teachers used to elicit student thinking | Tell me what happened?  
What was your part in this event?  
How did you feel at that point?  
Can you think about what it [the interaction] meant to you?  
What do you think you might do next time?  
Do you think this issue is related to any other issue you have experienced? |
What do you think you will do about this issue if it happens again?

| 2a | Examples of what teachers thought a student might learn about reflective thinking when they answered these kinds of questions | That reflective thinking can be about events
That reflective thinking involves the self as a subject of thinking
That reflective thinking can be about feelings
That reflective thinking can connect one event or feeling with another
That reflective thinking needs to also be about what to do next time an issue comes up |
| 3 | Examples of answers to questions teachers used to elicit student’s reflective thinking that teachers gave to students | ‘When I went on the ward for the first time, I felt scared of staff’
‘I think that I might be afraid of staff because of how one teacher used to treat me at school.’
‘What I think I would do about this issue is talk to the staff concerned’ |
| 3a | Examples of what teachers thought a student might learn about how to speak or write about their thinking | That speech or writing that expresses reflective thinking contains the words ‘self’, ‘me’ or ‘my’ and words that make reference to the student’s feelings or emotions. |

Table 7. Examples of specific language used by teachers around thinking when teachers aimed to cultivate students’ reflective thinking
Literature

Much of what I report in this section is supported by other literature, including the difficulties that teachers experienced cultivating student thinking as well as some of the tactics they developed to do it better. For example, Golding reports about difficulties that seem similar to those experienced by teachers in the current study, when aiming to cultivate student thinking:

One difficulty with initiating students into the practice of [critical] thinking is that thinking tends to be invisible, complex, abstract and implicit rather than explicitly articulated. How can students internalise the thinking discourse if they cannot apprehend what this discourse is?

(Golding, 2011, p. 359-360).

There have also been specific reports about difficulties that might result from the use of some language when aiming to cultivate student thinking, in particular explicit criticism of language that students might find ‘opaque’. For example, some report that such language might effectively ‘exclude’ a student from learning about thinking:

…linguistic opacity and unfamiliarity with notions such as critique are key examples of how HE culture and practices can exclude [students from learning].

(Hilsdon & Bitzer 2007, p. 1198).

There are also further reports of other factors that might lead to difficulties cultivating student thinking. For example:

- teachers who intentionally, or unintentionally, talk about thinking in ways that students fail to understand (Hilsdon & Bitzer, 2007) or
- talking about thinking in ways not easily understood by novices to the discipline (Golding, 2011) or
- that some students are simply unfamiliar with the thinking teachers aim to cultivate (e.g. reflective thinking) (Hilsdon & Bitzer, 2007) or
- that some students might naturally think in one way and not another and as a result need more guidance than others to achieve some goals (Wilson & Murdoch, 2013), e.g. some students might find logical thinking easier than reflective thinking.
The first tactic that teachers in the current study used with their students, to be specific about the thinking they wished students to develop, seems to be clearly supported by such literature. It is also supported by other literature in a more general sense. For example, by references to the need for ‘expert thinkers’ to ‘be clear’, as part of thinking: Fisher talks about an expert thinker being ‘clear what they mean’ (Fisher, 2013, p. 9). Although this author talks about a context in which a thinker is generally trying to express what they think (e.g. in discussion), ‘being clear’ seems to echo what teachers in the current study found.

Teachers in the current study were able to identify that they had either forgotten to ‘be clear’ or ‘be specific’ or had not done so because of an assumption they had made about their students. For example, teachers identified that they had assumed that their students would understand what they meant (‘of course they know that I’m talking about reflective thinking!’). To forget to be clear or specific was not best for student learning, nor were the times that teachers perhaps inappropriately used the term ‘critical thinking’ (see also section 4 for a discussion of how teachers better used this term).

The literature is also supportive of my conclusion that using specific questions could be central to cultivating student thinking, and the tactic that teachers developed to do this in class. For example, Paul (1993) argues that a student can construct incorrect ideas of the thinking that teachers aim for, because of any of the reasons given above (e.g. a student being unfamiliar with thinking). Paul also argues that if this is the case, a student might fail to achieve learning outcomes despite the provision of an otherwise excellent environment for cultivating critical thinking.

Asking specific questions to cultivate student thinking is also supported by the work of Golding (2011), who advocates the use of specific questions to elicit student thinking, that he calls ‘thought encouraging questions’. This author also argues that such questions need to be used to form the basis of what he describes as ‘an educative community of critical thinking’ (2011, p. 364) and that a student should be immersed in such a community to best cultivate their thinking. As I illustrate with Table 7, I found that asking a student specific questions to be a good way to help them learn about and cultivate their thinking. Golding suggests that teachers who aim to cultivate student thinking need to formulate their questions around ideas about what an expert thinker might ask themselves:
Isolate and articulate the [critical] thinking. What do critical thinkers ask themselves and others when thinking in these ways? For example, ‘what is an example of that?’ and ‘how do I know?’

(Golding, 2011, p. 361).

In essence, and as Golding also discusses, to ask students specific questions in order to cultivate their thinking looks like what Dewey (1969) refers to as ‘experimental copying’. ‘Experimental copying’, according to Dewey, is a process by which a student begins to learn to think by copying or repeating what an expert teacher does. However, with practice, a student begins to internalise (‘learn’) these processes and better able to think in such a way of their own volition. Wilson and Murdoch (2013) also recommend that teachers use such a method to cultivate student thinking but instead call it ‘modelling’ thinking. Vygotsky (1986) also describes how students can learn from a teacher modelling the thinking they aim for, and that as a result, a student internalises the questions and answers that are common to the ‘community’ which they would like to learn to be a part, e.g. the medical community.

Findings of the current study serve to further confirm that ‘experimental copying’ can be a useful way to help students cultivate various kinds of thinking.

**Contribution to the literature about how we might develop student thinking**

Offering students specific answers to questions they asked about thinking seems to make a more original contribution to the literature about cultivating student thinking than the others. There is thus a relatively new way that a medical teacher might better understand how to help their students cultivate their thinking in the classroom. While it is an idea that can be found in the literature, it seems one that is less often included as part of works that aim to develop ideas about thinking pedagogy (e.g. Golding, 2011). In other words, teachers needed to guide students in how to express their thinking in speech or in writing, as well as being specific about the thinking that they wished to cultivate and asking specific questions.

An example of how this tactic might add to the literature can be made with reference to Golding’s (2011) work. As this author describes, and elaborates in a later work about philosophy and the ‘philosophical thinking moves’ that might be suggested to a student (Golding, 2014) a teacher might encourage a student to develop their *evaluative* thinking by asking a specific question such as “what are some reasons to agree with …?” However,
teachers in the current study would also premise such a question by saying to students ‘we are aiming to cultivate your evaluative thinking’ and then move on to assist students to formulate answers to such questions by offering examples of specific answers like “some reasons I might agree with this statement are X and Y”.

Teachers in the current study understood that offering students specific answers to questions helped them learn to express their thinking, and that they needed this because some might simply have not yet developed the language skills necessary to do so. While the ability of a student to express their thinking in the classroom might also depend on many other factors (e.g. a student’s fear of speaking in the group, see Chapter 6), teachers understood that in many cases students simply needed to ‘find words to express thinking’; in other words, to begin to develop their language skills.

Ritchhart and Perkins (2008) argue that because thinking occurs mostly in our heads, is invisible to others (and at times ourselves), one indication of becoming an ‘effective’ thinker is to be able to move on and make thinking visible through speaking or writing. So, if students have not yet learned to express their thinking, teachers need to help them to do so. Wilson and Murdoch summarise the idea of helping a student express their thinking:

> Like teachers, pupils need to have an understanding of the thinking [that is being assessed] and the language to express it.


As they did with learning by copying teachers’ questions, students in the current study also seemed to undertake what looked like ‘experimental copying’ (see Dewey, 1997) when learning to express their answers to teachers’ questions. I think this was a likely explanation for what happened because teachers reported that some students began expressing their thinking using the same words as those suggested by teachers, then appeared to do this more readily themselves, and with language that was more original, for example, including colloquialisms. Teachers understood the latter to be evidence that students had moved on from ‘copying’ their teachers’ answers and learned to express their thinking themselves. For example, teachers set some written work for students which asked them to express their reflective thinking, and remarked that ‘some of the first [written] work I got back pretty much had my own comments [answers] in it. They just repeated things like ‘I felt upset by this’ (Lance). However, Lance also reported that over the academic year, his students’ work
changed and they seemed to be ‘writing in words that seemed a bit more like their own’. For example, Lance talked about how he could tell that the student had begun to develop their thinking, and written in their own words ‘because nobody else would have that turn of phrase. This student simply must have written this, it was from an angle that no-one else would have taken’.

In summary, the results of the current study that I report in this section suggest that the better-known tactic of asking ‘expert questions’ (see Golding, 2011) is an important one when aiming to cultivate student thinking, but should also necessarily be accompanied by two other tactics: for a teacher to clearly indicate what thinking they wish students to develop, and also for teachers to offer examples of what the thinking they wish to cultivate might look like or sound like in speech or writing. Together, these three tactics seem to better cultivate student thinking.

On a theoretical level, this finding shows that cultivating student thinking as part of their criticality could depend on the development of thinking as part of the criticality of teachers.
2. TEACHERS HELPED STUDENTS TO REPEAT THINKING MOVES AND REFERENCES TO IMPORTANT TOPICS AND THUS TO DEVELOP THEIR ‘THINKING HABIT’

This section is about how developing student thinking as a conscious habit could depend on the development of thinking in their teacher. Teachers did this so that a student would then move on to be able to habitually think well in their clinical work. This conclusion is again about Tenet 1 of the theoretical dimension of criticality of a student and Tenet 1 of Criticality in a teacher. Teachers encouraged students to develop a conscious habit of ‘thinking’ and ‘thinking about’ by encouraging students to repeat thinking processes and references to the topics they wanted students to think about.

With this tactic, teachers ensured that students undertook the ‘grunt work’ (as one teacher called it). Teachers repeatedly engaged students in tactics to develop their thinking (e.g. questions to help them to think reflectively or use clinical reasoning), and to think about topics, over and over throughout the academic year:

You just have to keep going over it and over it [the thinking teachers wished students to develop]… It’s one of those things that has to become natural, and a habit, but you’re not going to get there… just doing it once or twice.

(Researcher/Jane, group meeting).

When they [the students] get out into clinical practice, they are going to forget all of this unless they’ve learned to do it as a….like a habit, I guess. All the stress and that, of clinical work will make them forget to do any of it at all. They will likely forget to think about all the stuff we [in HIC]16 teach them too. You know, to think about the person [patient] as well and not just to think about their broken bits…

(Lance, personal communication).

Relationship with other teaching methods in the current study

Once students had begun learning to think, most needed a substantial amount of practice in order to form a more ‘habitual’ practice. For example, one teacher reported about a student who had apparently reflected well in one of the first classes that they tried reflective thinking. The next time the class tried it, the student had difficulty remembering what they needed to

16 Healthcare in the Community paper, part of the MBChB program at the University of Otago.
do, such as to remember to think about their feelings. Teachers understood that further repetitions of using thinking processes would help students do it better. They also reported instances that a student had said they had ‘done’ kinds of thinking or topics (i.e. been taught it) but that it was evident that they were unable to think well in certain ways, or unable to easily think about a topic.

I also think this tactic method had a supportive relationship with the first that I describe in this chapter as it seemed an important part of what teachers needed students to do with ‘experimental copying’ questions and answers to questions. For example, a student who learns to express their thinking with their ‘teachers words’ needs to necessarily repeat this expression to a point in which this language was internalised (as Golding, 2011, describes) and becomes a more natural part of what they do.

**Teachers’ reasons for developing this method**

Teachers developed this teaching method in response to their experiences in class in which their students would fail to easily and effectively engage in kinds of thinking if they had done so just a few times, and, similarly, only think about a limited range of topics, especially ones that were new to them (e.g. ethics), sensitive (e.g. sexuality) or difficult to talk about in other ways (e.g. intercultural issues). For example, a student might fail to think about themselves when thinking reflectively, or to think about the effect of alcohol on a patient’s mental health when discussing a patient’s case.

Teachers also developed this method in response to a particular concern they had about their students’ future practice. This concern was about when students would enter practice in the hospital setting and experience the demands and stresses of clinical life. Teachers understood, from their own experiences, that ‘thinking’ and ‘thinking about’ could easily be precluded by these stressors (e.g. having multiple demands on one’s time or attention). The teachers’ aim was to cultivate their students’ thinking to a point that they would routinely engage in it despite the stresses on them. Teachers understood that cultivating student thinking to a point that it would be habitual would offer the student a better chance of thinking well in their future practice.

One example of habitual thinking for good clinical practice was given by a teacher in the current study and was about working in the operating theatre. Lance described the hustle and
bustle of major surgery in the operating theatre and that in the more stressful moments he understood some staff would forget to ‘think about’ certain important things of practice such as communication with the patient or to think reflectively about their practice. He also reported that some others who, in contrast, had reported that they been taught in ways that made it their habit to reflect on their practice and that as a result rarely forgot to do so. While I have no further information of who received what training, or why others failed to think reflectively, this example illustrates what teachers aimed for when they taught in ways to cultivate their students’ thinking ‘habit’.

Teaching method in detail
I use two examples to illustrate how teachers in the current study used repetition to help cultivate students’ conscious ‘thinking habits’ in terms of kinds of thinking and topics that they might think about.

The first example is around reflective thinking and the use of ‘reflective templates’ as part of one paper some of the teachers in the current study taught. Reflective templates were a hard copy document which contained a series of questions to be answered by each student after experiential learning opportunities such as visits to community services. Specifically, these questions were aimed to elicit a student’s reflective thinking: ‘how did you feel during the visit to X?’ Ultimately, the aim of these reflective templates was to encourage students to engage in, and begin to routinely use, reflective thinking: to cultivate their ‘thinking habit’.

However, the number of templates required to be filled out over the year had been reduced by staff in charge of the curricula, due to concerns about tutor workload. Thus, the occasions for students to engage in ‘repetition’ of reflective thinking were also reduced. To counter this reduction, some teachers reported that they still used the templates beyond this lesser stipulation. They reported doing so because they viewed less frequent use unlikely to cultivate students’ thinking habits and even went as far as to say that for some students, if they did not engage in thinking repeatedly, the teaching they had given the student so far might ‘be worthless’.

An example about how teachers used repetition to cultivate students’ thinking habit about a topic was about the ethics of clinical practice. According to one teacher, students would often

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17 Template = a hard/electronic copy sheet with standard questions to encourage reflective thinking
‘forget that ethics was an important part of what they need to think about’ (Eleanor) in relation to diagnosis and treatment of disease (e.g. ethics in relation to genetic testing for cystic fibrosis). In response, Eleanor ‘added in’ discussions about ethics over and above those prescribed in formal teaching documents (e.g. workbooks about clinical cases), and did so over the rest of the academic year. She reported that some topics just needed to be revisited ‘again and again’, at least at the start of a student’s training, in order that they ‘bring it [ethics] up’ themselves, or, more specifically, that they showed evidence of habitually ‘thinking about’ these topics that would serve them well in clinical practice.

**Literature**

The need for a student to repeatedly engage in thinking processes in order to develop a thinking habit is supported by other literature. For example, in one author’s work about asking students ‘expert questions’ (as I also talk about in section 1 of this chapter) there is specific reference to the need for students to understand what is involved in thinking, but also that they need to do so *regularly*. This author recommends that teachers and students need to:

…regularly and frequently ask and respond to these [questions to elicit thinking] questions in lectures, tutorials, laboratories and assignments.

(Golding, 2011, p. 261).

Thus, we can understand thinking (however defined) needs practice to learn to carry it out effectively, but also that a thinking habit might take repetition to learn. This idea, in part, is also supported by the work of Vardi (2013) who reports that ‘expertise’ in critical thinking (in other words, being able to think critically as a matter of habit) would be very unlikely to be developed as a result of a one-off event such as a workshop about critical thinking. Similarly, Wilson and Murdoch (2013) describe how developing thinking (in a general sense) can just take time.

As did the teachers in the current study, Golding (2011) specifically argues that it is the *repetition* of ‘thinking questions’ (see section 1) to elicit specific thinking that is essential to cultivate a student’s thinking habit. While teachers in the current study were not at liberty to cultivate ‘thinking’ in many other teaching contexts such as the lecture (etc., as Golding suggests might help a student even more) they reported trying really hard to best cultivate students’ thinking habit with the time and resources they had.
Contribution

Repetition seems to be a well-known way to cultivate students’ thinking habits, for example for teachers to cultivate a student’s habit of thinking reflectively. However, results from the current study also suggest that repetition might be a useful tactic for teachers to employ where they aim for students to habitually ‘think about’ a topic, at least at the outset of study. Repetition to develop a habit of thinking about a topic can be found in the literature, but seems less well documented than a habit of thinking. For example, repetition can be found as one feature of what is called the ‘spiral curriculum’ (e.g. see Harden & Stamper, 1999). The aim of a spiral curriculum seems to be to help students understand a topic in more depth with each iteration of learning about it (e.g. for students to understand more about the physiology of a body system over time).

Results of the current study suggest that repetition was a useful way to help students begin to ‘think about’ a topic in a habitual way; in other words, teachers found that repetition was a useful way to help students remember to think about a topic as part of their clinical practice. While the process of repetition is arguably simply about developing a familiarity with a topic, teachers used it as a way to help a student think about topics that will form an important part of their future work.

At this point it should be noted that a ‘habit’ might be understood in various ways. For example, habit might be understood as a practice that is helpful, such as one that helps us to carry out our daily acts (a habit of brushing one’s teeth), or, habit could be understood to be problematic. One author (Carlisle, 2014) calls a problematic habit a ‘curse’ and that it might be so because a habit might also lead us to be passive and unthinking (such as a habit of doing as others say). In the case of what teachers in the current study aimed for, I use the term ‘habit’ in the more positive sense of these two examples: teachers aimed for a student to grow a habit of ‘thinking’ and ‘thinking about’ to be able to do these when under pressure in the clinical environment.

While teachers in the current study said that at times their students reported getting a little ‘bored’ with repetition, teachers also reported that they also began to more frequently and voluntarily ‘bring up’ topics as part of discussions. Teachers attributed this increase in frequency to having undertaken sufficient repetition of ‘talking about’ topics. Thus, I conclude that repetition of topic helped students understand the idea that a particular topic
was important to consider as part of their thinking processes, and ultimately important to their effective practice as a doctor.

3. TEACHERS USED AN EXERCISE CALLED ‘THE GOOD DOCTOR’ TO HELP STUDENTS BETTER UNDERSTAND WHY THEY WERE LEARNING ABOUT THE THINGS THEY WERE AND IN THE WAYS THAT THEY WERE

In this section I describe an exercise that teachers in the current study used to help students develop an awareness of the context around their learning; in other words, to understand what their medical education was aiming at, and why, for clinical practice. Specifically, that they were learning to think well, in order to practice as a doctor. This conclusion is about Tenet 4 of the theoretical dimension of criticality in the student and Tenet 4 of criticality in a teacher; about how the development of an awareness of context in a student can depend on the awareness of context in a teacher.

This was an exercise that teachers found fun to administer, that added to the camaraderie within the classroom but was less essential to cultivating student thinking than the first two methods I describe. Teachers used this exercise to help students understand why they were learning to think in the ways and to think about the topics they did, and why they were learning as they were (e.g. why they were learning to think reflectively, why they were learning to think about the ethics of reproduction or why they were learning by discussion rather than lecture).

**Exercise in detail**

Teachers used a whiteboard for the Good Doctor exercise. The teacher first asked one student in the group to draw a doctor on the board, and used this (stick/cartoon) figure as a prompt for the rest of the exercise.

For the first part of the exercise, the teacher asked their students what kinds of thinking an ‘Average Doctor’ might need to use as part of their practice, and what they might need to think ‘about’ (topic). They also asked students how an Average Doctor might learn. Students’ answers to these questions were such that they attributed logical thinking, and thinking about ‘scientific’ facts (e.g. physiology) to this doctor, and learning from text books, lectures or

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18 Introduced by one teacher and taken up by others during the study period.
laboratory experiments. This teacher would then ask which student would wish to train to be an Average Doctor. Of course, students seldom volunteered for such training!

The teacher then moved on to ask a second question about the stick figure, which was about a ‘Good’ Doctor; teachers made a deliberate contrast between the practice of the Average Doctor and the Good Doctor. The teacher asked students ‘what does a Good Doctor need to think like, and think about? How might the Good Doctor learn these things?’ What I saw in class was that students were able to attribute a more varied range of kinds of thinking (e.g. reflective and creative thinking as well as logical thinking and clinical reasoning) to the Good Doctor and could identify many more topics that they would need to be able to think about: how best to communicate clearly, a patient’s personal context and community health issues (etc.). Students were also able to identify that such a Doctor might best learn via more varied means than the Average Doctor: students could identify that they might best learn by experiencing practice in the community, talking with clients, learning from their peers rather than learning exclusively from books or lectures.

In summary, this exercise helped students to understand what various parts of their medical education were aiming for; thinking well for good practice. As Kuhn also summarises:

People must see the point of thinking if they are to engage in it.

(Kuhn, 1999 p. 23).

I cannot further substantiate why each student or student group apparently responded so well to the Good Doctor exercise. I might loosely suggest that the exercise helped students understand their thinking, for example, as described by Kitchener (1983). However, teachers in the current study simply reported that their students seemed to engage more willingly than some of their past students in tasks asked of them, as a result of employing this exercise. I am thus offered only a basic understanding of how the exercise might have worked. In this quote, Jane summarises her understanding of why the exercise seemed to work:

\[19\] Unlike a more customary reference to ‘Good’ as perhaps virtuous, moral or upright, this teacher made reference to ‘good’ by way of comparison between ‘good’ and ‘average’: a doctor who ‘practices well’.
If you start them off with understanding what they think medicine is, then they can work out for themselves what they need to learn and essentially, why they are here in these [small] groups and why you will be teaching the way you are and with the stuff [topics] that you are. It just helps them get on board with it.

(Jane/researcher, monthly meeting).

The Good Doctor exercise was taken up and tested by other teachers over the first weeks of the study and some continued to use it after the study, especially at times that they introduced something ‘left field’ or rather new for some students. They aimed for the students to ‘be on board’ (Jane’s words) with why they were doing what they were doing, and better engage in it. For example, some teachers employed the exercise prior to the students’ visits to community alcohol and drug agencies. As part of the exercise used for this purpose, teachers asked students ‘why would a Good Doctor need to learn about alcohol and drug agencies?’ ‘how might the Good Doctor learn about alcohol and drugs in the community?’

**Teachers reasoning for developing the Good Doctor exercise**

Teachers offered some reasoning around how they thought this exercise worked. Teachers thought the exercise helped their students understand what the practice of medicine would entail. More specifically, teachers understood that some of their students might (at least initially) have held a view of medicine that was rather ‘narrow’ and thus could not understand about some of the things they were being asked to do. After the quote I use above, in which Jane talks about her student’s ‘way of understanding about medicine’, she went on to explain that she meant the philosophical framework with which her students seemed to understand medical practice.

Students in the current study would likely have little idea about philosophical frameworks around which they might view medical practice, or about which their current medical education and curricula might be formulated. However, teachers in the current study felt many students, at least in the first few months of medical school, tended to view medicine in a ‘biomedical’ or what they explained as a ‘scientific’ sense. Teachers also thought that for some students, this view was either result of, or had been reinforced by, the student undertaking a foundational year in the health sciences prior to entering medical school. Teachers attributed this reinforcement to be a result of the exclusive ‘scientific’ focus of the
foundational year which teachers thought often led students to believe that the medical practice that they would be moving on to learn about after it would also be a strictly ‘scientific’ endeavour. For example, the teachers reported that students on the foundation year would learn about chemistry and biology in relation to the human body but little about human behaviour.

Thus, teachers in this study understood that for students to get the most from their medical education, which was developed around a broader model of medicine, students needed to understand medical practice and medical education in reference to a different framework. The framework used on the MBChB programme in the current study has been termed biopsychosocial medicine. This framework is now understood to be one that better allows for an understanding of effective modern day practice (Wilson & Cunningham, 2013). For example, the biopsychosocial framework for understanding medicine better allows an understanding of the treatment of chronic disease, a patient’s symptoms that might exist without an apparent pathological explanation and for the effects of the Doctor-patient relationship on healing.

A resource that explains more about what teachers in the current study aimed for with this exercise is The Good Doctor: What Patients Want (Paterson, 2012). The ‘Good Doctor’ exercise was developed by one teacher in the current study in response to what they had read in this book, which was an extensive examination of key competencies (including thinking) that the author reports to be required to be a Good Doctor in the 21st Century. Such competencies can be viewed against a philosophical framework such as biopsychosocial medicine. Teachers also talked about another book that they had referred to when developing this exercise (Being a Doctor, Wilson & Cunningham, 2013) and that these authors also wrote about the competencies that doctors need to develop for good practice, and that, in their view, should therefore be currently taught as a part of medical education. According to these authors, those in clinical practice and medical education now more commonly refer to such competencies that a doctor needs to develop with reference to the biopsychosocial framework. While the paradigm of biopsychosocial medicine is yet to be universally accepted in Western medicine, these authors note the presence of ‘paradigmatic tension and debate’ (p. 64) between some members of the profession, that they interpret to be indicative that a change might be underway.
At Otago, the context for the current study, the biopsychosocial framework has begun to replace the biomedical framework in the medical curricula over the last few years. For example, students are explicitly told that this framework underpins what they are being taught and the curriculum has also markedly changed from one that includes mostly ‘scientific’ topics, to one that now includes more diverse ‘non-scientific’ topics such as behavioural medicine. As McNaughton also explains, the scientific view of medicine is vastly useful to those in practice, but more effective practice can requires the doctor to aspire to skills that might sit outside of this ‘scientific’ paradigm:

…doctors need to understand their patients through a scientific knowledge of how the body works…But this scientific approach needs to be modified in the clinical situation when dealing with the individual patient. A ‘humane’ doctor is required, with…understanding…interpretative ability and insight, and governed by ethical sensitivity, to apply this scientific evidence and skills to the individual patient. The good doctor must also develop a sensitivity in her dealings with patients which is based on a knowledge of herself and her own values and imaginative insight into the problems and contexts of patients’ lives.

(McNaughton, 2000, p. 23).

In contrast, here Lance describes how he thought that some of his students might hold a rather ‘scientific’ view of practice as a doctor:

…they [the students] think it’s all [medical practice] about science, and I thought those days were over. Medicine is a way more varied and nuanced beast than that, we know this. It’s about people [the client], what they do, their family and everything, not just this body-as-machine [biomedicine] business. We have to help our students to understand that, at the beginning, else we’re buggered.

(Lance, group meeting).

Teachers in the current study understood that at the outset of their medical education some of their students were likely to consider a physician’s expertise to require them to think in ways, and to think about topics limited to a client’s physical ailments (e.g. clinical reasoning aimed at diagnosis of disease). Teachers also reported that a student with this understanding would also understand a medical education to inform their practice as one that would only include learning to think in some ways, and to only think about some things, and learning to do these
things also in a more limited ways (e.g. by lecture). With this exercise, teachers hoped to help students better understand what they were being educated for, and why.
Literature
It is hard to identify more specific literature that describes exercises similar to the ‘Good Doctor’. It is also unclear how this exercise ultimately helped students to better develop their thinking. Without further information (e.g. from students about how they felt it helped them better learn) I can simply suggest the seeming success of the exercise was because it helped students begin to understand about ways of learning and thinking that they might not have encountered before, and their relevance to the medical education they had begun. Such an understanding might be related, in part, to a student’s personal epistemology at the outset of study. However, without further information about how this exercise worked to help students, I cannot further substantiate this idea.

Contribution
The Good Doctor exercise seemed a useful way for a teacher to help their students understand and engage in various learning tasks, especially ones that a student might not yet fully understand the point of. Teachers in the current study found the exercise exceptionally useful in cases where they were worried whether students would fail to understand the thinking, topics or teaching methods they aimed for or used. While the mechanism for the success of this exercise is as yet unclear, this exercise seems a useful addition for teachers to add to their classroom practices in which cultivating student thinking is their aim.

However, this exercise does confirm an interesting point about the theory of Critical Being: that a teacher might use the Good Doctor exercise to help a student to understand the contexts (biopsychosocial medicine) in which they will be thinking in practice. In my literature review (Chapter 2), I talked about what some authors might consider uncritical thinking and the theme that seemed to run through these ideas was about context or purpose of thinking. For example, there seemed a theme that was about how one author might criticise creative thinking and call it ‘uncritical’, but another value it and base their practice as a professional (for example) on it. This theme led me to understand that most kinds of thinking and attitude might be valued in different contexts. This idea is supported by Huit (1998) who remarks that some kinds of thinking are appropriate to some contexts but not others. I have little evidence to substantiate how a student comes to understand their context, or one which they are learning for, but this topic would benefit to research further, for example by gaining more insight and information from the perspective of a medical student.
4. TEACHERS IN THE CURRENT STUDY AVOIDED USING THE TERM ‘CRITICAL THINKING’

I make this observation based on an understanding that a teacher who has clear, well developed ideas about the thinking they wish to cultivate in their students will be able to express clearly what these are (see Section 1). To do so would also entail the avoidance of the potentially confusing term ‘critical thinking’. This conclusion is also about Tenet 1 of the theoretical dimension of Criticality in the student and Tenet 1 of Criticality in a teacher; about how developing student thinking can depend on the development of thinking in their teacher.

Teachers who wished for their students to develop particular kinds of thinking (e.g. reflective thinking, reasoning, logic) stopped using the term ‘critical thinking’ in their teaching practices. For example, they avoided making reference to the term ‘critical thinking’ in the classroom and in their writing to students (such as feedback on a student’s work). Teachers in the study also reported that they would also have liked to also remove the term from formal documents, the editing of which was out of their remit. For example, they wished to remove reference to the term ‘critical thinking’ made as part of learning outcomes for students, from student workbooks, curricula and documentation used to evaluate their teaching.

This method was one of the first identified as part of the current study, was used throughout it, and teachers reported that it was exceptionally useful. What I mean by useful is that teachers reported their students seemed to come to a better understanding of what they meant by ‘thinking’ when the teacher avoided calling it ‘critical thinking’ and ultimately students seemed to more easily and effectively develop the thinking teachers aimed for.

This method might be understood to be a result of one tactic in method 1 because in this, teachers needed to be specific with students about the thinking they wished to cultivate (e.g. ‘we are learning reflective thinking’). As a result, there was no need for the teacher to make reference to ‘critical thinking’. A teacher could then also minimise problems that might have arisen due to uncertainty about what critical thinking might be, or disparate views between student and teacher that might mean they talk ‘at cross purposes’ (Lance) (see Literature Review, Chapter 2, for more detail about such difficulties). This method is also a support for method 1 because if teachers eliminated the term ‘critical thinking’ from their teaching practice, they were able to move on to operationalise the specific thinking they aimed
students to cultivate; to use more specific descriptions of thinking and questions to elicit from students exactly what it was they were after.

**Teachers’ reasoning for developing this teaching method**

Teachers gave several reasons for developing this method, which might be summarised under the following categories: teacher-student communication, teacher-peer communication, association between the term ‘critical thinking’ and a person’s academic ability, prudence, and teacher evaluation.

**Teacher-student communication**

One reason teachers in the current study gave for avoiding the term ‘critical thinking’ in their small group practice was that they had difficulty communicating with their students about what thinking they were aiming for when they used the term. For example, any of their students might have had an idea about critical thinking that was different to their teacher.

Teachers were particularly concerned that one consequence of a difference in ideas about what critical thinking might entail could be that a student believed they had learned to think [critically] when they had not, because the teacher had aimed for a different form of thinking. For example, teachers worried that a student might have understood critical thinking to be logical thinking and believed they had learned to think this way, even though a teacher had aimed for reflective thinking. Here, John and I discuss our worries that our students would not learn what it was we aimed for if we called it ‘critical thinking’:

Jane/Researcher: … a student would think, ‘I’m doing critical thinking!’…So we’ve got to be very clear about what we mean…otherwise none of them will know how to do it [to think reflectively etc.] There’s lots of talking about it … lots of talking about it but actually…

John: We all use the words ['critical thinking’] to mean different things

Jane/Researcher: … you could be doing one thing and I could be doing another

John: And we both call it critical thinking

*(John, Interview).*
Teacher-peer communication

Teachers gave a second reason for avoiding the term ‘critical thinking’, which was slightly aside to their classroom practice, but nevertheless had an impact on it: they wanted to communicate better with their peers.

Teachers in the study had heard other members of staff express different ideas about what critical thinking might entail, in conversation with each other. For example teachers had heard a paper Convenor and a Learning Advisor talk about ‘critical thinking’ but ultimately they had actually meant very different kinds of thinking to each other. While such a conversation in itself might not impact a teacher’s practice, the lack of further discussion about what these staff had meant, might. Teachers understood that a difference in meaning might have a flow-on effects that might mean these staff would to find it difficult to communicate to teachers what exactly they wished students to learn, and how this might best be done.

Potential association between understanding the meaning of the term ‘critical thinking’ and a person’s academic ability

The second reason that teachers in the current study gave for avoiding the term ‘critical thinking’ was because they understood that a person’s ability to understand what ‘critical thinking’ might mean might be associated with their intelligence or academic ability. As Lance summarised, ‘Of course you should know what I mean by critical thinking. You’re clever and you’re working in the medical school’.

According to teachers in the current study, this association could potentially influence teachers’ quality of work because, as a result, some felt precluded from discussing the topic of critical thinking with others. For example, teachers reported they felt like they could not ask others what ‘critical thinking’ might mean because they were afraid they would be judged badly for not understanding about this concept, or because they were aware their views might not be shared. Thus, teachers felt precluded from using others to help them develop their ideas about, and improve their ways of cultivating the thinking of their students.

Teachers in the study thought that to avoid using the terms ‘critical thinking’ would also avoid the association between intelligence and understanding the terms. They understood that
a teacher could then move on to talk about exactly the thinking they meant, discuss it and come to understand how to teach it more easily.

**Prudence**

Another reason that teachers in the current study gave for avoiding the term ‘critical thinking’ was that they wanted to be prudent. Teachers wanted to avoid an ultimately fruitless or difficult conversation with students about what critical thinking might be. What I mean by ‘fruitless’ or ‘difficult’ is that teachers reported experiences of students who seemed unsure about what critical thinking might entail, that some would have different ideas about it, but also that they thought it likely some would have not yet begun to consider the concept or develop ideas about what critical thinking might entail. Thus, avoiding the terms ‘critical thinking’ meant teachers could more fully devote their limited time to cultivating particular kinds of student thinking.

To summarise some of the reasons that teachers gave for avoiding the term ‘critical thinking’, Lance’s quote below contains specific references to two of these: the diversity of definitions used around critical thinking by Faculty staff, and his reluctance to talk about critical thinking with others:

> Well, it’s ['critical thinking'] one of those phrases I’ve heard bandied around for many, many years…I’m kind of left with the impression it is something that means many different things to different people and that its probably quite difficult to define. I have my own ideas on what it might be… but I *daren’t tell anyone.*

(Lance, Interview).

**Literature**

Teachers’ omission of the term ‘critical thinking’ in their practice, as part of the current study, seems rather contrary to some current literature and also popular trends in educational practice. For example, ‘critical thinking’ is still commonly referred to as a learning outcome in higher education and references to the term are often found in curricula and other documentation, such as student workbooks. For example, a reference to critical thinking can be found in the following ‘Graduate Profile’ from our own institution:
CRITICAL THINKING: ability to analyse issues logically, to challenge conventional assumptions, to consider different options and viewpoints, make informed decisions and act with flexibility, adaptability and creativity.

(Otago, 2013, p. 2).

To omit the term ‘critical thinking’ from teaching practice also seems contrary to some other reports about the term in the literature. For example, that the term continues to be featured in the literature from many professions, and so much so that some report the words to have become ‘fashionable’ and likened to other ‘buzz’ words (Moon, 2009). The term ‘critical’ is also frequently used in connection with other terms (e.g. critical appreciation) as a marketing aid or to lend an intellectual ‘air’ to a product (e.g. a book) (Tucker, 1996; Barnett, 1997).

What teachers did in the current study seems contrary to some of the literature. However, they reported experiences of the diversity of ideas associated with what ‘critical thinking’ might be. I mentioned the diversity of ideas about critical thinking as part of my argument for this thesis, and described some co-existing but contrasting ideas from the literature as part of my literature review. For example:

‘Critical thinking in higher education’ is a phrase that means different things to many people… Does it mean a propensity for finding fault? Does it refer to an analytical method? Does it mean an ethical attitude or a disposition? …Critical thinking in higher education can encompass debates about critical pedagogy, political critiques of the role and function of education in society, critical feminist approaches to curriculum, the development of critical citizenship, or any other education-related topic that uses the appellation “critical.” Equally, it can be concerned to develop general skills in reasoning—skills that all graduates might possess.

(Davies, 2015, p. 41).

I think that the omission of the terms ‘critical thinking’ as part of the current study represents an explicit realisation by these teachers of the many difficulties they experienced cultivating student thinking in the classroom and which they attribute to the complexity of the literature. Such experiences are echoed by the work of other authors. For example, Browne & Freeman (2000) explain that ‘reference and deference’ to the idea of critical thinking is common in practice (e.g. in conversation, as an educational objective) but specific teaching methods that aim to help students learn to think critically in the classroom are not so common. While the
last point is now more arguable, as there have been many recent suggestions of how we might better cultivate student thinking (e.g. Golding 2011) the former seems still to hold firm in relation to what I found in the current study.

Teachers in the current study avoided using the term ‘critical thinking’ as they understood these words were unconducive to cultivating students’ thinking. Avoiding the term also allowed teachers to move to use other ways to cultivate thinking as part of their classroom practice.
5. TWO FEATURES OF THE TEACHER-STUDENT RELATIONSHIP WERE USEFUL TO NEGOTIATE A TENSION EXPERIENCED AS A CONSEQUENCE OF SOME TEACHING METHODS USED TO CULTIVATE STUDENT THINKING

This section is about two features of the teacher-student relationship that teachers identified as useful to their practice. These features were that the relationship was friendly, but not one of friendship. These features were useful because a friendly relationship allowed a teacher to get to know their student and understand how they might need to be taught (e.g. which teaching method they would need) and a relationship that was not one of friendship was useful because a teacher could then effectively administer some of the teaching methods that they needed to, including disciplinary measures if they were needed.

These two features arose because of the complexity of the teachers’ practice, and also as a result of the very different methods that they needed to use (e.g. to help students to get to an answer, but also to let them get the answer themselves). The complexity of classroom practice is noted in the literature and it has been said that complexity might exist in many ways. As Shulman notes:

Classroom teaching: ‘is perhaps the most complex, most challenging, and most demanding, subtle, nuanced…activity that our species has ever invented’.

(Shulman, 2004, p. 504).

Teachers in the current study reported that they experienced a tension as part of the complexity of classroom practice. They reported that this tension was as result of having to decide what to do for which student and when: each student had different needs. As I argue in my introduction, such complexity can mean that effective classroom teaching is not a matter of a teacher simply administrating (even proven) teaching methods but also successfully negotiating this tension. While teachers needed to provide students with most of the teaching methods and tactics that I report in this chapter, they also needed to find a way to teach each student in a way that they needed when they needed it.

It is hard to pinpoint which tenet in the theory of Critical Being this method might be classified under. This is because this method was less definitely about ‘what a teacher did’ and more like ‘how they did it’ (see also Chapter 6). However, I include a description of this method here as there seems to be a connection between the teacher-student relationship that I identified and how teachers administered the other methods I describe here. To more fully pin down what this method might be classified as would be useful for further research and is
probably indicative of a relationship between dimensions of the theory of Critical Being which is yet to be identified.

I will now describe a little more about the tension that the teachers experienced, why it existed and the two features of the relationship teachers identified, and in some cases developed with their students that helped them negotiate it. I also report my findings in relation to the literature.

**Tension**

For teachers to experience a tension about what teaching method to administer when aiming to cultivate student thinking is a normal phenomenon. Such a phenomenon has been explicitly identified as an:

…”existential problem involved in teaching by inquiry: balancing the two seemingly incompatible aims of enabling students to get the answers and enabling them to inquire for themselves.

(Golding, 2013, p. 92).

I can illustrate the tension experienced by teachers in the current study by explaining their use of two methods used by teachers in the current study. These methods (see sections 1 and 2 of the current chapter), could be described as enabling students to get the answers to questions that aim to cultivate their thinking, but also enabling them to be able to do this themselves (here, develop a thinking habit). These are both different ways of teaching, which have different aims, and both important for cultivating student thinking. Teachers experienced a tension between these two ‘seemingly incompatible aims’, but also, at the same time, that they needed to be able to effectively administer each method.

For example, teachers needed to be able to know which teaching method a student needs, and when. One teacher talked about a postgraduate student who had already learned to think reflectively but had not been given opportunity to practise it themselves. The teacher understood that this student might need one teaching method more than another. In this case, teachers thought that they might need to ask the student fewer questions to elicit their thinking (because they already learned to think reflectively), but offer more chances to practice their thinking and develop it for themselves. Teachers described another of their students as ‘a rather inflexible logical thinker’ who needed more guidance being asked questions to learn to think reflectively.
Effective administration of teaching methods

Teachers also reported that they needed to be able to effectively administer these teaching methods; failure to provide either would mean a student’s thinking was not best cultivated. For example, teachers understood that failure to provide opportunity for students to think ‘for themselves’ might mean a student fails to learn to think independently of the teacher or to develop a habit of thinking in a particular way:

If you guide them every step of the way, they will never learn how to do any of it [formal thinking] by themselves. They’ll need those skills when they are out on their own on the wards and they need to find stuff out. They will also need to be able to reflect and stuff on their own without a bit of paper to help them. It’ll be hopeless if you do it all for them.

(Lance, monthly meeting).

Such a failure is also described by Burbules, who indicates what might happen if a teacher fails to help students ‘learn on their own’:

Leading learners does not help them learn how to go on: It may solve the immediate problem of moving them to a particular outcome, but does not by itself provide them with the ability, or the confidence to find the way on their own.

(Burbules, 2000, p. 184).

Teachers in the current study understood that to cultivate student thinking, they could not simply administer either teaching method (i.e. to use questions to elicit student thinking and then ask them to repeat thinking moves to develop their thinking habit) but needed to provide each student with both. In some cases, this would mean that teachers needed to be ‘firm’ with students (and at times significantly so) to get them to ‘do the grunt work’ which practicing their thinking required. For example, they had to get a student to engage in thinking ‘over and over and over again…..you have to be quite firm at this point, else they will just miss out’ (Lance, personal communication).

Teachers identified two aspects of the teacher-student relationship that would help them both negotiate the tension between teaching methods and also to be able to administer them effectively.
Two features of the teacher-student relationship \(^{20}\) that allowed teachers to negotiate a tension in teaching, and effectively administer teaching methods

Teachers in the current study talked about two particular features of the teacher-student relationship that they identified or, in some cases, developed as part of the study. These features were that the teacher-student relationship:

- was a friendly one
- was not one of friendship.

The first feature allowed teachers to negotiate the tension that they experienced as part of cultivating student thinking, and the other to effectively administer teaching methods to cultivate student thinking. While there are likely to be many more features of a relationship that best allow student thinking to be cultivated, two features figured prominently during the current study.

**Friendly relationship**

The teacher-student relationship needed to be friendly so that teachers were able to talk easily to their students and be in a good position to learn certain things about them. For example, they needed to learn what they had studied before and how they had been taught. Learning these things about their students meant teachers in the current study were better able to make choices about teaching methods that would best suit a student. For example, understanding a student’s educational background might mean a teacher could judge whether they needed to be guided more than another to express their thinking.

**Not a friendship**

Teachers reported that the second feature of their teacher-student relationship was that it was not one of friendship. They had developed this understanding on the basis that ‘friendship’ would not allow teachers to easily be ‘experts’ and administer methods such being ‘firm’

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\(^{20}\) The idea of ‘relationship’ might have been discussed in a Chapter about critical action, as relationship might be understood as ‘how teachers chose to act’ around students. However, I include it here because of the apparent direct connection with how teachers best cultivated student thinking.
with students or ‘keeping the pressure on’ – and at times using discipline as part of
cultivating their ‘thinking habit’. Teachers reported that helping students to develop their
thinking habit often needed to be accompanied by such measures especially if a student was
reluctant or bored. Teachers reasoned that a relationship based on friendship with a student
would not easily allow them to administer some teaching methods because a ‘friend’ might
find it harder to ‘be firm’ with a student:

   Jane: You’ve just got to be able to tell them [students] to pull their heads in\(^\text{21}\) and get
   on with it from time to time, that’s our job. It’s not a very nice bit of it, but can you
   imagine if we didn’t? They would just learn to be spoon fed every little thing and they
   would never be able to do it themselves. It would be so much harder if we were all
   buddies and we were afraid of saying that kind of thing.

   Lance: I know. You know, I see X [staff member] tries so hard to be friends with
   everyone, probably wishes they were still a student themselves, but it means that they
   [the student] won’t ever learn what they need to. It’s painful to watch but it’s true.

   (Jane/researcher, conversation with Lance).

**Contribution**

The teacher-student relationship has been discussed in the literature, with various recent calls
for more research into different aspects of it. For example, to what extent a positive or
negative relationship between teacher and student might entail or how this might influence a
student’s adoption of the ‘hidden curriculum’ in medicine (Haidet & Stein, 2006).

What we found in the current study is supported by literature which calls for effective
teacher-student relationships to be more closely based on ‘knowing students as people’. Such
an approach to teaching has been termed ‘humanism’; in other words, that to best teach a
student, a teacher needs to gain an understanding of who they are as a person. For example,
Gillespie talks specifically about needing to understand a student’s particular learning needs:

   Because knowing a student fostered their professional and personal growth, enabled
   the teacher to understand students’ expectations, learning needs and preferences, and

\(^{21}\) NZ/European colloquialism that means, loosely, to ‘tell someone off’
was essential to understanding and adjusting the ‘fit’ in the student–teacher relationship, it is imperative that teachers seek to know students as whole persons. (Gillespie, 2002, p. 574).

There have also been studies into what makes a successful relationship for learning and there have been suggestions that this requires a teacher is in possession of qualities such as emotional investment, flexibility, the ability to work collaboratively, but all with an approach that is said to respect and support the student for ‘who they are’ (Westberg et al, 1992; Bain, 2004; Kern, et al, 2005).

The finding that teachers needed to negotiate a tension as part of their teaching practice is not a new one (see Golding, 2011) and neither is the finding that teachers needed to understand their students as people in order to cater to their learning needs. However, in the introduction to this thesis I talked about a relationship that is congruent with learning, and that this best happens with a ‘functional’ relationship and that the teacher is ‘approachable’ (e.g. see Biggs & Tang, 2011). This is what we found in the current study. However, results also indicate more specifically that to best cultivate student thinking, teachers and students should not develop a relationship of ‘friendship’ as friendship would likely preclude the effective administration of some teaching methods that aim to cultivate a student’s thinking.
SUMMARY OF CONCLUSIONS
This chapter is about how the cultivation of student thinking can depend on ‘what a teacher does’. I found that asking students specific questions about thinking can be central to cultivating their thinking and that teachers used other methods (e.g. to help students repeat thinking processes) as they thought appropriate to help students do this. In theoretical terms, I found that the cultivation of one tenet of the theoretical dimension of criticality in a student might depend on the development of the same tenet of the criticality of a teacher.

Results of the current chapter suggest that the instigation of a teaching method (e.g. discussion to cultivate reflective thinking), even when proven in practice, might not necessarily lead to the cultivation of student thinking. Doing so was dependent on more factors than have previously been acknowledged. For example, we might also need to help a student formulate their answers to questions that we ask in discussion.

I think that cultivating student thinking is dependent on several factors because there was evidence that without such direction (e.g. in the form of explicit questions to elicit student thinking) some students seemed to develop inaccurate ideas about what thinking might entail and fail to achieve learning outcomes. This conclusion is supported by recent literature about cultivating student thinking. However, results of the current study were also indicative that some students would benefit from their teachers also offering a specific explanation of the thinking that they were aiming for in class, and examples of how a student might best express their thinking in speech and writing.

Another conclusion I drew was that teachers also needed to use practices that allowed students to rehearse and develop their thinking into a habit. This conclusion is supported by recent literature about repetition in learning. Results of the current study show that repetition might be a useful method for teachers to use when they wish their students to simply engage in thinking about topics. The Good Doctor exercise was a helpful way for teachers to help students understand why they were being taught to think, and the topics they were to think about, and doing so with teaching methods that were being used. Teachers understood that this method was useful for some students who seemed to, at least at first, err towards a philosophical framework or explanation for medical practice (biomedicine) that has now begun to be replaced by another (biopsychosocial medicine). As a result, such students did not yet understand why they were learning what they were, how they were.
Another conclusion about teaching methods was that teachers found it useful to avoid reference to the term ‘critical thinking’. Teachers did this because of various features of the literature about critical thinking (e.g. its complexity and the number of definitions of critical thinking) but also because teachers wanted to avoid confusion in their practice. For example, teachers wanted to avoid confusion when communicating with their students about what they wished them to learn to do. While the complexity of the literature is acknowledged by some authors, this practice seemed in contrast with recent literature which suggests that critical thinking terms should still be featured as part of learning outcomes and curricula, and popular references to the terms that aim to lend an ‘academic air’ to media.

I also drew a conclusion about two features of the teacher-student relationship that teachers found allowed them to best cultivate student thinking. Better cultivation of student thinking seemed to depend on a teacher being friendly with their students but they could not become friends with them. These features were developed and identified because of the need to negotiate a tension between the uses of two teaching methods. Teachers did this by forming a relationship which allowed them to understand their students’ exact learning needs and at the same time effectively administer methods to cultivate student thinking. For example, to push students to ‘do the grunt work’ when developing a thinking habit.

From this section I make one final conclusion about how we might best cultivate student thinking. This conclusion is based on my initial finding that the criticality of a student might depend on the criticality of a teacher. This conclusion is that to cultivate a student’s thinking, a teacher needed to be an ‘expert thinker’ (as Golding, 2011, might put it) or, as I more specifically frame in the current study, have a well-developed ability to think as part of their criticality. Such a conclusion seems ‘common sense’ but is worth considering in the current context of professional development for teachers who are asked to cultivate student thinking in medical education (and perhaps other contexts) who may have not formally ‘learned to think’ themselves; it is worth ‘thinking about teachers’ thinking’ because, as I talked about in my literature review, professional development that aims to help teachers cultivate student thinking is currently neither universally accessible nor compulsory. While there will be opportunities for some to learn about thinking and develop their own criticality, for others there might be fewer chances to do so. Evidence from the current study suggests that as a

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22 Please note, neither I nor teachers in the current study advocate abandoning the pursuit of a definition of critical thinking or the pursuit of more ‘complex’ disciplined thinking processes than I report in this text.
result, some such teachers might fail to help students cultivate their thinking as a learning outcome.

According to teachers in the current study, their ‘thinking abilities’ (i.e. that they can think well, and know how to teach it) were often ‘assumed at interview, and assumed again throughout the whole programme, as if they [employers] don’t want to offend us by suggesting we need to learn how to think, and how to teach it’ (Lance, personal communication). Such a conclusion has many potential implications for the practice of staff development and is also suggestive of several ideas for further research. I summarise these ideas in Chapter 8 as well as any limitations I identify of this study.
Chapter Six

How teachers do it

Critically managing emotion can be essential for cultivating student thinking and values
INTRODUCTION

In this chapter I move on from talking about methods that teachers in this study used to cultivate student thinking (what teachers do) to how teachers do it. What I mean by how they do it is how teachers administered minutiae of their practice as part of methods (see methods I describe in Chapter 5) with which they aimed to cultivate student thinking. My conclusion is that:

To critically manage emotion can be essential for cultivating student thinking and values.

This chapter is about three smaller conclusions; three ways that teachers critically managed emotion as part of their teaching. I further explain what I mean by the general term ‘manage’ in each of these three sections, but in brief, two ways (e.g. to mitigate a student’s fear, or to controlling their own emotion) allowed teachers to cultivate student thinking, and one (e.g. by anticipating and mitigating potential negative emotion in the student) which allowed them to cultivate student values.

In theoretical terms, I found that cultivating student thinking as part of their criticality and that cultivating a student’s values as part of their critical being could depend on a teacher’s critical action. I describe the more specific relationship between tenets of the theory of Critical Being, in student and teacher, in each section of the chapter. I came to some of these smaller conclusions during the analysis of results that I present in Chapter 5. The three parts of Chapter 6 are, in summary:

A teacher mitigating student fear can be essential to better cultivating student thinking

Teachers mitigated the fear that students experienced as a result of teaching methods they used with the aim of cultivating their thinking.

To control a teacher’s negative emotion can be essential to better cultivate student thinking

Teachers used their peers to gain an understanding of their own emotion about their students, to control their emotion and to make decisions about teaching that would cultivate student thinking.

To anticipate and mitigate potential negative student emotion can help cultivate student values

Teachers anticipated likely negative student emotion and used their understanding of this emotion to inform how they would talk about, and discuss students’ values. Teachers in the current study framed their discussion to mitigate negative emotion that a student might experience in response to talking about values, in order to better cultivate them.
RESULTS, ANALYSIS AND DISCUSSION in three sections

1. A TEACHER MITIGATING STUDENT FEAR CAN BE ESSENTIAL TO BETTER CULTIVATING STUDENT THINKING

This conclusion is about how a teacher mitigated their students’ fears in order to cultivate the students’ thinking. In this study, there was significant evidence to suggest that without a teacher stepping in to manage student fear, otherwise well-tested and effective teaching methods might fail.

In theoretical terms, this section is about how teacher used their critical action to cultivate the criticality of a student. In more detail, teachers observed Tenet 1 of their critical action (that there were conflicts between the actions that they might take) and that they used Tenet 2 (chose the more practically constructive outcome to inform their action) to cultivate Tenet 1 of a student (criticality: ways of thinking).

Student fear that I talk about in this section was reported to be associated with the various teaching methods that teachers employed when they aimed cultivate student thinking (see Chapter 5 for examples of some of these). For example, some fears were related to working in the small group (speaking in the group) or other more specific methods such as being asked questions to elicit thinking (fear of making a mistake). For some students, teachers reported that to mitigate student fears was essential for students to move on to develop their thinking as a learning outcome.

To introduce the first way that teachers critically managed emotion, I first talk about why I chose to report about student fear, and then I discuss some ideas from the literature about fear that a student might experience as part of education, student fear as part of a medical education, and also some ideas that have been suggested about how teachers might manage student fear. I do this because it is important that the reader understand these ideas, and also so that what I write about students and teachers in the current study makes sense; to explain ideas amongst the examples I give might make them less clear.

Why I talk about managing student fear as part of this thesis
I report about managing student fear for several reasons, but primarily because doing so was essential for the optimal learning of some students; ‘how teachers did it’ played a big part in the development of the thinking of some students. The conclusion that teachers needed to
manage student fear in order to cultivate their thinking thus forms a fundamental part of my overall thesis. Other reasons that I report about the management of student fear are around an interrelationship I note between one dimension of the Theory of Critical Being and others; utility, student diversity, clinical practice, because teachers in the current study felt ill-equipped to deal with student fear, and reasons to do with student wellbeing:

**The connection between a teacher’s critical action and a student’s criticality development**

I report about managing student fear because it is one illustration of the relationship between the teacher critical action and the development of student criticality. In the current study, critical action of the teacher to manage student fear (see later for more detail) was a major factor in cultivating student thinking.

**Reasons around utility**

Methods that teachers developed as part of the current study seemed exceptionally effective in practice and could help students who might otherwise have failed to achieve some learning outcomes. In particular, evidence suggested that teachers who managed student fear were able to avoid some significant and ongoing problems (e.g. chronic problems with group dynamics) and also disciplinary procedures that might have not been entirely appropriate for what the student was actually experiencing.

**Reasons around increasing student diversity**

For a teacher to understand how to manage student fear seems to be logical and necessary in the face of the increasing diversity of students they need to teach. Because of this increasing diversity, encounters that small group teachers have with student fear are likely to increase.

By diversity I mean that students who undertake medical training at Otago are becoming increasingly different to each other, and with these differences, teachers report, the likelihood of a student experiencing fear might be increasing. This difference is in relation to many factors, but teachers in the current study noted in particular that this would include a student’s educational background, geographic and ethnic origins. One example of this increasing diversity is that students are now much more often from a rural background or a family that contains no health professionals – whereas the urban family and ‘Doctor as parent’ were once
very common medical student demographics (Quaye & Harper, 2009). Lance explains about the students in the current study:

I reckon that what we have to do for each of these students is getting more and more complicated and more of them are scared of what we do [in these classes]. Say, that girl there, she’s terrified of talking to me, and that one there won’t say ‘boo’ to any of the others either. And [student name] seems to really struggle with her words and seems embarrassed, or something, about that. And this chap here, he seems to have been brought up in a family that the parents won’t tolerate being questioned by the child so never talks to me. Well, that’s all I can get out of him so far. So he’s scared too. It’s so much more work than we used to have to do. It’s only going to get worse.

The students are great, it’s not about them, but it’s like our job is so much different to what it used to be.

(Lance, IPR).

Teachers in the current study reported feeling an increasing demand that they tailor their classroom practices to cater for different students, and also that their student’s fears seemed at times to be associated with these differences.

**Reasons around preparing a student for clinical practice**

Managing student fear is also important because teachers in the current study understood that when they did this, they might teach their students more than just how to ‘think’. For example, teachers in the current study reported that when managing their student’s fears, they would also teach their students how to manage the emotion of their future clients. This observation has also been made by others. For example, some (e.g. Benbasset, 2012) argue that a teacher of students in a ‘caring profession’ is in fact morally obliged to manage the emotion of their students; to help students better learn what is actively being taught and to teach them about a vastly important aspect of their own practice. Benbasset (2012) also argues that because managing fear is essentially what students will need to do with their clients as part of their clinical practice, a teacher’s failure to do so (e.g. to tell a student to ignore their fear) would be incongruent with one of the primary aims of learning to be a doctor:
…it is impossible to ignore students’ distress and still teach them to empathize with patients.

(Benbassat, 2012, p. 527).

Shapiro also supports the idea that a student will need to learn to manage the emotions of their patients:

Medical students must learn to respond effectively to the emotions of their patients: First, students should be aware of and able to identify the patient’s feelings in any given situation; next, they should be able to convey that they hear and understand, yet do not judge, the patient’s feelings; and finally, they should be able to help the patient work with his or her emotions in ways that advance, rather than impede, the best possible clinical outcome based on the patient’s values and desires.

(Shapiro, 2011, p. 327).

Thus, it could be argued that if a teacher effectively manages their students’ emotion, the student might learn to think and learn to care.

**Teachers in the current study feeling ill-equipped to manage student fear**

Some of the teachers in the current study reported feeling ill-equipped to manage a student’s fear (see also hooks, 2010 for other examples of how a teacher might feel ill-prepared to manage a student’s emotion). I observe their feeling of being ill-prepared mainly by making a comparison with how these teachers reported feeling able to manage some other student needs. For example, those students who they understood to need ‘pushing out of their comfort zone’ to learn (see Dewey, 1997); teachers seemed to have a vast number of ways that they had already developed to help such students. However, to learn to manage student fear took a substantial period of testing and encouragement as part of the current study to help teachers develop effective methods with which to manage their student’s fears. Such a substantial period of testing we attribute to teachers being unaware of the gravity of a student’s fear, and the lack of understanding that a student’s bad behaviour might be related to their fear.

Therefore, to manage student emotion seems to be important for a teacher to understand and learn how to manage.
Talking about emotion in learning - an emerging field

Literature about managing student fear in the classroom seems rarer than that about managing some other issues in learning, and talking about student emotion in the small group is still considered to be rather a marginal topic (Paterson, 2010). However, to talk about emotion in the small group classroom is more common that it once was. For example, emotional intelligence (EQ) exercises are now commonly included as part of small group work with the aim of helping medical students explore and develop a sense of their own emotion in relation to the clinical context and how a patient might feel (Wilson & Cunningham, 2013). Medical educationalists now seem to better understand that:

Today, a good doctor must have a solid fund of knowledge and sound decision-making skills but also must be emotionally intelligent…

(Paterson, 2010, p. 18).

One way that emotion has become better featured as a topic of discussion in the small group is as part of reflective work in medical teaching (e.g. reflection on experiential learning, see Schön, 1987). However, over the last two decades there have been reports that a student who openly exhibits emotion might still be criticised for this and labelled ‘over emotional’ (as described by Boler, 1999) and thus find it hard to talk about in the group (Winston et al, 2012).

Student wellbeing

Fear seems to be an important issue to consider in relation to a student’s overall wellbeing and the teaching methods developed as part of the current study offer one way that Faculty staff might help some students better preserve their wellbeing during their medical education and prepare for clinical life. For example, fear experienced during a medical education has been reported to contribute to short- and long-term negative consequences for students. Such consequences can include the student’s learning (e.g. general disengagement from their career path) or their mental health, e.g. depression (Dyrbye, et al, 2005). Ways to preserve a student’s wellbeing are now rapidly becoming incorporated into medical education programmes and are often seen as a moral obligation of an institution that understands its students will experience stress as part of their education and will also go on to enter a profession in which they are also likely to experience high levels of stress (Wilson & Cunningham, 2013).
What some authors say about the fear a student might experience as part of education

Fear might be thought of as a ‘normal’ phenomenon for humans. As a result, one might assume that fear is also normal for a student to experience:

Fear and anxiety have always been companions of the human race, regardless of society or cultural epoch. Individuals…have faced a variety of fears; some based on superstitions or religious beliefs, while others could be interpreted as very real threats to person or property.

(Ewart, 1986, p. 33).

That a student might experience fear as part of their education, and in relation to a teaching method is also a well-documented phenomenon. For example, Palmer (2007) talks about how a student might naturally feel fear as a result of a discussion in the classroom:

Students…are afraid of failing, of not understanding, of being drawn into issues they would rather avoid, of having their ignorance exposed or their prejudices challenged, of looking foolish in front of their peers.


There are two phenomena that are related to the conclusion that I make here, but that are not the focus of this section. First, that a negative emotion might precede, or lead to learning (see Dewey, 1997). For example, a feeling of discomfort that one feels might lead to learning about what is making the person uncomfortable. A student might also experience fear that is deliberately engendered by a teacher. For example, fear as a result of being criticised for expressing a particular opinion (hooks, 2010) or anger as a result of being ‘made a fool of’ (Gan & Snell, 2014).

In this section I talk about how student fear might lead to a failure to engage in the learning tasks that we ask of them, and what teachers in this study did about it.

The relationship between student fear and engagement in a learning task

In this study, I found that a student might be present in the classroom, but their lack of engagement can mean that they fail to learn from the teaching method used. This phenomenon is supported by other literature. For example, Biggs and Tang (2011) state that a
student’s fear can lead to their lack of engagement in tasks we ask of them in the classroom because a scared student might feel an intense need to ‘exit the situation’ when faced with classroom tasks.

Lack of engagement, caused by a student’s fear can be particularly marked when a student is in a smaller group of students (Quaye & Harper 2009), which was the context for the current study. Tiberius (2003), in particular, reports that fear is in the ‘top 10’ reasons why a student fails to engage in a teaching method employed in the small group (e.g. fail to engage in a discussion) and also why a student might fail to interact with other students or their teacher.

In the current study, teachers found that some of their students apparently failed to engage in learning tasks asked of them with the aim of cultivating their thinking because of fear; teachers reported that they confirmed such phenomena with the students concerned. Thus, I found that a students’ fear could mean that they missed opportunities to develop their thinking.

At this point, I need to explain what I mean by student engagement. Engagement is a student’s willingness or ability to participate in tasks, in this case, which their teacher sets for them in the classroom. I use a definition of student engagement that seems to be in line with what might be called a behavioural perspective (e.g. as described by Kahu, 2013). I use such a definition because teachers in the current study reported that student fear apparently led to their failure to take part in some of what was asked of them in class, e.g. tasks such as debate or discussion, at times in spite of a more general willingness to learn. While lack of student engagement that teachers reported as part of the current study ranged from an ‘out and out’ refusal to take part in a task, to ‘sitting in on discussion but not contributing much’, it is essential to understand that some student’s fear meant they missed opportunities to develop their thinking.

What were medical students afraid of and why?
Fear can be a normal human experience, and thus one that is normal for students to experience as a result of a teaching method (Ewart, 1986; Palmer, 2007). Teachers in the current study were able to identify that their students were apparently afraid of:

- looking foolish
- appearing academically less able than their peers
• revealing their feelings
• getting answers ‘wrong’
• speaking in the group situation
• speaking to a teacher or
• having and/or expressing an opinion that was different to that of others.

I explain more about some of these fears later on in this section. What was interesting about these fears is that teachers seemed to mistakenly assume that a medical student would be more likely to experience such fear in relation to other teaching methods. For example, they assumed that a medical student would be more likely to feel fear in relation to what might be considered more ‘extreme’ teaching methods, such as the use of a cadaver as a method to teach human anatomy. This assumption, in my opinion, partially accounted for the delay that the research group experienced in ‘diagnosing’ some student’s fears (see later for detail). However, on closer examination, some students clearly reported experiences of fear in relation to teaching methods used in the small group, and with which teachers aimed to develop their thinking. As Claxton summarises:

The involvement of emotion in learning, especially any [teaching method] that involves personal risks of the kinds described, is inevitable.


In other words, any negative emotion can be a natural result of some teaching methods because of the risks to a student involved in taking part in these tasks.

**Exacerbated fear and the medical student**

Teachers in the current study identified several reasons why a medical student might experience fear more intensely than some other students in higher education. Teachers understood that this intensity might result from several factors, some outside of the immediate small group classroom, which might exacerbate the fear that the student experienced inside it. \(^{23}\)

\(^{23}\) I cannot substantiate exactly what each student in the current study was scared of, outside of teachers’ reports. I did not collect this specific information. However, teachers seemed confident about what their students had described and explained it well. Where I use a
For example, teachers in the current study understood that some students might experience more intense fear because they found a teaching method exceptionally new (e.g. learning by experiential learning after having learned by lecture only). Teachers also reported that some students experienced such newness when transitioning between a foundation year and medical school (e.g. a health science first year: HSFY, for some a necessity for entering medical school). The reactions of some HSFY students to the new teaching methods they experienced in medicine seemed notorious amongst teachers in the current study.

Teachers in the current study also suggested that some medical students might also experience fear that was exacerbated as a consequence of their high academic achievement. The student that Lance reports, here, as appearing ‘cross’, later revealed to another teacher his fear of failing the course:

   He couldn’t get over the fact that he didn’t get a distinction. He couldn’t understand how someone like him [a high achiever] didn’t get one… He was quite cross. I think it really scared him, that he might actually fail at something. He just hadn’t done it before.

   (Lance, email conversation).

Teachers in the current study also suggested that fear of failure might be worse for some high achievers, in comparison with others, because they would likely lack experience of failure. Teachers seemed to base this view on a belief that a student who has achieved highly would generally be pleased to do so, and would therefore associate learning, and the methods that a teacher might use, with positive emotion. Teachers suggested that lack of familiarity with fear might then make it harder for students to recognise or manage it and increase the likelihood they exhibit transference behaviour (e.g. belligerence, see later for more detail about this phenomenon).

Teachers in the current study also suggested medical students might experience worse fear than some other students because of the financial and personal risk associated with undertaking a medical education (see also Kahu, 2013). Teachers reported being aware that some stressors outside a student’s immediate classroom seemed to also affect fear experienced in it: for example, that fact that medicine is an extremely costly double degree
programme means that undertaking it has financial risks for a student and their family. A medical career is associated also with potential for personal kudos (e.g. respect from community members), high salary and also high parental expectations, especially next-generation doctors. These factors are rather peripheral to students’ learning processes in the classroom, but teachers in the current study understood such fears likely to exacerbate other fears.

According to Sandars et al (2014), fears, such as a fear of failure, can be common in the medical student population. General stressors on a medical student from outside of the classroom might exacerbate a student’s fear that they experience in it (e.g. fear of failure might be exacerbated by a student’s financial problems) (Robotham & Julian, 2006; Kahu, 2013). It has also been reported that, as we found in this study, different students’ ways of reacting to, and coping with fears can vary greatly (Sandars, et al, 2014).

**What students in this study did when they felt fear**

In the current study, we saw some medical students exhibit behaviours that we understood as the ‘need to exit’ that is described by Biggs and Tang (2011). Some students simply failed to engage in what we asked of them in class: they were quiet, or seemed to be daydreaming. Students also told us about their fears, e.g. that they were afraid to speak in front of other students. However, we also saw students exhibiting behaviours that at first seemed unrelated to fear but that we were able to later substantiate as fear. For example, we found that some students got cross in class, and when we followed up this behaviour with a private conversation with them, we found out that they were scared, and that this was at the root of their behaviour. Thus, in the current study we experienced what Sandars et al (2014) also report as a ‘range of ways’ that students reacted to fear.

However, some of the more extreme ways that students reacted to their fear as part of this study were more ‘physical’. For example, some students verbally challenged their teachers. According to some, fear-related behaviours such as these can also be common (Ewart, 1986). This author notes that fear can indeed manifest in student behaviour on a spectrum from quietness (e.g. lack of participation in a discussion) to talkativeness, and at the extreme, irritability or hostility. As I describe in more detail later, some of the more extreme behaviours in the current study were the cause of some exceptional difficulties experienced by teachers in the current study.
Literature about how teachers might manage student fear in the small group

The small group can be an important part of a student’s medical education and a vehicle that is chosen to specifically cultivate their thinking or values. It is increasingly acknowledged in the literature about education that the small group can be an important part of what might be called ‘congruent’ teaching with these aims. It is also increasingly acknowledged that to teach a small group effectively, a teacher needs expertise in administrating the particular teaching methods they might use in it (Dent & Harden, 2013; Golding 2011; see also Chapter 5). For example, it is acknowledged that small group teachers need to develop expertise in asking students the questions that best help them to develop their thinking as part of small group work (Golding, 2011).

However, literature that offers teachers specific ideas about managing student fear associated with teaching methods used in the small group is harder to find. Some authors (e.g. Shapiro, 2011) even argue that despite recent increases in talking about managing patient emotion as part of medical education (e.g. a patient’s emotional response to a disease) student emotion is still rarely a focus in the classroom. This author also expresses the opinion that despite the increase in talking about patient emotion, a more common approach to a student’s emotion in medical education is still one that encourages a student to ‘distance themselves’ from what they might be feeling. Such an approach is in contrast with what teachers in the current study chose to do, which was to acknowledge and actively manage student emotion.

Specific ways to manage student fear can more readily be found in literature that makes reference to teaching methods that might more deliberately (not maliciously) induce student fear (e.g. methods that aim to develop teamwork with outdoor pursuits): one author argues that management of fear in such instances can be undertaken by staged de-sensitisation such as repeated exposure and modelling of coping behaviours (Ewart, 1986). This literature seems somewhat lateral to that about medical education, but I think it is relevant because some of the methods that this author talks about using to manage student fear were very similar to those used by teachers in the current study. It is also suggested that students who have a fear of speaking in a group (which might occur as frequently as one in six students) can be managed by offering them instruction in speaking skills and repeated practice in the context that makes a student most scared (Shanahan, 2013).

There is even less advice to be found in the literature about students who might present to the teacher with more extreme behaviours (e.g. belligerence, see Ewart, 1986) related to their
fears. In the current study, we experienced some extreme student behaviours that, after some inquiry, we found to be related to fear. Lack of advice for teachers about this kind of behaviour I deduce to be because it can be hard for a teacher to make a connection between such behaviour and its true cause, as we experienced in the current study. There is a general acknowledgement in a good-sized literature about ‘problem’ students in small groups; that they should be identified as soon as possible in order to reduce ongoing problems and stress levels (e.g. Steinert, 2013) but specific reference to a potential cause for the behaviour itself or what a teacher might exactly do to manage it seems limited. For example, one suggestion is that a teacher might try to determine the reasons for a ‘hostile or problem’ student’s behaviour and that all group members might try to find a resolution for the students behaviour, or that the hostile student might be asked to leave the group (Kitchen, 2012). However, this author does not connect the student’s behaviour with a cause or suggest how a teacher might specifically manage the behaviour. Asking a student to leave is, of course, a valid option where bad behaviour seems intractable, but as small group attendance can be compulsory for a medical student, such a tactic would be a last resort. Teachers need to be able to explore other options in order to improve learning for everyone.

I now report some more findings from the current study about student fear experienced in relation to teaching methods used in the small group: how the research group came to understand that student fear needed to be managed, specific methods teachers employed to manage it and what findings might mean for teacher practice in medical education. I have already talked about what teachers in the study understood their students were afraid of, and that, for some, they understood some of these fears might have been exacerbated. I present a summary of conclusions at the end of this chapter, which I again summarise in Chapter 8, alongside recommendations for practice that I base on these.
**How the research group came to understand about student fear**

The idea that students might experience fear in relation to tasks aimed at cultivating their thinking emerged from discussions in the research group (see Chapter 5). We expressed concern that despite implementing tasks and methods we thought congruent with our aim of cultivating student thinking, some students still failed to engage in them. We wondered which aspect of our practice we might improve to address this concern. After some time, we began to consider less about ‘what we did’ but more about ‘how we did it’.

A full understanding of why our students failed to engage in tasks we set for them only emerged in hindsight. As I have already briefly described, a fuller understanding was elusive because our students tended to express fears in one of two ways. For example, some students expressed fear directly to a teacher, or in class, e.g. ‘I’m scared of you’ or ‘I dread talking in the group’ but some instead expressed it indirectly via generally bad behaviour (e.g. expressed fear by deliberately disrupting a discussion). One way was relatively easy to spot but the other exceptionally difficult and required significant interpretation. This latter expression, teachers interpreted to be a result of transference. Transference as described by teachers in the current study is a phenomenon by which a person might experience one emotion, but react to it in a way that ‘transfers’ the emotion to another, sometimes in a behaviour that seems unrelated to the initial emotion.

Teachers in the current study understood that transference could account for some cases in which they had experienced a lack of, or tenuous apparent relationship between a student’s behaviour and what they were afraid of. For example, teachers found that some students refused to engage in class (e.g. stayed silent), criticised the ‘system’ (e.g. the medical curriculum or administrators of it) or made harsh comments in written work (e.g. ‘this essay is pointless’). I deduce such phenomena to be a result of students’ attempts to ‘feel better’ by transferring fear to another person or object (e.g. from themselves to the teacher). Thus, in our classrooms we experienced expressions of student fear that Ewart (1986) might describe as being associated with ‘high danger’ learning tasks; for some students, talking in the group was apparently terrifying. While I do not attribute all ‘bad’ or difficult behaviours to fear, I report these accounts as I managed to substantiate them with data from students.

Given difficulties accurately interpreting some presentations of student fear, our research group had little initial understanding of what was going on for some of our ‘difficult’ students or groups, but needed to begin to manage whatever it was going on. Thus, we initially
developed our ways of managing student behaviour with only a partial understanding of what we were dealing with. To do so felt quite uncertain, but at the same time we all seemed to feel reassured that our methods were valid because in some cases our ‘troublesome’ students apparently better engaged in what we were doing. However, and as I report in detail in Section 2 of this chapter, teachers who experienced more extreme student behaviours (e.g. refusal to take part) needed additional support to best manage their students’ fear (if fear was found to be the cause of the problematic behaviour).

As a result of a discussion I had with my supervisory team, the research group were able to more specifically identify that some student’s fears were expressed as transference. Members of this team asked me to return to the data to find specific incidents of what I had thought was ‘troublesome’ student behaviour. This suggestion led to a re-examination of some accounts of conversations between teachers and I, in which they reported about such students. After discussion of these conversations with the research group (for quality control), the supervisory team, research group members and I concluded student engagement could be precluded by student fear in relation to our attempts to cultivate their thinking, and that some students might express their fear in ‘bad’ behaviour.

While I rely substantially on teachers’ reports of their students’ feelings in this section, I am offered confidence in these reports by the significant experience of teacher participants, their apparent holistic understanding of their students and a rich set of data that I could substantially triangulate between sources.

I now describe specific examples of student fear reported by teachers in the current study.

**Specific examples of student fear reported by teachers in the study**

Teachers reported that more direct expressions of student fear, such as students saying ‘I’m scared’, were most likely to happen where a friendly relationship had developed between teacher and student (see also Chapter 5, for a discussion about the nature of a friendly relationship). For example, teachers learned about students’ fear from group discussions, and ‘Progress Report’ meetings. Teachers reported hearing from their students comments such as:
• ‘I’m scared to bits of talking in the class. What if they laugh at me?’
• ‘If I try to answer and I’m wrong, they will think I’m a fool. It’s terrifying’
• ‘I daren’t open my mouth in case she [another student] snaps at me’

(Various sources).

Indirect expressions of student fear as transference were harder for teachers to correctly interpret. This example taken from my own practice (recorded in my Journal of Reflection) shows how hard I had found such interpretation. However, the behaviours that I had initially thought were about a student being cross, or my neglect to explain the essay requirements thoroughly, turned out to be as a result of this student’s fear:

One student has just blamed me when she received a ‘bare pass’ on an essay rather than the ‘good’ or ‘distinction’ she apparently expected. She said ‘you didn’t tell us what to do, it wasn’t clear’. She might have been right, so I have carefully reflected on my practice around the instructions I gave for that essay. I was reassured that other students had found these clear and informative.

However, this student has continued to make similar comments over several weeks, about many tasks. I started to feel rather cross about this and have discussed the issue with Lance (see later in this chapter) but I initially didn’t do anything more about it in the hope she was experiencing ‘settling in’ issues and that she would improve naturally. However, I began to dread her class, which was unusual for me, so I decided to have a private chat with her.

In discussion she revealed that she found ‘non-scientific’ work (her description of the content of classes I taught) daunting and was afraid of failing the programme as a result. I reassured her that these feelings were normal and we discussed ways that she might approach the next task that I had set for the group. After our chat she complained less, seemed to better accept her marks and she began to seek more advice on her work.

Teaching method in detail
I now describe, in several small parts, specific methods teachers in the current study developed to manage their students’ fears. Teachers hoped to:

… learn to address our students’ fears rather than exploit them [and]…move toward better teaching.


Relationship between methods
Each method I describe in this section contributed in part to the overall general aim of managing student fear. The relationship between each method was that (i) was essential for the others, which teachers then followed with (ii). Note – as with other methods, there is also a significant interrelationship between methods in this section, and other methods that I describe in Chapter 7 (e.g. how a teacher might care for their students).

Diagnosis of student fear
To manage student fear, teachers in the current study first took steps to correctly diagnose it (because diagnosis was not always easy some teachers needed to seek help from their peers to do this; see Section 2). Teachers began diagnosis by finding out about their students on a personal level. By personal I mean teachers took steps to find out about:

- students’ cultural, ethnic background, and places they had lived
- information about their immediate family and prior education to include Doctors as parents, first at university etc.
- students’ current emotions about their learning – how students felt about what they had studied before (e.g. how did you feel about lectures?)
- how students felt about beginning small group work, experiential learning?

(Various data sources).

To elicit this information from students, teachers in the current study tailored ‘ice breaker’ exercises that they used at the outset of the academic year. Teachers also made use of
‘progress report’ meetings that they held during the year. In these, some also asked students specific questions to elicit their feelings about learning in the small group context. Teachers would also organise additional chats with a student if they talked about fear during group work, or behaved in ways the teacher suspected to be related to fear.

I am offered confidence in this method by which teachers tried to find out information about their students that would reveal their fears. This is because some teachers had developed, used and tested and had ‘success’ with this method prior to the study, and also because there was evidence at the study’s outset that some understood that information they gained from students could be useful to help them teach better. I am also offered confidence in this method by evidence that some teachers quickly grew to better value these meetings as an important part of their practice. For example, teachers reported that progress report meetings were an excellent source of information about students’ fears, and began to work outside paid work hours to ensure these meetings and other conversations with their students were undertaken to their satisfaction, often outside recommended time-slots of 10 minutes to talk with some students for 20 minutes or more.

Getting to know students on a personal level also meant that teachers were also able to pre-empt fear for some of their students. They did this in response to a tacit understanding that emotion of some kind was likely for most students as a consequence of teaching methods (e.g. rosters to work in a rest home). Teachers understood that, as Claxton says:

The involvement of emotion in learning, especially any that involves personal risks …is inevitable.


Towards the end of the study, we realised that pre-empting student fear might lead to earlier, better management of it for some, in particular a decrease in the likelihood that a student would exhibit ‘bad’ behaviours related to their fear.

The next teaching methods all share one common feature; that teachers aimed to mitigate student fear. What I mean by ‘mitigate’ fear is to lessen fear. This is an important concept to understand, as to remove fear, which teachers felt tempted to do, would be almost impossible,

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24 Progress reports are a department document which aims to provide the student with feedback about how they are going in small group work, and identify any issues with performance, participation or behaviour. Reports are completed routinely twice during the academic year and usually involve a 10 minute teacher-student discussion.
and would also not help students to learn. For example, it would be virtually impossible to eliminate the requirement for a student to talk in the group, if this was what they were afraid of, and if teachers did, the student might not learn some things, such as to argue a point.

Instead, teachers found that using a combination of methods to mitigate student fear meant they could help students move on to learn, and learn to think.

**Ways that teachers mitigated student fear: normalising fear and carefully modifying teaching methods**

Teachers in the current study aimed to mitigate student fear to a level that was tolerable for that individual student, for example, to a level that they would be ‘slightly challenged’. While I have no information to further substantiate this idea, I think teachers helped their students feel some negative emotion, such as to feel challenged, but go on to learn, rather like Dewey (1997) describes.

Teachers mitigated student fear in two ways. The first way was to normalise student fear; in other words to help the student understand that fear could be a normal part of learning. The second way was for teachers to carefully modify their teaching methods around what their student was afraid of; teachers changed what they might normally have done in class to specifically help students make progress with what it was they were afraid of. I will now explain what normalising student fear and modifying teaching methods entailed in this study.

**Normalising student fear**

One way that teachers aimed to mitigate student fear was by ‘normalising’ it. What I mean by normalising is that teachers aimed for students to understand fear as a normal part of learning. Mitigating a student’s fear in this way meant that the student found it more manageable, better engaged in learning tasks, and learned. To normalise fear, teachers talked with students about emotion, and fear, in various forms, *a lot*. As well as using examples drawn from clinical scenarios, teachers used examples about emotion and learning. For example, these teachers talked about:

- the possible emotions of their patients
- students’ emotional reactions to patients’ stories
• students’ feelings more generally (e.g. about lectures, their teachers)
• how various learning tasks might feel, e.g. what does discussion feel like?
• fear about their own learning, e.g. undergraduate or postgraduate study, continuing professional education in the workplace
• academic works that explained the relationship between emotion and learning (e.g. one used Schwarz, 2008: ‘The importance of stupidity in scientific research’ which explains that feeling ‘stupid’ can be a normal part of scientific work).

Wherever possible, teachers in this study talked with their students about emotion. At the outset of doing so there was some reported ‘laughing behind hands’ from students at the mention of what they called the “F” word (feelings), but students apparently settled down quickly over the year, began to talk more seriously about emotion and spontaneously commented about their own. However, while taking about emotion worked well to help students normalise, understand and mitigate their fear, there is one important proviso to this method, and that teachers in this study were able to identify.

**Proviso - no soothing**

There is one proviso to the method that teachers used to normalise and mitigate a student’s fear: teachers realised that talking about students fear was useful, but that talking about fear in ways that aimed to ‘sooth’ or ‘reassure’ students about it were sometimes not helpful for the student. While ‘soothing’ itself might not have been problematic, teachers came to the understanding that in some cases their language might be interpreted as a ‘dismissal’ of a student’s fear as invalid or implied that the student somehow lacked academic ability.

This proviso seemed to centre on student fear that was associated with assessment, such as fear about taking a practical exam. One specific example of such a fear, and how my words might have been misinterpreted, is a conversation I had with a student. I had indicated that I might be present as an examiner for their practical clinical examinations:

“Oh, it’s all so hard, so scary [the practical exams]. I’m glad you will be there” one said.
“Don’t worry, it’s very hard to fail. Nobody I know has ever failed” I replied.

Later, I reconsidered my response to this student and realised that I had instinctively felt the need to ‘soothe’ or ‘reassure’ them so they felt better, but also that in doing so, my language might have been unhelpful to them. I reasoned that my language might have been unhelpful because my words implied a dismissal of my student’s legitimate fears. In reflection, I also became concerned that my comments could have actually distressed the student, or made their fear worse, especially if they were very scared or had performed badly in the exam. In reflection, I wrote:

...why on earth would I tell a student that it’s [learning] easy? If they’re in the right place [challenged to learn] it should be bloody hard, and bloody scary. If they [students] are finding it hard, and we deny it by saying there’s nothing to worry about it’s actually a bit of a travesty. That student is going to know it’s scary, and at times they will get cross about that. But they might also think that they shouldn’t say it out loud because we say it’s easy. They’re going to then feel like they are all alone with it all or that they’re the stupid one. Medics have been pretending things are easy for decades and perhaps it’s time it all stops. It’s no bloody good for learning at all!


I discussed the issue of ‘soothing’ or ‘reassuring’ a student with members of the research group. Based on their own experiences, members were able to confirm my view that some language that aimed to ‘soothe’ a student might not help them. In particular, teachers confirmed that some words (e.g. ‘everyone passes, don’t worry’, vs, ‘man, it’s hard isn’t it!) might be interpreted to mean that they dismissed the students’ fears or that the student was somehow unable.

Teachers also explained further why some words would not be helpful; because they might exacerbate or add to some fears for the student. For example, they wondered if an implication that a student is somehow unable might add another fear of being thought stupid. Thus, teachers in the study began to avoid making some comments that aimed to reassure. For example, teachers reported that they began to avoid phrases like:

‘Don’t worry, there is nothing to be afraid of.’
‘I know you will be fine.’

‘There’s nothing to it, giving a presentation is easy.’

‘A girl of your calibre has nothing to worry about.’

(Various data sources).

Instead, teachers stuck to what they thought of as more genuine phrases, like ‘it’s tricky isn’t it’, and ‘yes, it is scary’ and thus avoided the possibility that a student might interpret their comments badly.

Modifying teaching methods to mitigate student fear

The second way that teachers helped mitigate student fears was by modifying their teaching methods to better suit each student, and what it was they were afraid of. What I mean by ‘modifying’ is that teachers changed small details of what they would normally do in class, with the aim of lessening a student’s fear. These changes enabled students to re-engage with what it was they were afraid of and ultimately, the teachers aimed to help students to make progress with developing their thinking. One example of modifying a teaching method can be made with reference to Lance, a teacher in the current study. I had watched Lance using discussion as a method to cultivate student thinking about an issue of medical ethics and how he changed some details of this method to cater for a student’s fear.

In my observation of Lance’s class I had noted that he modified how he administered the discussion from what might be called his ‘normal’ method, which would be to involve all students equally in a discussion. In this instance, he left one woman out of a class discussion for quite some time, whilst at the same time encouraging all other students in the group to contribute. Only in the final stages of the discussion did he ask this woman for some input. After the observation, Lance and I discussed his reasoning for leaving this woman out of the discussion until the end. Lance explained that he had got to know quite a lot about her, understood English to be her third language and also that that she was concerned about her lack of fluency in it. She reported that her lack of fluency meant that she was terrified of sounding foolish when speaking in the group.

Lance explained exactly how, and why, he had modified his teaching method to cater for this woman’s fear of sounding foolish. Lance explained that he had watched her sit through the
discussion, until she wrote a phrase down on her notepad. Once she had done this he asked her to join in. He did this, because having had chats with this student about how to tackle her fear about sounding foolish, he understood that the written word offered her some confidence in both her pronunciation of her English and what she wanted to say. Thus, Lance had changed his teaching method to mitigate (but not remove) this woman’s fear. Over the next few weeks Lance reported that, seemingly as a result of what he had done, she was able to begin to better participate in discussion without using the notepad, and make progress with her thinking\textsuperscript{25}: by the end of the year, she was beginning to contribute to discussions spontaneously.

\textit{Other examples of how teachers modified their teaching methods to mitigate student fear during the current study include:}

- One student was afraid of questioning the teacher (e.g. to clarify or query what the teacher had been talking about). In discussion the student and teacher came to an agreement that the student would ask the teacher one question the next week, and again the next, and the one after that she would be expected to question the teacher spontaneously.

- A student who was fearful of talking with ‘new people’ e.g. in a patient interview\textsuperscript{26} would be asked to take a ‘back seat’ for the first few minutes, then make a contribution by asking a question, and then resume the ‘back seat’ again. The next time, they were asked to contribute more questions.

Teachers managed the fear of students who exhibited fear as transference also by modification of teaching methods, but took a slightly different approach to how they would usually speak with such students. For example, teachers reported that such students would often be quite challenging to talk to. To overcome this ‘challenge’, these teachers reported that they would deliberately re-direct the student from talking about objects or people of transference (e.g. criticising an exam, being cross at Faculty), towards suggestions of what they thought they might actually be feeling. In some cases,

\textsuperscript{25}Although I acknowledge that students who do not contribute to classroom discussion might think, think well, or learn.

\textsuperscript{26}In HIC, the Healthcare in the Community paper, clients would come to class in order for the students in the small group to gain experience interviewing them about their experiences in the health care system.
this meant a teacher ignored or virtually ignored comments made by students about/to the object of transference and talked about fear and learning instead:

**Student:** I still think this essay [about reflective practice] is a *crock*\(^\text{27}\). What’s the bleedin’ point?

**Teacher:** It can be rather full-on and a little scary at first, can’t it [learning to write an essay about reflective thinking]. We can manage it [the new essay style] together though, and there is lots of time to learn how to write in a different way.

(Jane/researcher/example from my own practice).

In this example, I chose to avoid responding to the student’s criticism, and instead chose my words to acknowledge the fear the student might be feeling. Because I had not responded to the criticism, I was able to refocus the conversation on ways that the student might be helped to learn. In my opinion, the outcomes for the student were better with this way of talking to them, and they began to engage with the essay task, and achieved their learning outcomes.

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\(^{27}\) NZ/European colloquialism that means ‘a waste of time’ or ‘rubbish.’
Contribution of these methods to the literature
The results that I describe in this section of Chapter 6 suggest several additions to the current literature. First, these results suggest that, broadly, ‘what we do’ as medical teachers is important, but for some students, not enough to cultivate their thinking.

More particularly, I found that ‘how teachers do it’ in small group work was also important for a student to learn to think; while some students might experience better conditions to develop their thinking in a small group as a result of what teachers do, (Brookfield & Preskill, 1999) this might not be the case for all students. In some cases, conditions created in the small group resulted in fear for a student (e.g. fear of group speaking) and made learning hard. Thus, a small group is not a ‘one size fits all’ teaching method but one in which a teacher will also need to be aware of the potential for, and cater for, a student’s fears. A small group teacher will need to get all students engaged in a task that might help them learn.

The small group offers opportunity for a teacher to come to learn about their students (Brookfield & Preskill, 1999) and results of the current study who that a small group also offers chance for a teacher understand about a student’s fear. Specific opportunities (e.g. icebreaker exercises) to come to understand about students are now more routinely woven into small group work in medical education and are valued for how they might contribute to a group’s positive dynamic (e.g. see Biggs & Tang, 2011). In the current study, teachers took advantage of icebreaker exercises and ‘progress meetings’ to specifically inquire about various aspects of their students’ backgrounds, and what they might be afraid of. Results of the current study therefore reinforce the importance of such exercises as a specific way to help ‘diagnose’ and begin to manage student’s fears.

Results of the current study also reinforce an idea that is already becoming more accepted as an important part of a medical education: that emotion should ‘talked about’ in the small group in medical education (Wilson & Cunningham, 2013). This has been mostly about a student learning to develop their emotional intelligence in relation to their clients, and how they might work well in the team environment (Wilson & Cunningham, 2013). However, results of the current study also indicate that as part of talking about emotion in the small group, students can benefit from talking about emotion in relation to their learning and their learning experiences (e.g. talking in the group). This is because teachers in the current study found that student fear could, in part, be mitigated by talking to a student about it, and changing their understand of it. For example, we found it helpful to discuss ahead of time
how an experiential learning visit might feel to a student. According to some (e.g. Shapiro, 2011) student emotion is still rather a marginal consideration in the medical curricula. However, the current results are suggestive that, as others also note (e.g. Winston, et al, 2012; Reyes, et al, 2012), a simple means such as talking about emotion can bring about better learning. To talk about student’s negative emotion can help a student learn.

One aspect of these results would benefit from more research and clarity. It is unclear how a teacher judged ‘how much’ fear a student might be able to tolerate in order to learn to think. For example, how much exposure to their object of fear a student might tolerate before they might disengage from the situation, such as Lance tried with his student who was being brought gradually into the ‘tail end’ of discussions while she gained confidence. To gather more detailed information on how exactly teachers did this would inform how teachers might understand the intricacies of their work, better administer it in the classroom; exactly ‘how they might need to do it’.
2. CONTROLLING A TEACHER’S NEGATIVE EMOTION COULD BE ESSENTIAL TO BETTER CULTIVATE STUDENT THINKING

In this second section I move on from talking about a student’s emotion, to talking about a teacher’s. I talk about the emotion that a teacher might experience as part of small group teaching. This kind of teaching is said to be:

…the most complex, most challenging, and most demanding, subtle, nuanced…, and frightening activity that our species has ever invented.

(Shulman, 2004, p. 504).

In particular, I talk about the negative emotion that some teachers in the current study experienced as a result of aiming to cultivate student thinking in the small group. Cultivating student thinking depended on a teacher managing emotion, but, in this case, I found ‘management’ meant a teacher needed to manage their own emotion.

This section is based on the same theoretical development as the first section in this chapter: that the cultivation of a student’s thinking as part of cultivating their criticality might depend on teachers’ critical action. Specifically, this conclusion is about how a teacher was helped by other’s (their peers) to take a critical action (because they experienced what I call tenet1: they felt a conflict that influenced their actions) to take (to pursue the most practically constructive action: Tenet 2) in order to cultivate a student’s ability to think in many ways (what I call Tenet 1).

Focus of this section

In this section, I talk about how a teacher might experience negative emotion as part of teaching a small group. In particular, I talk about how this emotion might get in the way of a teacher reasoning well about how to best teach, and thus also get in the way of cultivating their students’ thinking. I describe how teachers in the current study found to control their emotion and teach their students better. Teachers sought support from their peers, discussed their feelings with them, got help to control their emotion and moved on to teach better.

The results emerged from various data sources: teachers’ discussions of their own teaching as part of our monthly research meetings, observations of teacher practice during some of their
classes during the study, discussions with individual teachers about their practice and email conversations between teachers and I.

Teachers used two main tactics to control their negative emotion, one as a natural follow-on from the other. In brief:

**To seek support** This section explains how teachers sought support from peers when they felt negative emotion as a result of small group teaching, e.g. when they felt anger as a result of a student’s chronic failure to engage. Support that teachers sought from their peers allowed them to control their emotion, better reason about their teaching methods, and move on to instigate these methods and better cultivate student thinking.

**To seek support in the long term** In this section I describe how teachers sought continued support from peers during the study, to continue to control their emotion and maintain their use of teaching methods that would best cultivate student thinking.

First, I introduce some of the literature about teacher emotion and ways emotion might be managed by a teacher. I do this for the same reason as I described how student emotion has been described in the literature in the last section: so the reader gains an understanding of what exactly was going on for teachers in this study. I will then move on to describe what teachers in the current study did and the significance of this research to current literature.

**What authors of some literature say about negative teacher emotion**

It is normal that a teacher experiences negative emotion. That a teacher experiences emotion in relation to their work, or the students that they teach is therefore a normal phenomenon and one that has been specifically identified in the literature. For example, Sutton talks about both the positive and negative emotions a teacher might feel:

> Teaching is an emotional endeavour. Teachers may experience happiness when an instructional objective is met or students follow directions, frustration when students cannot grasp a concept, anger with misbehaviour, disappointment with lack of effort, and anxiety when competence is challenged.

That a teacher might experience negative emotion in relation to what they do also makes sense to me as a practitioner. I am familiar with such feelings as ‘dread’ (see Tiberius, 2013) in anticipation of teaching a group that repeatedly fails to engage in what I ask of them. I have also experienced emotion as a result of various disciplinary issues in the classroom (see Sutton, et al, 2004).

What was surprising to me, when reading about teacher emotion, was that while unpleasant at times for the teacher, negative emotion can be helpful to teacher practice. For example, a teacher who feels fear or worry that they are teaching badly might as a result feel motivated to improve their practice (Palmer, 2007); a teacher who feels trepidation about bringing a topic to discussion in the small group might in fact stimulate student learning with a ‘juicy’ topic (Palmer, 2007).

However, in the current study, negative emotion was at times unhelpful to teacher practice. Teachers seemed to experience a similar phenomenon to what Palmer (2007) describes; their fear seemed to cause them ‘lose touch’ with what they need to do:

…fear is everywhere…in ourselves – and it cuts us off from everything…how do we transcend it and reconnect with reality for the sake for teaching and learning? (Palmer, 2007, p. 58).

In the current study, there were times when a teacher’s emotion needed to be controlled so that they could better teach their students, and the students could learn to think. Teachers learned to recognise those times, seek help to control it and make better decisions than they might have about how to teach their students.

**What authors of the literature say about controlling teacher emotion**

Teachers in the current study understood that what they did in the classroom could have a vast influence on the learning of their students. The potential for such an influence has been acknowledged:

…teachers possess the power to create conditions that can help students learn a great deal – or keep them from learning much at all.

Teachers also understood that their influence on a student could be as a result of acting in response to their emotion. Teachers also understood that their own emotion could create ‘conditions’ less conducive to learning. Teachers understood this to be because their emotions seemed to get in the way of them thinking well about their teaching:

...[my emotions are] somewhat engulfing. It’s like they take over and stop me from thinking the way I should about the way I should be teaching. It’s like I just want to shout at them [the students] all. In fact, I want to tell them all to ‘fuck off’.

(Lance, personal communication, by email).

Thus, teachers in the current study developed some ways to control their emotion. An example of how a teacher might achieve such control is given by Sutton (2009) who talks about how some teachers might, over time, learn to ‘hold in’ or ‘reduce’ their anger: what this author calls ‘emotion regulation’. This author suggests that another way a teacher might regulate their emotion is by undertaking a re-appraisal of their reasoning for feeling whatever they are feeling. For example, if a teacher feels anger about a students’ late work, they might re-appraise their anger; in doing so, they might consider the students broader context and perhaps some factors which might explain why the student turned in their work late. As Sutton describes, a teacher’s aim in re-appraising their feelings would be to stick to what they were trying to do in class.

Why I report about teachers controlling their emotion

These results are one illustration of how the action of a teacher can influence a student’s thinking development; that ‘what teachers do’ can also depend on ‘how teachers do it’.

There are also several reasons that I report about this issue. The most significant, I feel, is that I found that failure to reason well meant that teachers also risked failure to use teaching methods that would best cultivate student thinking as a learning outcome. When a teacher experienced negative emotion in relation to their students, this emotion seemed to preclude their ability to make rational decisions about how best to teach. I liken this phenomenon to one described by Sylwester (1994). This author describes how a negative emotion might indeed preclude one’s ability to reason well.
The practice of controlling emotion is also one that is contrast with that which I report in the first section of this chapter (6). In this part, I talk about how a teacher used knowledge about their students’ emotion to modify their teaching method. Thus, controlling teacher emotion is one illustration of what might make an action ‘critical’; in theoretical terms, a critical action that is taken in response to an emotion might have different outcomes, and (as I explain in Chapter 4), this action needs to be chosen to respond to a context. In the context of results I report here, the students needed to develop their thinking. In this case, a teacher was able to choose the critical action that was is better for doing this.

I also report about this issue because one might assume that the issue of emotion precluding ‘good’ teaching might be common amongst small group teachers. I deduce this because there was significant evidence that Lance, and the other teachers in this study was a highly skilled teacher. By highly skilled, I mean that there was evidence of Lance’s competence in the classroom in a ‘content’ sense and also as a facilitator of a teaching method; Lance was also a very experienced health professional, had also received excellent formal evaluations and teaching awards, earned formal tertiary teaching qualifications (not always the case the higher education setting) and as a self-selected participant in the current study, likely to be reflective and willing to improve his practice. This evidence is therefore likely to be an example that a teacher might be an ‘expert’, but also that they might still experience significant difficulties in the classroom. Emotion precluding good teaching might therefore be a common phenomenon among small group teachers. Palmer (2007) describes emotion in relation to a particular student, and how it precluded teaching the rest of the group well:

…faced with the Student from Hell… I became totally obsessed with him, and everyone else in the room disappeared from my screen.

(Palmer 2007, p. 44).

To introduce the method that teachers in this study used to control their emotion I use a report about Lance (teacher) and Jane (peer teacher/researcher) taken from an email discussion between these two teachers. This report conveys an experience of a significant difficulty in teaching might engender negative emotion in a teacher, and the potential for the teacher to fail to reason well about teaching as a result. Lance reported ongoing issues with one student group that presented to him as a chronic failure to engage in any task he set for them, e.g.
discussion. Lance describes his attempts to engage these students in a discussion, how these attempts were met with silence and his extreme frustration and anger about this:

**To: Researcher Email Subject: Turd, hill, pointed stick**

Last night after HIC [Healthcare in the Community class] I was ready to throw in the towel [give up]. I was utterly flat and questioned my whole role, nothing seems to get them going…they just sit there and say nothing, with expressions that are unchanging … I did some extensive research on subjects mentioned in the tutorial, but that was a waste, I took them biscuits, which remained in their packet at 5.50 [end of session]. I took the biscuit snub as the ultimate fuck off. Is it me, the subject matter? …last night I was seriously considering cutting my losses and going back to X [my other job]… they can, as a colleague of mine puts it, go and piss up a rope….I feel I am drifting into the arena of the unwell.

(Lance, e-mail conversation).

From this email, I could see that Lance’s students were causing significant problems for him in the classroom and that he was acutely distressed and angry. Lance and I exchanged emails about this problematic group over a few days, and I began to understand that Lance’s anger was preventing him from reasoning well about what to do next. Over time, I also came to understand that the support Lance had spontaneously sought from me was vital for him to begin to reason better about his teaching and that he needed this support to be ongoing.

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28 Colloquialism commonly heard in northern England which roughly means ‘trying to do the impossible’.
Method in detail
To seek support
In essence, Lance was helped to control his emotion and teach better by the simple act of seeking support from a peer. In response to Lance’s woes, I offered reassurance and tentative suggestions about what might be happening for his students, but Lance reported that it was the act of seeking support itself that allowed him to control his emotion. Here is my response to him:

To: Lance
Email Subject: Re: Turd, hill, pointed stick

Hi Lance. Come on mate, you’re doing alright. They’ve just done that alcohol unit, haven’t they? That’s some kind of weird learning for them all. Do you think that’s related to their oddness? And at that time of night too, who wouldn’t want to go home. I do wonder if they are just learning so much so fast. I can’t see you doing anything in particular to upset them – you’re a great judge of character and of what they need. Keep going. Just try not to get cross at them. Chat to you in a bit. We should nut this out a bit more. Coffee?

Best, Jane (researcher)

To this email, Lance responded:

Thanks for that, I think I’m onto it now. It’s weird though, sometimes you don’t need anything but a listening ear. That’s all. You don’t need to be watched teaching, or be evaluated. That’s going to do nothing at all. You just need someone to hear what’s going on and that helps you make sense of it.

(Lance, personal communication).

Here is another example of how important it might be for a teacher to seek support to control their emotion, this time about my own practice. In the following quote from my reflective journal, I describe how I had used an exercise with a small group of students with which I aimed to challenge the assumptions of my students. I thought the exercise had been well received but one student made a comment about it on a form for my formal teacher evaluation that I had issued on the same day. The student had left the form on the desk for me to see, rather than in the customary confidential envelope. I was exceptionally upset about their comments because it contained a seemingly harsh criticism of the exercise I had used:
It makes me so bloody mad. It’s so hurtful. I thought that exercise through very, very carefully. I can’t shake the thought that he thinks I’m an awful teacher. ‘She needs to be careful bringing stories like that’ the student said, didn’t even dignify it with a reason. Blame the teacher, I say, blame them! Lance was great, he made me feel a little calmer….  

(Jane/researcher, Journal of Reflection).

Just as Lance was angry about his student group, I was upset by the comments that my student had made. So much so, that I felt precluded from deciding how best to deal with the comment and how to teach. For example, I could not decide whether to challenge the student, talk to the whole group about the exercise or do nothing? However, seeking support from Lance allowed me to control my emotion and decide more rationally what to do next.

We were both able to better plan what to do: in response to the challenges of his group, Lance decided to instigate various classroom exercises to help the group to work better together, and have a personal chat with those he felt were the most challenging29. After discussion with Lance, I began to better understand that my ‘problem’ student had probably felt challenged in some way by the exercise I had used in class. Because this was my intention, I was satisfied that the student’s comments were evidence of learning and that further action on this was not necessary; in other words, I decided to do nothing: 

…he’s probably complaining about the exact thing I meant to do – which was challenge his thinking…

(Jane, researcher/peer, Journal of Reflection).

In summary, seeking support was a useful way for teachers in the current study to control their emotion in relation to small group teaching, and better teach. However, there were also cases in which teachers needed ongoing support.

29 On an interesting note, Lance found that some of his students were experiencing fear in the small group. In this case, fear of a group member who was treating some group members badly outside of the classroom.
To seek ongoing support

Lance and I both also sought and benefitted from support in the long-term. We understood that we needed this support because we both experienced ‘relapses’ in our emotional state after our initial conversations. By relapse, I mean Lance and I both succumbed again to negative emotion about our students and risked repeated failure to reason about, and teach, our student groups well. As I wrote in my journal:

Lance was great, he made me feel a little calmer, the first time we chatted, but I relapsed soon after. I just want to slap the little bugger [the student who complained]. How can I carry on like this?

(Jane, researcher/peer, Journal of Reflection).

Relapses for Lance and I continued in the form of repeated episodes of extreme negative emotion in relation to our ‘difficult’ students. For example, I experienced extreme anger when I next saw ‘my student’ in class, and Lance reported that he continued to be ‘filled with dread’ each time he was due to teach his group, despite some general improvement in their behaviour.

Lance and I stayed in touch with casual meetings and emails about our ‘students from hell’ in which we continued to share with each other our various issues with the students and in particular our emotion about them. Our meetings were exceptionally useful, helping us continue to control our emotion, teach in the ways we had decided, and those that we thought would best to cultivate student thinking and achieve learning outcomes:

To: Lance Email Subject: Re:Re: Turd, hill, pointed stick

Come on now, we’ve talked about this matey. You’re doing alright, don’t let them suck you into a bad temper again. They might just ‘come right’ [get better] yet. Keep going as we said we would, did you do those exercises? I’ll save a pinot gris for you.

Best, Jane/researcher

While these continued conversations sounded much like continued complaining about our students, they helped us stick to what we meant to do. Eventually, we began to see the fruits of our hard work. Lance’s group began to talk about why they were failing to engage in class and my student continued to contribute to class and showed no sign of further issues.
**Contribution**

One important point about this conclusion is that teachers needed support to control their emotion to better teach their students, and that *peer* support was particularly useful for what they needed. As in previous chapter, the methods I report in the current section seem worth considering in relation to current professional development opportunities for a medical teacher. In particular, opportunities that a medical teacher might have to access support.

Results from the current study suggest that a medical teacher who aims to cultivate student thinking might particularly benefit from, and be able to access in a timely fashion, a *simple* support mechanism. For example, a teacher might get what they need from a peer with whom they have email contact. Even what one teacher in the current study reported as brief ‘conversations in the corridor’ seemed to offer the support that they needed to better teach their students. Such conversations also seemed to positively benefit these teachers’ mental health and job satisfaction.

Teachers in the current study were able to identify two specific reasons why support from their peers was useful. First, they identified that peers were *immediately available for each other*. They also identified that these peers were also not in a supervisory or ‘senior’ role to them. I will now explain why both these factors seemed to work so well as part of the current study.

First, the research group participants were *immediately* available for each other by virtue of working in the same physical location and also by email contact. To explain how useful this acute availability was, I make a comparison, with what teachers found with ‘formal’ support that might have been available for them. However, these staff members (e.g. a Learning advisor or Convenor) were seldom available:

I remember asking [staff member] to come and talk about it but they were too busy. It took me so long to get to this stage of asking for help and I think I’ve blown it now [it’s a hopeless situation]...they [the staff member] would think me a ‘right pudding’ [idiot] for needing help, anyway, I reckon. Christ, I have no idea what I’m going to do now.

(Jane/researcher, Journal of Reflection).
For Lance and I, immediate access to a peer made it possible to chat exactly when we needed it. For example we were able to chat in the evening immediately after a class (Lance), or immediately after a problematic encounter in class (Jane).

The second reason that peer support worked well for Lance and I was because the issues we experienced and needed to talk about were of an emotional nature. We felt emotional issues were rather ‘sensitive’; our emotions were also caught up in ideas about our competency as a teacher (‘is it me?’ Lance), and ‘coping’ (Jane). So, as well as being ‘pissed off’ or ‘upset’ with our students, we felt in doubt about our abilities as a teacher and as a person. Both Lance and I indicated that peers worked well to help us with these feelings because we felt able to express exactly what we felt without worrying, as we would with a non-peer, that they might further doubt our abilities; our peers were not involved in our teacher evaluation or our contracts of employment. Lance and I both reported that talking about our emotions with a paper Convenor or Learning Advisor would put us at risk of being judged badly. In essence, these teachers seemed concerned that with a ‘superior’ or ‘employer’ they feel unable to fully express what they needed to.

However, we might also wonder whether any-old-peer would do for peer support. After all, teachers in this programme – and who offered support to one another – were selected as participants in this study for their years of experience teaching in the medical education context, willingness to make a contribution to the increased quality of teaching on a medical programme, and also their willingness to be reflective on their own practice. Such qualities are unlikely to be shared by all medical teachers. In other words, the peers in this study may have had at least a tacit understanding of what another teacher might need and a substantial amount of skill in listening and helping another teacher to reflect on their practice.

Much of what I report here is supported by other literature. That a small group teacher is extremely likely to experience negative emotion as a natural part of their work is supported by Sutton (et al 2004; 2009) and Palmer (2007) talk specifically about how negative emotion can be engendered in such a teacher, particularly as a result of the close proximity between student and teacher over time. The current results also show that a teacher who aims to cultivate student thinking is likely to experience significant negative emotion, for example, a teacher can feel upset when students fail to engage in a learning task. However, these results offer further weight to the use of near-peers for support of such teacher. Near-peer support is an established practice in clinical practice and usually comprises a student in a year higher
teaching those in the next (e.g. ten Cate, et al, 2012). I suggest that one simple way to support a teacher of small groups is by a teacher with significant experience in small group teaching offering support those newer to it. A near-peer might offer easy access (e.g. by email, or directly after class) and allow a teacher to feel more at ease than they would with a person in a supervisory capacity, and also offer other expertise such as the benefit of experience and skills in listening. While there is still a chance that such a peer might be busy from time to time, or be someone that their peers don’t get along with, these obstacles seem surmountable and perhaps offer a more accessible alternative for the support of a small group teacher than purely relying on supervisory or senior staff for support with emotional issues about teaching.
Post script

Jane and Lance continued to seek support from one another and reported that they were glad for such support. This was because despite significant improvement, some issues could not be fully removed from teaching practice but arose again and again, with different students and needed support throughout the academic year:

To: Researcher/Jane:

Email subject: Problem child

Hello, I've just covered [taught for you] a HIC tutorial which contained your ‘problem child.’ How have you got this far without punching her out? …I shall be getting very, very drunk this evening.

Lance
3. CULTIVATING STUDENT VALUES BY ANTICIPATING AND MITIGATING NEGATIVE EMOTION

Teachers used in this study used their understanding of a students’ potential emotional reaction to what they were teaching to inform how they framed their words. Teachers were careful to use language that they understood would avoid, as much as they were able, engendering negative emotion for the student. They did this to increase the likelihood that a student would spend time considering their values. For example, teachers avoided phrases such as ‘I think you need to think very hard about whether you really are empathetic’, and instead used ‘can you think of why empathy might be an important value for a doctor to develop?’

This method is important because cultivating a student’s values is one way that a teacher might help a student develop their critical being. In other words, that cultivating a student’s values is one way that a teacher can help a student think well and act well in all of life’s contexts. In more detail, this conclusion is about how a teacher used their emotional intelligence (what I call tenet 3 of their Critical Action) to cultivate values (which I call tenet 3) as part of their student’s Critical Being (how they might extend their critical action and criticality to all life contexts).

Specifically, teachers understood that a student might feel negative emotion as a result of a discussion about their values; that words they used in class had the potential for engendering such emotion in their student; and that such emotion might preclude them from thinking about and evaluating their values. The teacher therefore took steps to mitigate this potential for engendering negative emotion by carefully selecting their language: in brief, teachers understood that they needed to be very careful when framing their language around values, in order to increase the likelihood that a student would spend time thinking about them.

Definition of values

For the purposes of this thesis I use a definition of values that I draw from reflections on values as part of my own teaching practice and the research group’s general discussions. It is possible that this definition has been informed by literature that the teachers had read on the subject and which is difficult for me to fully reference because of the complexity of our discussions. For example, some teachers showed an interest in the work of Harland and Pickering (2011). In summary, we defined values as:
Values are genuine behaviours and attributes that ideally underpin all our actions and behaviours: they make up the ‘who we are’ that others perceive and experience. Values can be about things or objects (money, nature) and people (family, colleagues, or groups of people); behaviours and attributes in ourselves (generosity), and others (manners). As our experiences through life grow in number and diversity, we come to understand more about the world. Through these experiences our values can grow or change, for example, to come to value something more or less, or value something where we did not. Value change can be slow or fast, e.g. as we grow to experience family life, we might slowly grow to better understand its value, or quickly grow to better understand the value of safety after an accident. We might also find that one value absorbs another (e.g. compassion and kindness) or because of life context, collides with it: e.g. valuing financial independence might collide with the offer of financial help in difficult times. Thus, we might argue values to be dependent on our life experiences and whether we can act upon them at the mercy of context.

(Various data sources).

Teacher’s reasoning for developing this method
Teachers in the current study explained their reasoning for developing this teaching method in some detail. First, they explained that for a student to cultivate their values, their students would likely need time to consider and evaluate them; for example, whether their values align with those needed for effective practice, or perhaps if they have developed that value at all. Second, that to be able to take this time to consider their values, a student would need to be willing to consider what the teacher had taught. This willingness, teachers understood, might in many cases depend on the student being in a frame of mind likely to consider them. They also understood that the student’s frame of mind would be better if the teacher had not ‘upset’ the student or ‘pissed them off’. Teachers understood that ‘pissing a student off’ would also be likely because a student might consider their values ‘quite personal’ or a ‘part of them.’

Teachers also noted that there might be some cases in which engendering a negative emotion in a student might lead to learning (see Dewey, 1997). For example, teachers understood that as a result of an argument between teacher and student, the student might ‘go away and have a jolly good think about what their values really were’ (Lance). However they also
understood that such an approach would likely be ineffective for most students, and at best have an outcome that was hard to predict. Teachers understood that in general, negative emotion that they might engender by using words that ‘pissed students off’ would mean a student was less likely to develop their values.

**Relationship with other conclusions**
I describe this teaching method distinctly from others. However, as with other methods that I describe in this thesis, in their practice, teachers employed this method less discretely: they often used it in conjunction with, or as a part of another method. For example, a conversation aimed to develop reflective thinking might also contain discussion about values.

**Reasons that this method is important**
Before I give more specific descriptions of the language that teachers used to better cultivate student values, I present reasons why this method is important and that I report it as part of this thesis, explain how it emerged from the research and offer some examples of literature about educating for values. I finish with a description of contributions that I think the current research might make to the literature.

As well as being a way to develop a student’s critical being, another reason that I report about cultivating a student’s values is because I agree with Barnett (1997), that educating for values needs to take place as part of a higher education. A ‘higher’ education should include education for the ‘whole person’ and offer students specific opportunities to examine, evaluate and perhaps develop their values. To find ways that a medical teacher might do this was one argument I made for my application of this theory in the medical teaching context.

This method is also important because a doctor needs to develop particular values to inform their actions and interactions for good practice. What these values might be have been clearly stated by those who work in the medical profession and who use its services. For example, clients need a ‘Good Doctor’ (see also Paterson, 2012) who is:

…a doctor whom they [the client] feel they can trust without having to think about it. They [clients] equate ‘goodness’ with integrity, safety…the ability to form a good
relationship with them…good doctors are clinically expert and at the same time interested in them, kind, courteous, empathetic and caring.


This method is also important because the values that a doctor might need in order to practice well are set out as part of the Hippocratic Oath, which in many cases is sworn by a medical student at commencement of training (Stern, 1998). Those who teach in medical education who need to help students to cultivate their values are also supported by recent works, in which some authors also draw on the argument that such an education is, in New Zealand, also prescribed by law:

In New Zealand, university graduates are required by law to become critic and conscience of society (see EAA 1989). To do this they need more than attitudes, knowledge and skills in medicine.


Thus, a way to effectively develop a student’s values is important for those in a medical education to deliver what they, and the clients a medical student will serve, ask for.
Current difficulties cultivating student values experienced in higher, and medical education

As I briefly described in my introduction to this thesis, there are several difficulties in effectively educating for values as part of a higher and a medical education. These difficulties have been described by various parties, but can be described as: in relation to curricula, what teachers think about values education, various aspects of how medical teachers might view and express their own values and the effectiveness of one common approach to cultivating student values:

Values and curricula
One concern about curricula is that values rarely feature explicitly in them and some (e.g. Reiser, 1994) report that as a result, values might be seldom explicitly taught. For example, the values a medical student might need to develop are seldom written into a curriculum documents and as a result not allocated a specific time or space to be taught (Reiser, 1994). In medical education, the failure to include values in curricula has been attributed to some members of these institutions who persistently hold a view that medicine is a ‘pure science’; and that education for the ‘affective’ domain is not a valid aim of a medical education. The persistence of this view is despite the fields of philosophy and ethics having had a strong influence on medical practice since the mid-20th Century (Reiser, 1994).

What teachers might think about cultivating student values
Another difficulty in cultivating student values as part of a higher education is that a teacher might fail to value values education itself. Such a failure can mean that this teachers practice is ineffective. Such failure can occur even in cases in which developing a student’s values are explicitly written into curricula (Harland & Pickering, 2011). For example, a teacher may think that educating for values is not part of their charge, have little interest in it or feel overwhelmed by other teaching, such as ‘covering’ a complex topic, and simply dismiss the importance of cultivating student values. While these authors do not explain further how such a phenomenon might occur, it is argued that such attitudes, and related failures, are common (e.g. Harland & Pickering, 2011).
**Assessment of value change**

Another challenge in cultivating student values is that it can be hard to determine whether a student has developed a value that we hope them to. In turn, such a difficulty can be the result of a potential disparity between what we see a student do (e.g. apparently demonstrate empathy) and their actual values; in some cases, it can be hard to identify a genuine change or development in a value. Some students are actually encouraged to ‘show’ an apparent value, rather than cultivate it in reality (Bleakley et al, 2011). For example, a student who sits a practical assessment might ‘act’ or ‘perform’ what they have learned rather than act as a result of the development of a genuine value. Those who examine or assess such a student might then face a dilemma; they might ‘see’ evidence of a value but believe it to be inauthentically exhibited (‘empty’), or lack faith in an assessment tool that relies solely on answering questions with ‘tick boxes’ (e.g. ‘did the student show adequate empathy for the patient?’) rather than asking the patient or examiner whether they understood the value was actually held by the student. The minutiae of what we do and the ways we do it can reveal what our values really are (Harland & Pickering, 2011). Thus, a teacher or patient can understand that a student is ‘acting’ what they might really value.

**How a teacher might express their own values**

There are also challenges for a teacher who wishes to cultivate student values, which are that they might wish to avoid ‘indoctrinating or brainwashing’ students and as a result, avoid being too open about what these might be (e.g. to discuss their values, even when they know what they are) (Bloom, et al, 1971). Conversely, some teachers fail to consciously consider their own values or find them exceptionally difficult to articulate (Harland & Pickering, 2011).

**Concern about specific teaching method to teach values**

A teacher who specifically aims to cultivate student values, e.g. where curricula demand it, can face other challenges. For example, their teaching can have limited effectiveness if they limit their methods to ones that explain about values. This is because ‘explaining’ can be limited, in terms of what students might actually learn (Harland & Pickering, 2011); a student might ‘learn about’ empathy rather than actually develop it as a value. Thus, what Barnett means by a teacher in higher education helping a student to enter into a ‘wider critique’ of themselves (1997) might not lead to the personal growth that a teacher hopes for.
Thus, there are several obstacles when we consider how we might cultivate student values as part of a medical education. To find out how we might better do this is important when one considers that there continue to be reports (e.g. see Paterson, 2010) that some doctors in practice lack values considered fundamental to good practice by the medical profession and its clientele. For example, the most common official complaint that patients make about their doctor has been, and remains still, one about a seeming ‘lack of respect’ for the patient (Paterson, 2010).
RESULTS and ANALYSIS

Evolution of method to cultivate student values

The method that teachers developed to cultivate desirable student values evolved as a product of two smaller conclusions:

- *That some students developed values when allowed time to consider them.*

- *That spending time considering values was more likely when a teacher had not engendered negative emotion in the student, through the ways they talked about values.*

These conclusions were identified in discussion with teachers in the study quite early on. I will now explain a little more about them.

Teachers gave students time to think about values in order to develop values

We found that a student might need time to think about a value in order to develop it. We found this as a result of observations that a student would often apparently fail to respond to what a teacher did in class to cultivate their values, but at a later date report to the teacher in a manner that offered evidence that they had. For example, Eleanor reported about a student who was ‘just revolting’ in class. By ‘revolting’, Eleanor explained that she meant that her student showed evidence of blatant disrespect for others in the ways he spoke to his classmates (had no respect for their opinion) and clients (showed no gratitude to those who took the time to present their medical histories to the class so they could learn from them). This student apparently remained ‘revolting’ and displayed similar behaviours throughout the academic year. Eleanor described her despair about his lack of response to her teaching, which had included about respect for the individual. However, three months after the end of teaching that year, Eleanor reported that she received an email from this troublesome student in which he thanked her for ‘everything she had done’ and how much he had learned about working well in a team, and patient interactions from her. Eleanor understood that these words indicated that the student had developed his values, but some time after Eleanor’s teaching.

Teachers had various other experiences that support the idea that a student might need time to develop their values. Some teachers referred to this development over time in rather earthy
terms, such as ‘slowly coming to fruition’ or that their work was ‘sowing seeds’. Teachers reasoned that the need for time to develop values might be for several reasons:

- because some students had seldom overtly considered their values, which meant they needed time to think about what they might be (see Harland & Pickering, 2011)
- because some students talked about some values as if they had developed them, but evidence showed that they had not (e.g. see Schön, 1987); according to teachers in the current study, students needed time to think about which was the ‘real’ value for them
- because some value change was hard and just needed time to be thought through.

Here is an example of how Lance understood the need for time to develop values, and how he understood it related to his practice as a teacher:

Lance: Yeah. I just think it’s a seed, you know, planting a seed. We’ll put an idea there [about values]…I always use the analogy of the cigarette behind the ear... and they will think about it. **Good teaching might just be about sowing of the seeds and cigarettes behind ears. You never know when they are going to ‘come right’**. (Lance, observation recording/discussion).

Thus, teachers in the current study understood that much of what they taught might seem to have little effect, due to the lack of immediate evidence of a student developing a values, but understood that the value was more likely to develop at a later time.

However, teachers also understood that whether a student would begin to consider their values was dependant also on the emotions that were engendered in the student in relation to values discussions. For example, teachers understood that if they offended a student during a discussion about values, the student would be less likely to spend time thinking about, or developing the value. Thus, teachers understood that another important factor in cultivating student values was about how they needed to mitigate such emotion, using language that they had selected carefully.

30 An English colloquialism that refers to how someone might come to think about an idea (cigarette) later on (behind the ear).
31 ‘Come right’ is an NZ colloquialism that refers to ‘get better’ or ‘fix itself’.
Teachers chose their language carefully to mitigate potential engendered negative emotion in the student

Teachers also chose their words in discussions about values carefully. They did this to mitigate negative emotion that a student might feel as a result of such a discussion. In other words, to minimise the potential for a student to be ‘offended’ or ‘upset’ at what teachers said. Teachers understood that minimising such potential was important for a student to be willing to take time to think about their values.

Reasons these teachers gave for choosing their words carefully emanated from their experiences that student had told them that they would be unlikely to consider their values if they had been ‘offended’ (etc.), and also their own understanding that a person would be likely to be easily offended when talking about a value. Teachers gave some examples of reasons why a person might be easily offended when talking about a value:

- a value might have a cultural origin, for example, a value such as ‘collectivism’ might be caught up in a student’s feelings of belonging to a particular cultural group
- that a student might view values as ‘part of them’, i.e. as part of their ideas of personhood or individuality.

According to teachers in the study, these reasons might mean that talking about values as part of small group work could be fraught with potential for offense (etc.), and that offense might lead to a student failing to cultivate a value.

That some values might be more or less cultural in origin also raises the issue of whether a teacher should be educating for (or against) these; it raises ethical issues. While an important issue, such a discussion is beyond the scope of this thesis.
Language choice

Jane described her feelings that carefully choosing language was ‘the epitome’ of what made the teacher’s acts critical. This choice of words, in Jane’s opinion, helped to prevent a student feeling offended (angry, upset, etc.), and for a student to then go on to think about, and perhaps develop their values:

That’s the epitome of a critical act, isn’t it? [as if talking to student] ‘I’m not going out to change your mind. I don’t think I’m better than you or that I’ve got a better idea. I’m not saying it in a way that would hurt or upset you.’ I’m just putting it [the value] there [for you to think about].

(Jane/researcher, group meeting).

To illustrate this ‘critical choice’ further, here are some examples of what teachers in the study thought would be better, or worse choices of language, to avoid offending a student: Teachers identified these phrases as ones that they framed to specifically avoid engendering negative emotion in their students. I contrast these phrases from the current research with fictitious ones that I thought would not work so well.

<table>
<thead>
<tr>
<th>Question that a teacher thought <strong>would work well</strong>, i.e. not cause offense to a student</th>
<th>Alternative question that teachers thought <strong>might not work so well</strong></th>
<th>Potential offense would be a result of alternative question because</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m wondering about spirituality, and why this lady might value it so much. Do you think a doctor might need to value the idea, also?</td>
<td>Don’t you think a Doctor’s needs to value the idea of spirituality? Why ever not?</td>
<td>Student might feel that they are being judged for not yet understanding or feel they are being challenged for having the ‘wrong’ values.</td>
</tr>
<tr>
<td>That lady seems to have had a very rough time dealing with the staff on the ward. Can you think of what might be going on</td>
<td>Everyone should communicate properly with each</td>
<td>Student might feel judged if they are yet to develop their appreciation of</td>
</tr>
</tbody>
</table>
there? Do you think it’s about how they are talking with her?  

other; it’s a simple as that.  

communication skills as important to practice.

| When we talk about empathy for a patient, why do you think that such a value would be important for a Doctor to develop? How do you think that a Doctor valuing empathy might help the patient? | If you don’t value empathy, you’re not going to get very far in practice. | The student might interpret this question as being told that they are/will be a bad practitioner. |

Table 8. Examples of language that teachers in the current study used to mitigate potential engendered negative emotion in their students

When teaching, I observed the effects of Lance carefully choosing his language. In the following quote, Lance and I discussed how and why he had made his choices. Lance and I discussed how the effect of his carefully chosen language was ‘gentle’ ‘careful’ and ‘respectful’ rather than an alternative, which might have been found ‘offensive’ or ‘disrespectful’.

Some of Lance’s choices of words were:

‘I’m wondering if that approach [to tell a client that her leg will be fixed and not to cry] would entirely work. I’m thinking that this lady might like some different kind of input, say of an emotional nature, rather than about her leg?’ [about empathy]

‘This lady seems quite independent and she will probably have some thoughts about what to do next [about caring for her serious injury]. What would happen if you talk to her about what she thinks and see how it compares to what you think should be done?’ [about respect for a client’s opinion]

‘Some of the things that people might need when they are poorly are not quite what we might expect, but they can have a big effect on how someone recovers. Say, what do you think about spirituality? Do you think that might have an effect on how someone gets on?’ [about valuing a client’s individual spiritual viewpoint]
Our discussion offered Lance opportunity to reflect and more fully explain what he did and why he did it:

**Jane/Researcher:** … I thought that was extremely nicely done because you, you were being really *careful* about what you said … you just slid it [the value] there, popped it there next to what she thought [her value].

**Lance:** Yeah…oh, I see!

**Jane/researcher:** It was so *gentle*, wasn’t it? [this way of talking about values]?

**Lance:** Yes, I think that when we do this there’s quite a lot of *respect*, in it, isn’t there [how we talk about values] …do it in a way that’s *scholarly*, that’s, in an *adult* and a *constructive* way. We don’t want to upset them. And we want them to feel able to think about it afterwards, too. I don’t want them to just think ‘feck off’.

**Lance:** Like with you, with that one you talked about, the girl that didn’t see the issue with spirituality, you didn’t get angry. You didn’t try to ‘change’ her. You just gently offered some ideas about why spirituality might be helpful to the client, and as a doctor.

**Jane/researcher:** Just put in on the table.

**Lance:** Yeah, that was enough to move her. I knew I had to get her to think about it some more.

**Jane/researcher:** But you know then that some will then go on to think about it and get there themselves [develop the value] over time.

**Lance:** Because they can then sit and think about it. If they aren’t pissed off, that is.

(Lance, observation recording/discussion).
Contribution
Results of the current research contributes to the literature in several ways. One way is that the current work seems to support the idea that teaching which ‘tells students about’ values is not an effective method (see Harland & Pickering) to develop them. More specifically, the current research offers the idea that ‘telling students about’ values can be unsuccessful because the words that a teacher might use when doing so could engender negative emotion in a student, and as a result they will fail to consider the value.

However, the current results support the idea that the cultivation of student values and how this might be generally related to ‘how a student is treated’ or that a student should feel socially safe’ to talk about their values (Berkowitz, 2002). To do this, teachers in the current study reported that they used words that a student would respond to as ‘gentle’ or ‘respectful’ words. Such words allowed the student to go on to think about, and perhaps develop their values.

This latter finding is also supported by other work. For example, Noddings (1994) also notes that better cultivation of student values can happen when teachers treated students with respect and little intention of upsetting them. According to Noddings, in practice, the conversations that are the most ‘effective’ about values (i.e. those that lead to values evaluation and/or appropriate development) can depend on a teacher ‘respecting’ their students and treating them with more importance than the topic at hand.

That the ways a teacher talks about values can make a substantial difference to whether a student develops them offers assistance for a teacher who wishes for specific pedagogical guidance about how to best do so: understand how best to frame their speech around values. The current results thus offer further weight to what Berkowitz and Noddings say, but also seem to add to the literature a specific idea about what ‘being treated well’ might entail, or what ‘being treated well’ might ‘sound like’ (as Golding, 2011, might say) in the classroom.

For example, that a student being ‘socially safe’ and treated with ‘respect’ can more particularly entail a teacher avoiding engendering negative emotion (e.g. causing offense).

Results from this section also tentatively suggest another contribution to the literature. This contribution is that better cultivation of student values seemed somewhat dependant on a teachers ability to understand how their students might feel. For example, for a teacher to understand how a student might feel as a result of the language that they use to talk about values. Such an ability might be summarised as having a highly developed emotional
intelligence. Exercises by which emotional intelligence might be cultivated have been introduced as part of classroom practices in medical education for various reasons, for example, to cultivate a student’s emotional intelligence in relation to their patients (e.g. see Wilson & Cunningham, 2013). However, results tentatively suggest that a teacher who wishes to cultivate student values also needs to be highly emotionally intelligent, and that professional development in this area might be beneficial for some. Luckily, perhaps by virtue of their experience as health professionals, teachers in this study already seemed proficient in it.

The results of this study do not address concerns that have been expressed about the need to include more specific spaces (e.g. time to talk about values for values education within a medical education (e.g. Stern, 1998; Byszewski, et al, 2012). Teachers in this study understood that they aimed to cultivate student values as part of their charge, but did so as part of work that had various additional foci. For example, they would discuss what it might be to value communication skills in the hospital environment, but as part of their work on ‘Interprofessional practice’. While this study does not address concerns about including more specific spaces for cultivating values, results do seem to suggest that values can be cultivated, even where they are not the primary aim or learning outcome.

32 A short module as part of the ELM program which has a focus on how different professions and professionals within the health sector might interact and care for the patient as a whole. For example, how a physiotherapist or counsellor might together be involved in a patient’s care, and how they might best work together.
SUMMARY
In Chapter 6 I reported about how teachers in the current study used emotion in three different ways as part of their teaching practice.

I talked about different ways that teachers chose critical actions to cultivate the thinking, and values, of their students.

Section 1 was about student fear and how teachers needed to diagnose and mitigate these fears to better cultivate student thinking

- students could experience fear in relation to what teachers asked of them in class, e.g. teaching methods with which teachers aimed to cultivate their thinking
- at times these fears were expressed simply and directly to teachers, but at others as transference)
- teachers in the current study found that getting to know students on a personal level was a useful way to begin to manage their fears early in the academic year and also mitigate worse behaviours. Teachers were also able to pre-empt some student fears in this way
- teachers used their knowledge of student fear to help them tailor their teaching methods in relation to what the students were afraid of and help students mitigate their fear and better develop their thinking
- teachers found some language that aimed to ‘soothe’ student fear was unhelpful for their learning because it could be misinterpreted to mean the student lacked ability (for example)
- teachers found that in some more extreme cases (e.g. students who presented with anger as a result of fear transference) ‘gentle’ language that helped students ‘stay with’ their fear, rather than direct it to another, would also help them students experience it at a manageable level
- teachers found talking about fear with students regularly helped them to mitigate it
Section 2 was about negative emotion for the teacher and how they needed to control it to better cultivate their students’ thinking

- some teachers in the current study experienced negative emotion as a result of some student behaviour
- some teachers seemed to experience emotion to such an extent that their thinking about how best to teach was precluded
- there were cases in which such teachers needed to ‘be heard by their peers’ in order to control their negative emotion about students
- as a result of controlling their emotion teachers were better able to think about how to teach students
- some of these teachers also needed ongoing help to maintain how they had decided to teach – this was because some problems could recur or be ongoing
- I found peer-teacher support useful for supporting teachers who aimed to cultivate student thinking.

Section 3 was about negative emotion for the student, and how teachers needed to anticipate and mitigate negative emotion for the student in order to better cultivate their values

- students did not cultivate values in response to ‘being told about’ values
- students were less likely to cultivate values when teachers engendered negative emotion in them (e.g. offended them). In the latter, failure to cultivate a value seemed to lead to a lack of time considering their values
- teachers found a better way to cultivate student values was through anticipating and mitigating potential negative emotion for the student
- teachers did this by carefully choosing the language they used with their students

In this chapter I discussed how cultivating student thinking and values could depend on the critical action of their teacher. Thus to cultivate a student’s criticality and their critical being could depend on not only what a teacher did, but also ‘how they did it’.
Chapter Seven

Who they are

Cultivating student thinking in the small group can depend on a teacher’s values
INTRODUCTION
This final results chapter (7) is about one broad conclusion I draw as a result of the analysis of my data. This broad conclusion is about the teachers in the study, and ‘who they are’. This chapter is about how ‘who teachers are’ influenced the development of students’ thinking in this study. Relative to my main thesis, I argue that ‘who teachers are’ can have a significant impact on how a student might develop their thinking.

What I mean by ‘who they are’ is a teacher’s values. Harland & Pickering (2011) explain why ‘who they are’ might be understood as a teacher’s values. These authors explain that such an understanding is possible because a teacher’s values are the foundation upon which their actions and decisions in life are based. For example, values are the foundation upon which we might decide to do one thing but not another.

A teacher’s values can thus be understood by those around them, as a result of their actions. In the classroom a student can thus understand a teacher’s values from their actions but also, because they are in close contact, from the more implicit ways they go about their work. For example, a student can understand a teacher’s values from what they say (‘that essay was rubbish!’ can indicate a lack of respect for a student) and also the ways they talk or look at a student (a teacher who looks at a student with genuine concern can indicate genuine caring for them). A teacher’s actions as part of small group can be more easily observed by a student than those of a teacher giving a lecture:

In tutorials, the student observes the tutor closely just as the tutor observes the student…[the tutorial is] a space for students to learn from the actions and contributions of a teacher.


Thus, the conclusion I make in this chapter, as part of my overall thesis, is that:

Cultivating student thinking in the small group can depend on a teacher’s values.

All conclusions I describe her are about how a teacher cultivated the thinking of their students. In theoretical terms, how they used their values (as part of what I call critical being)

33 Although I acknowledge that there will be times that context dictates that we undertake actions and make decisions that are not fully based on our values.
to cultivate thinking, as part of criticality in their students. I explain the more intricate relationship of these in each section.

I make this conclusion as a result of evidence from the current research. This evidence was that two values held by teachers in the study seemed to influence student learning, and in the case of this study, the development of student thinking.

**Why teacher values are important for cultivating student thinking**

It became evident during this study that in some cases, teachers’ instigation of specific teaching methods to cultivate student thinking (e.g. questions to elicit student thinking; *what teachers did*), and other ways they aimed to help students cultivate thinking (e.g. to mitigate student fear; *how teachers did it*), could still result in a student’s failure to develop their thinking. To better cultivate thinking seemed dependent on an additional factor which we were yet to identify. We found that the learning of some of our students still seemed dependent on *who teachers were (their values).*

Barnett expressed concern that some ways teachers in higher education cultivate student thinking might be effective in part, but overall limit a student’s thinking abilities. This concern was at least in part shared by some teachers in the current study, and I believe was somewhat addressed by the second value that I describe here. For example, teachers expressed concern that the influence of the Hidden Curriculum might mean that a student develop one kind of thinking, but not another. For example, develop their clinical reasoning, but fail to develop their reflective thinking. While the causes of such a failure might be complex, results of the current study suggest that one way teachers might diminish such a failure is to truly value that which they teach (in the latter case, to truly value reflective practice).

**Teachers’ reasoning for developing this ‘method’**

In Chapters 5 and 6, I describe teachers’ reasoning for developing each teaching method that I report. However, in the current chapter I need to describe teachers’ reasoning rather differently. This is because what I report in this chapter is not a result of the deliberate development of a teaching method by the teachers or the employment of a specific practice to better cultivate student thinking: teachers’ values simply ‘were’. Rather, the framework of the
theory of Critical Being allowed me to identify a phenomenon in the classroom, ask the teacher more about it, find out whether it was related to values and then clarify it with the help of the research group.

Therefore, to explain teachers’ reasoning I will rely on their reports of why certain values were important to the success of their practice (i.e. for students to achieve learning outcomes). Teachers were allowed to reflect on their practice by virtue of our group meetings, discussions about the DVDs I had taken of them at work and some reports from students that teachers also told me about.
RESULTS AND DISCUSSION

How a teacher’s values might influence a student’s learning

A student can understand a teacher’s values from their explicit and implicit actions (Harland & Pickering, 2011). This is because of the close proximity between student and teacher. Thus the small group context of the current study arguably provided an ideal setting to observe what a student might understand about their teacher’s values and what influence this understanding might have on their learning outcomes.

Teachers reported that the values of ‘caring’ and ‘valuing that which we teach’ seemed to better develop student thinking as a learning outcome. For example, students seemed to better develop their reflective thinking as a result of a teacher caring about them, and as a result of a teacher valuing the processes by which they taught reflective thinking. Therefore, I found that, student thinking was better developed by a different mechanism; a different value. Each of these values and the mechanism by which I thought it helped a student forms the sub-conclusions I describe in this chapter.

The finding that a student’s learning can be influenced by a teacher’s actions (values) in the small group is supported by other literature, as is the fact that often the effect of such an influence is understated. For example, several authors claim that the impact of a teacher’s actions (values) on their students can be more significant than ‘formal’ teaching methods and techniques they might use. For example, Tanner talks about:

…how little great teaching has to do with technique and how much it has to do with the teacher as a person.

(Tanner, 1999, p. 339, my emphasis).

Palmer (2007, p. 4) also argues that the influence of who teachers are is seldom explicitly considered as an important factor of effective teacher practice:

The question we most commonly ask [in teaching] is the ‘what’ question – what subjects shall we teach? When the conversation gets a bit deeper, we ask the ‘how’ question – what methods and techniques are required to teach well? Occasionally, when it goes deeper still, we ask the ‘why’ question – for what purpose and to what ends do we teach? But seldom, if ever, do we ask the ‘who’ question- who is the self that teaches? How does the quality of my selfhood form- or deform- the way I relate to my students, my subject, my colleagues, my world?
Palmer’s words seem to echo the broader conclusion I make in this thesis; the ‘what, how and who’ of teacher practice, and how the latter might be more important to its effectiveness than is customarily thought.

However, we might then wonder, how exactly might a teacher’s values (actions) influence a student’s learning. Certainly, it is documented that ‘who teachers are’ can influence student behaviours. For example, Berkowitz (2002) talks about how a student might ‘watch’ the ‘significant others of education’ and warns that a student is:

…watching [the teacher]. What is worse [my emphasis] is that they are also imitating.


In this work, Berkowitz does not make any further reference to how a student ‘watching’ might move on from ‘imitating’ their teacher or to go on to perhaps more fully develop the behaviour they perceive. However, this author does place significant emphasis on the negative influence that a teacher might have on a student’s behaviours.

In the current study I identified that a teacher can influence a student’s learning. However, rather than a negative influence, as Berkowitz notes about student behaviour, I found that a teacher’s values might instead positively influence a student’s learning.

What the values were, in summary:

Caring A teacher’s caring can help a student overcome fears that they experience in relation to some learning tasks

Students seemed able to understand from the explicit and implicit ways that their teachers interacted with them, that their teacher cared about them. This understanding seemed to have a general positive influence on student learning, but one that was particularly marked when teachers worked with students to mitigate their fear about learning tasks. Students understood a teacher’s caring, which in many cases helped them overcome enough of their fear to better learn, and better develop their thinking; a teacher who cared about their students could better cultivate their thinking.
Valuing that which we teach: A teacher who values what it is they teach (the topic) and how they teach it (their method) can have a positive effect on student engagement in tasks that are aimed to cultivate student thinking.

Students were able to understand from their teacher’s explicit and implicit actions that they valued what it was they taught, and how they taught it. What I mean by explicit is a teacher’s words and overt actions; implicit is a teacher’s more subtle body language or nuance of speech such as an inflection. This understanding had a positive influence on a student’s engagement in these various learning tasks.

Each of the values that I report about here seemed to have a different mechanism for improving student learning and cultivating their thinking. I now explain what I thought this mechanism to be, followed by some specific evidence for this taken from the current study.

1. Caring
Teachers’ reported that caring about students had positive influence on student learning where some students experienced fear in relation to methods and tasks their teacher asked of them. According to reports from teachers and students, the positive influence came about by a student being able to perceive a teacher’s caring for them, and this caring then having a positive effect on their confidence levels. Because a student might feel more confident, they were less fearful, and better able to engage in what it was they were learning. As a result, students were better able to develop their thinking.

This conclusion is about how a teacher used (what I call) tenet 1 of their critical being (living their values fully) to cultivate what I call tenet 1 of a student’s Criticality (the ability to think in many ways).

2. Valuing that which they taught
Teachers could cultivate student criticality because of their own critical being. Teacher who lived their values fully (what I call tenet 1 of their Critical Being) could cultivate tenet 1 of a student’s criticality. Specifically, teachers reported that if they ‘valued what they taught’ (topic, and teaching method), this value would also have a positive impact on student learning. They reported that this was apparently the case with students who had some doubt.
about engaging in what they asked of them in class. While I could not explicitly identify what this reason might be for any particular student, teachers reported that this method seemed to work for students who seemed to doubt the validity of a teaching method or topic to their medical education. For some students, however, teachers explicitly reported that this value helped the student because it mitigated some effects of the ‘Hidden Curriculum’ on a student.

The Hidden Curriculum is a sociocultural phenomenon which, in brief, comprises values of a ‘cultural group’ (here, medicine) which can be communicated to students through various aspects of their education (e.g. words and behaviours of others) outside of the formal curriculum (Hafferty, 1998). For example, a student might be taught in class that respect for their peers is an important value for effective practice, but outside of this formal method, they might observe staff treat other staff members with lack of respect. The influence of the latter on a student’s learning could be understood to be part of the ‘Hidden Curriculum’ and can influence what a student might learn, such as to treat colleagues rudely. The influence of the Hidden Curriculum might in some cases have a bigger impact on what students learn than more formal teaching (Hafferty, 1998), which is similar to what Palmer (2007) argues about teacher values. In this case, the student might have not learned to respect their peers, but instead that the ‘done thing’ in medicine is that clinical staff need not respect each other.

Several of the teachers in the current study described that the Hidden Curriculum was well-known to them, as part of working with small groups of students. This was because their students actually reported to them that they were negatively influenced by the behaviour of teachers outside their small groups. For example, one teacher reported a discussion they had had with a student in their small group, which was about a lecturer who had described the idea of learning to think reflectively as ‘time wasting’. Seemingly as a result of this comment, one student expressed doubt about the validity of learning reflective thinking and questioned ‘why they had to learn all this because [lecturer] doesn’t think we should be doing it’. Teachers felt that such doubt had a knock-on effect on their work, because these students often seemed harder than others to engage in methods with which they aimed to cultivate their reflective thinking.

While ‘valuing that which we teach’ seemed to help mitigate the negative effects of the Hidden Curriculum on a student, it is unclear how exactly this might occur. For example, whether this happened because the student was likely to develop the value of the teaching method themselves, or whether the value of the teacher worked against those of others, or
perhaps because a student’s proximity to the influential teacher had some other effect on them. The more relationship between the value, and how the student better learned, would be one worthy of more detailed research.

Evidence
As I explained in detail as part of my methodology, much data used in the current chapter was obtained by proxy. For example, data comprised teacher’s reports of what their students had said. Thus, it is hard to fully substantiate some findings I report in this section. However, as with some of my other results, I am offered confidence in these reports because of my method of participant selection: purposive sampling. This method allowed me to choose study participants with a high level of experience. As a result of this sampling, I feel that these teachers are reliable reporters of their students’ words. I am also offered confidence in my findings because I observed teachers to be exceptionally self-reflective and eloquent about their practice and because I was able to triangulate data between several sources.

I now offer detailed evidence of how I identified these two values, and discuss this against what is said about values in the literature. The evidence that I present is centred about my finding that students seemed to understand a teacher’s values from their explicit and implicit acts; what Lance called ‘they can spot a wanker at thirty paces’; or, behaviours that seemed ‘inauthentic’ (see also p. 270).

More than modelling
When I first began to think about the issues that I report here, I thought that I had found evidence of teachers in this study modelling behaviours that they wished their students to develop; what I mean by modelling, is that I thought I saw teachers behaving in ways, and identifying them as such, that they wished their students would behave in class. For example, teachers reported that they had deliberately modelled ‘being polite in discussion and ‘recovering gracefully from making a mistake’ and that as a result, students seemed to get better at doing these in discussion.

I initially considered that the idea of modelling was sufficient to account for what we found in the current study because I found that these teachers were modelling ‘caring’ to their students, and they also reported that one of their reasons for doing this was to teach a student how to care for a patient. For example, Haidet and Stein (2006) talk about how a student
might learn how to care for a patient as a result of how they have learned from their teacher. Similarly, and as I also suggest in Chapter 5, a student might learn to think by, at first, copying a teacher, Brookfield:

> Observing role models to help us imagine, define, and practice the kinds of behaviours we would like to exhibit in our own lives is one of the most common means by which we learn.

(Brookfield, 1987, p. 85).

However, as a result of some reports of what some students had said, I found evidence to suggest that what I had seen was ‘more’ than a teacher modelling a behaviour and a student mimicking what they did. I could begin to distinguish what it was about the behaviour of these teachers that was different. This idea was also confirmed when I read accounts about teaching (e.g. Browne & Freeman, 2010) that suggest modelling of behaviour or process might in isolation be insufficient to achieve what we want. For example, these authors report finding that some students will fail to respond to modelling when a teacher aims to develop their thinking, even when modelling is used in combination with other specific strategies (e.g. explicit questions aimed to develop student thinking).

Ideas about what exactly this phenomenon might be, over and above modelling, surfaced first as a result of a group discussion, shortly followed by empirical evidence from a student report. The group had discussed ideas about how modelling might also be understood as ‘inauthentic’ or ‘acting’. For example, that modelling might mean a teacher behaving in one way, but without believing in it fully, and that this ‘belief’ might have negative implications on the effectiveness of their practice. Brookfield (1987) talks about one phenomenon that seems somewhat related to what the group discussed, which this author calls ‘effective vs ineffective modellers’. In particular, that an ‘inauthentic’ modeller might be such because of a failure to display authenticity and integrity in their actions. Teachers in the current study identified that authenticity seemed essential to helping their students think. Thus, it was value of caring itself that had the positive influence on the student.

That caring can have a positive effect on student engagement is supported by other reports of this phenomenon in the literature. For example, Reyes, et al (2012) identified ‘caring acts’ to be one of the most influential factors on student engagement in the classroom. However,
despite this finding, I was still unsure why the value of ‘caring’ might have such an effect on a student in the classroom; I was missing a detail.

Then, at approximately mid-year during the study, I had a discussion with a student who was experiencing fear in relation to speaking in the group – and as a result was failing to engage in methods that I was using, and develop their thinking as I might have liked. As a result of this discussion, I was able to more specifically pinpoint that this student’s response in class was as a result of a value held by a teacher. In this case, the value was held by me. Thus, I was able to further identify that a student might respond to a teacher’s authentic acts rather than ones that are ‘acted’ or modelled, and this authenticity was related to the teacher ‘caring’ about them. I had found evidence that a teacher’s values might help a student learn.
Caring – specific examples from the current study

After discussion with a student, I reported to the research group that:

They really do get it don’t they, if you give a damn. If you don’t, they won’t do any of that stuff like talk in the group. They are a clever bunch anyway, and they get it from your words, your body language.

(Jane/researcher, group meeting).

Specifically, I had also written about this same student in my journal, and about what they had told me when we met:

She told me that she gave it a go [tried talking in the group] because of all the time I’d spent with her working out what we would do [the next time she spoke in the group]. She said too that she understood that I cared about them all and that I thought their learning was important. I had no idea how she got that or that it had meant so much to her, and I’m so glad I did. She said she could just tell from the way I had been teaching them. Makes you worry though, doesn’t it, when you have a bad day what they might pick up…

(Jane/researcher, group meeting).

While I believe ‘modelling’ did, in part, help cultivate student thinking in the current study (see Chapter 5, which was about how a student might begin to learn by imitating their teacher), discussions with teachers revealed that for some students, to cultivate their thinking might depend on a more nuanced aspect of their work. Evidence suggested that some students better engaged in tasks asked of them in class as a result of more subtle teacher behaviours than modelling. In my opinion, these behaviours were natural, pervasive and authentic in ways which ‘modelling’ or ‘acting’ were not. As such, students responded to these more subtle messages in ways beyond some others.

The observations that Jane made about her students were also supported by Lance, who reported that:

They [the students] can really tell when you care about them, I’m sure of it. If you don’t, they will just shut down and not try.

(Lance, research group meeting).
As Jane’s comments indicate, ‘caring’ seemed to be understood by her students both from explicit acts (what she did: spending time) and implicit acts (how she did it: nuance of behaviour, such as tone of voice). The student understood their teacher’s caring and said that they would ‘try harder’ as a result; I also saw an apparent positive change in their engagement in the classroom. If my interpretation of this student’s comments and behaviour is accurate, it might be that a scared student might be helped to better engage in learning tasks by a teacher caring.

I am offered confidence in the connection between ‘caring’ and better student engagement in part by evidence I described in Chapter 5, in which I talked about student fear and disengagement from learning. I described a phenomenon in which student fear gave reason for them to ‘exit the situation’ and disengage from learning. What I think I identified in the methods I describe in this chapter was a phenomenon that perhaps mitigated this ‘need to exit’ and produced what seemed to be an opposite effect in the classroom.
Valuing that which we teach – specific examples from the current study

The second value that I found might positively influence a student’s learning, and thus better cultivate their thinking was ‘valuing that which we teach.’ I again draw a sub-conclusion that cultivating the thinking of some students could depend on a teacher’s values:

They [the students] can spot a ‘wanker’ [idiot] at thirty paces. Someone that’s not authentic. They’ll get it if you don’t believe in it [a student will understand that you don’t value what you are teaching].

(Lance, personal communication).

Lance’s comments raise two issues. One, that I have discussed already, is that students understood when a teacher was ‘authentic’. In other words, actually living it, not acting a value. Specifically, teachers reported that when they valued the topics they taught, the kinds of thinking they taught and the processes by which they taught these (e.g. by experiential learning). Their valuing could influence whether or not a student engaged sufficiently in these to cultivate their thinking, in the face of the various other forces of the Hidden Curriculum.

For example, teachers reported that when they introduced a topic or method that could be considered a bit ‘new’ or ‘challenging’ to students (e.g. a debate), they understood that they needed to truly value the practice for some students to engage in it and cultivate their thinking. One particular example of this was a time that one teacher sent students on an experiential learning visit of short placement in a rest home34. Students had commented on how they did not understand why they were being sent on such a placement, but also that they were ‘willing to give it a go’. They reported to the teacher that ‘you [the teacher] know what you’re doing’ but also that ‘we can tell that you think it’s [the placement] important’.

I can further substantiate that teachers might need to value that which they teach by describing an experience of my own. One year, I was reasonably new to teaching a paper on the ELM (Early Learning in Medicine) programme, and one part of this paper involved engaging students in an exercise in reflective thinking. At that point, in reflection (oh, the irony), I didn’t fully understand the power of reflection and its importance to the growth of an

34 A home in which residents, usually members of the more elderly population, are in partially or fully supervised care which may include hospital level facilities.
effective professional. In other words, I was yet to develop a value for reflective thinking. One student I was working with was quite challenging in terms of what he seemed to understand a medical education should contain. His behaviour apparently included seeking every opportunity to explain and justify to me, and the group, why certain things should not be contained in the medical programme. In particular, this student advocated for the removal of reflective practices from the work of the small group and even the entire curriculum. He made this recommendation on the basis that reflective thinking was ‘valueless’.

In a one-on-one meeting this student confronted me, and asked ‘why should I do it [learn reflective practice]? You don’t seem to be into it at all.’ While initially horrified, at the same time I realised that this student was, in part, telling the truth. He seemed to understand my failure to value reflective thinking.

Here is another example in which I (Jane) talk to Lisa, another teacher in the current study, about the realisation that students might intuit whether we value what it was we teach:

Jane/researcher: …actually meaning what we do. It’s like an extra bit to modelling. It’s something really, really important because the students get it if you don’t think you should be teaching it or if you plain just don’t like it

Lisa: It is, you know you said about if you don’t believe in it, they can spot it a mile off.

(Lisa, observation).

Another quote about such a realisation is taken from my Journal:

…they completely get it if you don’t know what you’re talking about, but especially if you don’t believe in it…they can tell if you think it’s a crock [if you are pretending]. It just won’t work then.

(Jane/researcher, Journal of Reflection).

35 Although I have no data to confirm this, it is possible that student was also experiencing fear in relation to learning tasks as I describe in Chapter 5.
Contribution

Both of the findings that I report here support other literature. ‘Caring’ has been explicitly linked with how a student might learn, and that this improvement might be related to a student’s engagement in a learning task. For example, Klem and Connell (2004) talk about how a student who is in a ‘caring and supportive relationship’ with their teacher might learn better than one who is not, and especially that such a student might respond better to ‘challenges’ that threaten their engagement in learning tasks as a result of this caring. As part of other studies, Connell (e.g. Connell & Wellborn, 1994) also talks about how the experience of a positive emotion in relation to a learning task might help a student’s engagement in it. While I do not have any further evidence from students in the current study about this phenomenon with which to further connect it to this literature, the current results suggest that a teacher’s caring can have a specific impact on a student’s confidence, which in turn mitigates their fear and helps them better engage in a learning task.

‘Valuing that which we teach’ is also mentioned by other authors. It is also specifically mentioned in relation to how a teacher might introduce ‘new’ or unfamiliar teaching methods, and in relation to the effect of the Hidden Curriculum on a student. For example, Ottenbreit-Leftwich (et al, 2010) talk about how the ‘success’ of a new way of teaching (i.e. getting a student to engage in it) might depend on the beliefs of the teacher. In a more general sense, Moon (2012) talks about evidence that a teacher who is overt about how they teach, and why, can be useful when facing resistance. For example, Moon describes how they found that a student might better engage with ‘new’ learning technologies when their teacher fundamentally understood about, but also believed in, the methods that they were using. However, the current research more fully links the idea of ‘valuing’ to a teacher’s values, in other words, who they are as a person. The current research also links the idea of ‘who a teacher is’ to congruent teaching for thinking.

What is unclear from the current study is how a teacher might develop values. For example, it is as yet unclear how these teachers came to care about their students or how, indeed, I came to better value what it was I was teaching. To find out more about how this happened will offer guidance to teachers in practice, and to those who employ teachers to develop the thinking of students. For example, as a result of such guidance an employer might be able to identify which teacher would be most effective in this practice, and create criteria upon which to base a selection process for employment.
I make a final observation based on what I have reported here. In my introduction chapter, I talked about how a teacher’s work might be affected by how they feel about their work. How a teacher feels about their work, in turn, can be influenced by the decisions that are made as part of administration of their institution (Haas & Keely, 1998). For example, I talked about a teacher who found that their usual spaces to meet with their students had been loaned out to another department. These teachers reported feeling that they, and their work, were ‘undervalued’ as a result of this decision. Therefore, if a teacher feels that their work is not valued or important to an institution as a result of such decisions, they might fail to value their work themselves. While I have shown that a teacher who values what it is they teach can better cultivate student thinking, it also seems possible that the decisions that are made at an institutional level can also have an impact on whether they actually do so. This is even when such a decision is seemingly unrelated to ‘what a teacher does’ in the classroom.
SUMMARY OF CONCLUSIONS
In this chapter, I report about how some teachers in the current study were more effective in their practice as a result of holding the values of ‘caring’ and ‘valuing that which they teach’. By ‘effective’ I mean that they were better able to cultivate their students’ thinking.

Findings that I talk about in this chapter illustrate one conclusion that I made about the theory of Critical Being: that the development of a student’s criticality might depend on a teacher’s critical being. In other words, I concluded that ‘who teachers are’ can have a positive influence on the cultivation of student thinking.

One sub-conclusion that I made in this chapter was about a teacher caring for their students. This caring had an apparent positive impact on student learning and learning to think; how this worked was that the student’s understanding that they were cared about helped them gain confidence and in turn mitigate some fears they experienced.

The other sub-conclusion that I made was a teacher who values what it is they teach, and how they teach it would have a positive influence on student learning, and cultivating student thinking; the student’s understanding of this value helped mitigate the negative effects of the Hidden Curriculum. Whilst the exact mechanism for how this happened is as yet unclear, valuing what and how a teacher taught helped some students develop their thinking.

I make one overall observation as a result of what I report in this chapter. The contribution that I have made as a result of the current study is that the relationship between a teacher’s values and a student cultivating their thinking. As a result of the current study, I have found evidence that a student’s thinking development can specifically depend on their teacher’s values. Such an idea is worth considering in relation to how a teacher is recruited and selected for employment (see also conclusion chapter).
POST SCRIPT 1

To: Jane, 1st October, 2013

Email Subject: Thank you

Dear Jane, just a quick note.

The sessions [monthly group meetings] I have attended with the group this year I have really enjoyed and a feel a lot of that is down to your ability to allow us to believe in us as teachers and that we can make a difference with what we do.

Thank you for your support and all the best,

Frances

POST SCRIPT 2

To: Jane, 5th October, 2013

Email subject: Thankyou

Hi Jane,

Thank you so much for being such a great tutor this year! Almost all of the tutors I've had this year have been good, but I think you're the only one who really opened up and showed us that you were a real person instead of just a tutor. And in a programme like HIC, I think that makes all the difference. As a result you really managed to successfully make an environment where everyone felt safe and comfortable. Your hard work is duly appreciated.

(Jane’s student, by email).
Chapter Eight

Conclusion
INTRODUCTION
In this final chapter, I talk about several things. 1. I summarise the conclusions I make as a result of the current study. In doing this I relate each conclusion to my main research question and identify recommendations for practice that I make as a result of my conclusions. 2. I summarise limitations that I can identify about this study, which can also be thought of in terms of how conclusions might be generalisable to other practical situations. 3. I talk about ideas for further research that have emerged from the current study. For example, I identify ‘gaps’ in what I have found, that might be filled by further research, and be of further benefit to those in practice. As a reminder to the reader, my research question was:

*What are some ways a medical teacher might teach for Critical Being?*
1. SUMMARY OF CONCLUSIONS and RECOMMENDATIONS FOR PRACTICE

Overall observations

I make three overall observations as a result of the current research. The first observation is that the role of a teacher of small groups is an important one. Results of the current study suggest that when a teacher aims to cultivate student thinking or values in the small group, they can significantly influence a student’s learning. Such an influence is in relation to what a teacher does, how they do it, and who they are (their criticality, their critical actions and their critical being).

I make this observation at a time that cultivating student thinking and values have begun to be more established and accepted goals of a medical education, and also when the small group has, in many cases, become accepted as a format in which to do this. Over the last few decades, however, there have also been reports that the role of a small group teacher should be of a ‘guide on the side’ rather than the more customary ‘sage on the stage’ (King, 1993). This suggestion has been made with the idea that the latter ‘sage on the stage’:

…will not be effective for the twenty-first century, when individuals will be expected to think for themselves, pose and solve complex problems, and generally produce knowledge rather than reproduce it.

(King, 1993, p. 30).

In somewhat contrast to what King suggests, I found that a medical teacher can influence the development of a student’s thinking by providing them with sufficient opportunity to practice their thinking, speaking considerately to them about their values and by helping a student engage in processes to develop their thinking by caring about them. Thus, the results of the current study suggest that if cultivating student thinking or values are aims of a medical education, the teacher who has come to be known as a ‘guide on the side’ (King, 1993) might still occupy a rather more central role in it than these terms suggest.

I also observe that medical students are often assumed to be among the ‘glitterati’ of students. In other words, a medical student might be assumed to be among the academically more able. However, results of the current study suggest that, like any other, a medical students will need significant support to best develop their thinking and values; academically able students will likely need guidance to cultivate their thinking. A medical education should therefore be one that ensures that a student gets what they need. The support that students in the current
study needed was much more than their teachers had anticipated and in relation to some unexpected things. For example, some students in the current study needed support to understand what they were supposed to be doing, and why, and also when they encountered fear in relation to what they were asked to do. Because teachers in the current study had assumed academically able students would not need such guidance, teachers risked failing to help their students and in addition, teachers identified cases that they might have inadvertently ‘set their students up to fail’. For example, one teacher identified that they had failed to offer a student sufficient guidance around what reflective thinking might actually entail, and then the student had failed their reflective essay task.

My third observation is that development and support for a medical teacher is a necessary part of their work. In Chapter 5, I talked about failure to provide a student with what they need to develop their thinking and that such a failure could be seen as ‘setting a student up to fail’. I now observe that if a small group teacher charged with to cultivating student thinking and values lacks support, such a lack might also be seen as ‘setting a teacher up to fail’. I observe this as a result of my findings that a natural part of a student learning to think might be understood as one in which they experience fear, which at times might mean they behave badly in their small group. While a natural phenomenon, such behaviours can be hard for even an expert teacher to manage. Those who employ a medical teacher to use such teaching methods (e.g. to ask the right questions) need to provide the support to carry it out on a daily basis (e.g. peer support). Students and teachers need support to develop thinking and values.

I now summarise the other main conclusions I made as a result of the current research.
Summary of conclusions about the theory of Critical Being
I make several conclusions about the theory of Critical Being as a result of the current research. These conclusions build on those that I made in my Masters’ thesis and which I described in detail in Chapter 4. While the theory is still incomplete, developments made as a result of this research seem to make a significant contribution to how the theory of Critical Being might be understood.

Tenets of each dimension of the theory of Critical Being
Several tenets of each dimension of the theory were added, clarified or reinforced as a result of the current research.

Criticality
As a result of the current research, tenet 1 was added to the theory of Critical Being, which allowed us to include in the theory that a person needs an ability to think in many ways, as was tenet 2, which was about a need to be able to ‘think about’ many things and topics. We made no progress on the depth of ‘thinking about’. Tenet 3, which was about ways of learning, was reinforced (i.e. my understanding of it was confirmed), and tenet 4, which was about response to context, also reinforced. We also established that criticality might be an idealistic position, as we found it hard to make a judgement about level of a person’s cognitive ability, mastery of thinking and how developed criticality would need to be for the theory. Tenet 6, that a person would need some cognisance of thinking was added, although with little indication of depth of cognisance.

Critical Action
We established that in order to make action critical, conflicts would have to exist between motivations for different actions (tenet 1). We also established that the choice between actions is made in response to context (tenet 2). Emotion was raised as a particular factor in critical action and we found that critical action in response to context would sometimes be taken in response to a person’s feeling’s, or understanding the feelings of another person, and sometimes not, and therefore depend on one’s emotional intelligence (tenet 3). Critical action as response to context was thus further clarified (tenet 4). We also found that critical action could be an idealistic position, as multiple or difficult conflicts on action could mean that our choices of action are limited (tenet 6). We also found, as was suggested by my 2011 study,
that critical action might take the form of no action, but also includes how we do things as well as what we do (e.g. nuance of body language) and how we react to others (tenet 6 and 7).

**Critical Being**

We also found that critical being could also be an idealistic position. This, we found, was because living one’s values fully would at times be hard because of life context. We also clarified the difference between critical action and critical being (as we also did in 2011) as critical being not being the product of criticality and critical action (tenet 2). We also found that critical being would be dependent on context.

**Relationship between theory dimensions**

The main finding from the current study was that critical action occupies a central position in the theory of Critical Being. This conclusion was based on results that I present in two of my results and discussion chapters. For example, that the development of a student’s criticality and critical being could depend on the critical action of a teacher, which I discussed in Chapter 6.

I also observed some interdependence between critical being and criticality. For example, that the development of criticality might depend on a teacher’s critical being (see Chapter 7) and that the development of a student’s criticality could depend on the development of criticality in their teacher (Chapter 5).

These conclusions raise one emerging question about the Theory, and about a Critical Being:

*Does a teacher have to be Critical Being in order to cultivate Critical Being in their students?*

What I found in this study was that a student *might* cultivate their thinking as a result of the criticality of their teacher. I also found that *for some students*, better cultivation of thinking and values might depend also on a teacher’s critical action. I also found that the development of a student’s thinking might depend on a teacher’s critical being or values. Therefore, I can answer this question, tentatively, as ‘sometimes it can help’.
All of the ways I now summarise here are methods that teachers in the study developed to teach for Critical Being. These methods can be understood as some answers to the question:

_What are some ways a medical teacher might teach for Critical Being?_

**Summary of conclusions about medical teacher practice**

*Chapter 5*

Conclusions that I make in Chapter 5 contribute to the questions raised as a result of my review of literature about critical thinking pedagogy. Specifically, that I identified a need to better understand how a teacher might help a student develop their thinking as a learning outcome in the small group, and in the presence of an increasingly complex literature about critical thinking.

In summary, in Chapter 5 I talked about how asking students specific questions could be central to cultivating their thinking; that a student can learn to think by being asked specific questions about thinking to elicit thinking, and that imitating a teacher’s answers can lead a student to express their own thinking; I also found that repetition of thinking processes and topics was a useful way to help a student develop their ‘thinking habit’. I also talked about how medical students could better develop their thinking when their teachers avoided using the term ‘critical thinking’ to describe instead the specific kind of thinking they aimed for. I also found that the exercise that teachers called ‘The Good Doctor’ was a good way to help students understand why they were learning to do think, and in the ways that they were. I also discussed how teachers in this study experienced a tension as part of their classroom teaching, related to how to best administer each of the above teaching methods. For example, what to do when, and for who. Teachers were able to identify that the teacher-student relationship that allowed them to negotiate this tension, and effectively use the methods that I describe here was one that was friendly but was not one of friendship. As a result of this finding, I answered one question that arose as a result of my literature review, which was the need to more specifically identify what an effective teacher-student relationship to cultivate thinking might ‘look like’. 
Recommendations for future practice based on Chapter 5

I make several recommendations for practice based on my findings I report in Chapter 5.

I make one suggestion for practice on the basis of conclusions I make in *stop talking about critical thinking*. I suggest that if developing thinking is an aim of classroom practice, the term ‘critical thinking’ should be avoided in teachers’ daily discourse and classroom materials such as handbooks and teacher evaluations. It might also be useful for those in medical education more generally to consider what specific terms they might use to describe the ‘thinking’ that they aim for, when described in the classroom and also in learning outcomes and other curriculum documentation.

If developing student thinking is one aim of classroom practice, teachers need to seize any opportunity to engage students in thinking processes and topics (especially if a ‘tricky’ topic such as sexuality) regularly within classes and throughout the academic year. I argue for the creation and preservation of specific spaces to develop student thinking as part of a medical education curriculum. I also recommend that ‘removal’ of repeated processes (e.g. the ‘reflective templates’ that I mentioned in Chapter 5) based on workload issues should be carefully considered against this aim.

Teachers in this study needed to use specific questions and answers to help students learn about thinking. I also identified that doing so could be a result of a teacher’s own criticality. A teacher who aims to cultivate student thinking therefore needs expertise in asking such questions. Teacher development that specifically aims for developing a teacher’s thinking seems essential to effective teacher practice.

In relation to the overarching research question, I concluded that ‘what we do’ was important to develop the thinking of a medical student and that ‘what we do’ as teachers can be related to the development of our own criticality as part of Critical Being.

Chapter 6

In Chapter 6 I talked about emotion, and how teachers chose one of three ways to manage emotion to better cultivate student thinking and values. Each way was different: in the first, teachers developed methods to mitigate student fear and as a result helped the student better engage with the methods used to cultivate their thinking (e.g. to take part in a discussion). For the second, teachers made use of conversations with their peers to control the extreme emotion they experienced as a result of teaching their small groups (e.g. related to discipline).
Controlling their emotion meant teachers could reason about how to teach their students. The third way that teachers managed emotion was to anticipate what a student might feel in relation to discussing their values, and frame their words to mitigate any negative emotion they felt they might engender in doing so. Teachers did this with an understanding that this was one way that would help a student take the time necessary to consider their values.

Conclusions I describe in this chapter thus more clearly establish the relationship between emotion and learning— that fear can preclude learning— as well as offering ideas about how we might better cultivate the thinking of a student; by mitigating their, and their teacher’s negative emotion. Conclusions also add to ideas about how we might cultivate a student’s values as part of small group teaching and how we might offer simple, but effective professional development in the form of peer support, to a teacher who aims to cultivate student thinking or values in the small group setting.

In relation to the overarching research question, as a result of what I find here I conclude also that ‘how we teach’ in terms of how we manage some other aspects of our practice can be as important as ‘what we do’. I also found that a teacher’s critical action could positively influence the development of a student’s criticality and Critical Being.

**Recommendations for practice based on Chapter 6**

I make several recommendations for practice based on my findings I report in Chapter 6. First, teachers found that icebreaker exercises and other opportunities (e.g. progress report meetings) to talk with students and get to know them well helped them to understand what they were afraid of, begin to help students mitigate their fear and learn to think. I argue that these exercises and processes should be preserved as part of small group practice and any suggested reduction in their duration or frequency considered against what the teacher and student might gain from them. I also advocate for medical teachers who aim to cultivate student thinking to include in their work, activities in which they talk about emotion, and fear, and do so regularly, and to develop their own EQ as part of their own professional development. Emotion and learning has historically not often been featured in small group work in medical education and can also be hard for students and teachers to talk about.
However, talking about emotion offers opportunity for a teacher to help their students overcome fear and learn to think.

I also argue that for some teachers, peer support can be essential to control their emotion about their students, and can be essential to making teaching well. Peer support can be more easily accessible than some other means such as a Learning Advisor, and offers a teacher opportunity to talk about emotions that they might not feel so happy doing with a ‘superior’. I therefore recommend that those in medical education who aim to cultivate student thinking be offered at least an informal arrangement by which they can easily access a listening ear. I also recommend that this ‘listening ear’ be one of a teacher with some experience of cultivating student thinking, for example a near-peer who has some experience of small group work in the longer term.

Chapter 7
In Chapter 7 I talked about two values that a teacher might hold that helped students cultivate their thinking. The first was ‘caring’ and the second ‘valuing that which we teach’. ‘Caring’ helped because students understood a teacher’s caring from their actions, and as a result felt more confident, mitigated their own fear and better engaged in what they were afraid of. This value I identify to help address one question that arose as a result of the review of literature about critical thinking, which was about how we might better cultivate a student’s thinking. ‘Valuing that which we teach’ was a little more elusive to pin down in terms of how this ‘method’ (value) worked, but in some cases seemed to mitigate some of the negative effects of the ‘Hidden Curriculum’ on a student. To mitigate the effects of the Hidden Curriculum meant that a student better engaged in learning tasks and developed their thinking. In both cases, students seemed able to learn, and able to cultivate their thinking as a result of a teacher holding these values. As a result of this finding, I answered, in part, one question that arose as a result of my literature reviews, which was how a teacher might help a student develop their ability to think in many ways, rather than in a more limited or ‘narrow’ terms (as Barnett, 1997, might say).

In terms of my research question, I conclude that ‘what we do’ can be vital to cultivating student thinking, and ‘how we do it’ can have a significant influence over what a student might learn. However, I also argue, as a result of what I report in Chapter 7 that ‘who teachers are’ can also significantly influence what, and whether, a student learns. I also argue
that a teacher’s Critical Being can positively influence the development of criticality of a student.

**Recommendations for practice based on Chapter 7**

I make several recommendations for teacher practice based on the findings that I report in Chapter 7. The first is about recruitment of medical teachers. Recruitment and selection of medical teachers has at times been primarily based upon topic expertise. While such expertise is important (in the case of this study, teachers were all experienced health professionals), results I report in this chapter suggest that ‘who teachers are’ is also vital to cultivating student thinking. This could be understood to especially be the case in a profession in which teaching is rapidly changing to include more effective (hopefully) but ‘newer’ methods, a profession that has a ‘Hidden Curriculum’ that is active and influential over a student, and a profession in which a student might experience fears that can significantly impede their learning. I suggest that ‘who a teacher is’ might take a greater place in the interview and selection process than has been customary.

**Overall comment**

In the introduction to this thesis, I indicated how the current research related to what other medical schools in the Western world have been doing for medical student education. In other words, I indicated whether the curricula that my teacher participants practiced with in this research were new to medical education or more widespread in their use. The curriculum that these teachers worked under has, in some medical schools, been part of curricula for some time. However, as I argue in my literature review, there have been many problems in effectively administering certain elements of medical education that I talk about in this thesis. For example, there are constraints, such as time, on providing useful and appropriate professional development for medical teachers and some lack of explicit guidance about how to best develop student thinking. Thus, some medical schools remain vigilant in their pursuit of ways to better administer such curricula.

To incorporate in a medical curricula some of the approaches to medical education that teachers in the current research developed would likely be met by many problems, but there will also be many different ways to overcome these. For example, to provide a near-peer to support a small group teacher in their practice might be a relatively cost effective way to offer them support (as I talk about in Chapter 6), but a near-peer might also experience periods in which they are unavailable, such as times that they are engaged in clinical practice. One way
to overcome such a time might be to have contact by email, as I did as part of this study.

To help teachers effectively cultivate their student’s thinking might seem relatively easy, in that a simple workshop might be administered to staff that have this as an aim in their teaching. However, given my discovery that ‘who a teacher is’ can have a profound influence on participation in such a learning experience (for example), the administration of a workshop would not necessarily result in a corresponding improvement in teacher practice but also depend on how a teacher feels about participation in such a workshop and the values of the person who administers it. Selection of staff to administer a workshop is, of course, under the influence of many factors and many of these outside the control of those who wish to use their services.

**Tentative additional thought about of some of the current study results**

Because of comments like those made by Frances, that I use as a postscript for Chapter 7, I would like to describe some additional tentative thinking about the results in this thesis. Frances talked about how she had been encouraged by Jane’s belief in her as a teacher. I will try to extrapolate some results from the students in the current study, to the teachers.

However, I am offered confidence in this additional thinking about the teachers by other findings that are expressed in the literature and some observations that I made (and teachers in the study made) about the students in the current study. I report about each of these as I work through my thoughts.

Here are some of France’s words that gave me the initial impetus to try such an extrapolation. She made these comments at the end of the data collection period. She told me that, in my role as researcher and novice staff developer, I apparently seemed to:

…believe in us as teachers and that we can make a difference with what we do.

(Frances, by email).

I will attempt to extrapolate results of the current study in three ways. First, I will talk about ‘telling a teacher about’ values. Second I will talk about a staff developer (professional developer, etc.) and their emotional intelligence (EQ). Third, I will talk about a staff developer and their critical being.
Teachers in the current study, like their students, seemed to better cultivate thinking (in this case about the theory of Critical Being) when they were actively engaged in question and answer sessions (see Teacher Development Resources, Appendix A) and given the chance to go over and over these ideas. They did not respond so well to being ‘told about’ the theory. I liken this finding to what I report in Chapter 5, which was about asking the ‘right’ questions to elicit thinking and also offering the chance for a learner to repeatedly engage in thinking. In doing so, I also felt that I developed a relationship with these teachers similar to that which they had with their students. This relationship allowed me the freedom to ask them questions to get them thinking, to ‘keep them at it’ when necessary; I was friendly, but not (always) friends.

I also argue that a staff developer, as would a teacher who aims to cultivate student thinking and values, would also need a highly developed EQ. I think this because it became apparent that teachers in the current study also seemed to view aspects of their practice as ‘part of them’; in other words that they valued their ability to cultivate student thinking very highly. This seemed a direct parallel to what teachers had reported about their students (see Chapter 6) who thus understood values as a ‘sensitive’ topic. As such, I was in a position that I had to be very careful when suggesting to these teachers that they might like to develop a new skill, or indeed come to value it as part of their teaching practice. I was in a position that demanded as high an EQ as I could muster (and sometimes I failed and offended) in order to frame my questions: I needed to anticipate and mitigate potential engendered negative emotion of ‘my’ teachers. This argument is offered some weight by reports (see Webb, 2012) that a staff developer needs abilities similar to a ‘counsellor’ as part of their work.

Finally I also argue that a staff developer who ‘cares’ might also be able to make a significant difference to a teacher’s practice. Frances reported to me that I had helped her understand that she could make a difference. In other words, she understood that our research – or something about it – had offered her confidence in her abilities. This is in marked contrast to the how she presented to me at the outset of the current research, when she seemed much in doubt about her abilities. As a parting comment, therefore, I might also ask ‘does a staff developer need to be a critical being?’ for Good Practice. As I did with the teachers in this study, I argue that for some people, it might help.
2. LIMITATIONS OF STUDY

Any study or data from a study will have limitations, which means that conclusions drawn need to be carefully considered to ensure they are suited to the use to which they are put. For example, one might consider whether data is dependable or transferable to another context or whether methods are suitable ways to collect data about phenomena. I identified the following limitations to conclusions I made in the current study, based on the fact that the current study was undertaken in a very specific situation in order to gain deep insight into particular issues.

**Participant selection**

Teachers who responded to my initial email approach, which asked for experienced and keen teachers, were likely keen to develop their practice. Thus, conclusions of the current study might be less transferable to more novice teachers or those more resistant to developing their practice.

**Data from group work, teacher interviews and other sources**

Apart from the DVD of one class per teacher, students were not included in the direct collection of data in the current study. Thus, the majority of data about students was from my observation of them, their teacher’s observation of them but in particular teachers’ reports of what students had said and done in class. As such, these might be subject to reporter bias and as such lack dependability.

Students whose comments were reported to me by teachers during the current study were also taught by other teachers as part of their medical education. It may have been the aim of these others to also develop student thinking. Thus, any reported progress (or lack of it) in cultivating student thinking might not be easily separated from these others, or singularly attributable to teachers in the current study.

There is also another limitation to data I use in this study, in particular that I find with data provided by me, about my own practice as a teacher. As were all teacher participants, I was an active participant in the study. However, I am not afforded the same confidentiality as other teacher participants. I am easily identifiable by both name and workplace. Thus, there is the possibility that I have withheld or changed some of the information that I give, especially when it is about my own practice. Thus a certain amount of bias in the data might be possible. For example, I may have felt reluctant to reveal some of the issues I felt that I did not cope with so well as part of my work. To counter the possibility for such bias, I ensured that I
talked issues of practice over with my supervisors in order to get a clear idea of what was going on and also in order to have these issues on ‘record’.

However, recommendations I make on the basis of these conclusions are limited by the nature of the teacher sample in the current study. I purposively selected experienced teachers charged with developing student thinking because I needed to pursue depth of understanding about how to do so. Such sampling means conclusions might only be generalisable to similar classroom situations but not elsewhere. For example, use of critical thinking nomenclature might be problematic in a classroom context but helpful for university programme marketing and student recruitment.
3. IDEAS FOR FURTHER RESEARCH

One idea for further research that I can identify from my conclusions is about ‘The Good Doctor’ exercise (described in Chapter 5). I was unsure exactly how this exercise worked to help a student understand what teachers did, and therefore better develop their thinking. I have an idea that it may have had something to do with a student developing metacognition, but nothing more than that. Therefore, further research would gather specific data about this exercise from students who experience it, to better understand the exact mechanism by which this exercise helped them.

It would also be useful to approach the data about ‘critical actions’ of teachers in a way that was different to that I used in the current thesis. As a result, it might be possible to come to a more detailed understanding of ‘how they did it’. For example, I might approach data with a critical discourse analysis. Such an analysis might be more likely than a more general induction approach to indicate what power dynamic was at play in the words that the teachers used for their students and how, then, a teacher might learn to take critical action.

As they likely experienced a range of emotion in relation to learning, it would be useful to understand which particular students experienced what, and why, and what effect each might have on learning. As the more negative emotions, such as anger, seemed to significantly impact students’ learning, and learning to think, further information might allow teachers to further refine approaches to what they experience in the classroom.

It would also be useful to further pursue information about how teacher needed to value that which they teach in order to mitigate the Hidden Curriculum for some students. It was unclear from the current data how exactly this happened. This phenomenon would be worth clarifying in order that a teacher might more fully utilise the positive effect that it seemed to have on the learning of their students. It would also be useful to better understand how a teacher with the values of caring might be identified. This is because it would be useful information for those who select teachers for employment.
Parting comment

The question we most commonly ask [in teaching] is the ‘what’ question – what subjects shall we teach? When the conversation gets a bit deeper, we ask the ‘how’ question – what methods and techniques are required to teach well? Occasionally, when it goes deeper still, we ask the ‘why’ question–for what purpose and to what ends do we teach? But seldom, if ever, do we ask the ‘who’ question–who is the self that teaches? How does the quality of my selfhood form–or deform–the way I relate to my students, my subject, my colleagues, my world?

(Palmer, 2007, p. 4).

The framework of the theory of Critical Being allowed me to ask students and teachers about what Palmer might call the ‘hows and whys’ of what they needed and why they worked in the ways they did. I was also able to ask about the ‘who’. I found that, as Palmer infers, the effectiveness of a teacher’s practice was permeated with the influences of who they were. ‘What they taught’ (here, thinking and values) depended on ‘how they did it’ (e.g. by helping a student engage in a teaching method) but also, at times significantly, by ‘who they were’.

Barnett talks about the need for a Higher Education to include education for values in addition to education for what he calls the ‘knowledge’ domain. However, as part of this study I have shown that values influence a teacher’s practice, whether they like it or not. Educating a student for Critical Being might be something a teacher purposefully aims for in their practice, but a teacher’s own Critical Being is also likely to be influential over those they teach. If the effectiveness of a teacher can depend on who they are it might be time to consider this influence more carefully against what we would like to achieve with a medical education.


Vardi, I. (2013). *Developing students’ critical thinking in the higher education class.* Milperra: HERDSA.


Appendix A

Teacher resources
Pedagogy for Critical Being Educator development resources

Introduction

Welcome to the project and thank you for agreeing to participate. I appreciate the time and commitment that this means. Initially this resource will help introduce you to some important topics. This resource will then also provide a reference point throughout the research period as it contains spaces to record your peer observation sessions. I will be giving you a separate book for your reflective journal that I have also asked you to keep for the academic year.

The first two introductory group sessions will be spent discussing our ideas about research, teaching and critical thinking. As soon as we are able we will move on and discuss the theory that we will be using for this research. We will also have an introduction to reflective journaling. I hope these meetings will provide a useful starting point for our professional development over the year; I urge you to look ahead at the resources and write in the spaces ahead of time if you would like, as there is lots to read. We will be using this book as a basis for discussion in our first meetings.
In this resource you will also find a personalised research timetable so you can keep on track with all the bits and bobs. Please bring this resource to each monthly meeting during the research period. In each interim please think about what your journal has raised for you and what you would like to bring discuss with the other group members.

If you would like to find out more about any aspects of the research, feel free to ask, bring questions to discussions or access the references given at the end of the document. Feel free to also direct any questions or queries to myself or my primary supervisor.

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This project has been approved by the Higher Education Development Centre, University of Otago. The project is also supported by a Faculty of Medicine Education Scholarship
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References…. 
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Here are some dates, times and venues for the various components of the research process that you will be involved in. A summary:

One interview early in academic year (recorded)

Two initial group sessions, then monthly (total 10, recorded)

Two peer observation sessions (notes taken) and discussion (recorded)

One Interpersonal Process Review (IPR - DVD session, then comments recorded)

Reflective Journal (throughout the year).

If you are happy, I would like to gather the journals at the end of the year, and return them when the analysis is finished.

<table>
<thead>
<tr>
<th></th>
<th>Date</th>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual interview</td>
<td>Fri Feb 1</td>
<td>9.30am</td>
<td>Office</td>
</tr>
<tr>
<td>Introductory meeting 1</td>
<td>Thu February 7</td>
<td>10 am</td>
<td>Hunter Rm G07</td>
</tr>
<tr>
<td>Introductory meeting 2</td>
<td>Mon February 11</td>
<td>10 am</td>
<td>Hunter Rm G07</td>
</tr>
<tr>
<td>Monthly Meeting 3</td>
<td>March</td>
<td></td>
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</tr>
<tr>
<td>Monthly Meeting 4</td>
<td>April</td>
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<td>Monthly Meeting 5</td>
<td>May</td>
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<tr>
<td>Monthly Meeting 6</td>
<td>June</td>
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<tr>
<td>Monthly Meeting 7</td>
<td>July</td>
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</tbody>
</table>
Meeting agenda

It might be useful to have a rough agenda for our monthly meetings. These should be a general discussion that develops and builds on experiences from our teaching in the interim periods.

Quick catch up.

Themes from journals this month

What worked/didn’t work

Discussion/problem solving

Questions about theory or practice

Plans for next month’s teaching
Reminder of consent process/confidentiality

The method for this research has been outlined in the Participant Information Sheet. Are there any aspects of this method that are unclear to you, or you might like more information on? This might be practically e.g. logistics or in terms of method or methodology.

Anonymity

Every effort will be made to ensure the anonymity of participants in this research. Data that is transcribed for analysis will refer to each educator or student by pseudonym which will also be used for the subsequent thesis and any publications. No personal information about the participants will be sought.

I also will be vigilant in removing any identifying features (e.g. places of work) from the resulting thesis and papers. Raw and transcribed data will be placed in a locked filing cabinet/password protected computer at the University of Otago Higher Education Development Centre for the duration of the research, for at least five years afterwards and then destroyed.

Consent

All participants will be asked to sign a consent form prior to the research commencing and be reassured they can withdraw from the project at any stage without consequence to them. Educator participants will be reminded of this at the commencement of all interview/group meeting/IPRs and that they are free to withhold from research anything they say in interviews/group meetings as they wish.

Educator participants will be offered a copy of their interview/group/IPR transcripts and advised that they can request a copy of any information held about them at any time. Their reflective journals will be returned to them at the end of the analysis period.

Results of this research will be written up and submitted as a thesis towards the degree of Doctor of Philosophy at the University of Otago, will be available at the University of Otago library and may also be disseminated through other publications within the fields of Higher Education and Medical Education. Participants are invited to request a copy of the results of the project if they would like.
Section One

Group discussion: ideas about research and action research

When embarking on any research it is important to know what it is for, and what its basic assumptions and philosophy are. It can be helpful to examine our prior experiences and ideas - what Harris, et al (2008) called our ‘personal foundations of experience’.

Q. What experiences do you have of research, doing or participating in it? Describe some examples.

Q. From these experiences, can you describe the idea of the ‘position’ of the researcher?

Q. What about knowledge? How was this ‘created’ in the research that you have experience of?

Q. Two ideas about the philosophy of action research (used for this project):

…a process of learning and reflection that happens with the support of a group or set of colleagues working on real problems with the intention of getting things done.


…the right of all people to speak and be heard, the right of each individual to show how and why they have given extra attention to their learning in order to improve their work, the deep need to experience truth and beauty in our personal and professional lives.


Given these ideas, how does the current research seem to relate to your own ideas and experiences about research, teaching and learning?
What is Action Research?  

Adapted from McNiff (2002)

Having identified group members’ ideas and experiences of research, this section will now introduce you to the method which will be used for the current project.

Action research refers to a practical way of looking at any aspect your own practice to check it is as you would like it to be. Action research is done by you, the practitioner, and involves thinking about and reflecting on your work in order to improve future practice, i.e. contains a significant amount of self-reflection. This idea is central and a major characteristic of action research. Traditionally, especially in the sciences, researchers do research on other people, and the quantitative methods also tend to ‘separate’ the researcher and strictly control conditions of the research. By contrast, action researchers research themselves, enquiring into their own lives. You, the practitioner, will think about your own life and work, ask yourself why you do the things that you do, and why you are the way that you are.

When the research is finished, you will have carried out a systematic investigation into your own behaviour and the reasons for that behaviour. It is hoped that this research might also reveal ideas about the process you have gone through in order to achieve this understanding. These ideas would mean you can continue developing yourself and your work.

Action research begins with an idea that you develop rather than a fixed hypothesis. The research process is the developmental process of following through the idea, seeing how it goes, and continually checking whether it is in line with what you wish to happen. Action research is thus a form of self-evaluation and used widely in professional contexts such as appraisal, mentoring and self-assessment.

Who does action research?

You are doing the action research in this project. This project also contains a certain amount of interpretation as I will be working alongside you. From time to time I might clarify or analyse what you are doing to facilitate your progress, as well as for the research itself. You will also be doing so for me, and my practice as an educator. Thus I am part of the research and you are part of the research.
You have also been asked to incorporate a particular theory of critical thinking into your practice which takes some belief from you. Rest assured that this theory has been distilled from excellent practitioners at work in the health sciences as well as from the literature. As with any learning, this process might feel uncertain at first. One of my jobs as researcher is to tackle this when it occurs! It is hoped that our practice will begin to evolve around this theory and we will develop ideas about what this educating with this theory might look like and how exactly I might best teach it to you. I anticipate there will be many ways of educating with this theory, much discussion along the way, perhaps disagreement, all of which are valuable and integral to the research outcomes and purpose.

**What exactly are we going to be doing?**

I will be interviewing you early in the academic year, prior to your classes starting. By the time you get this document, this should have happened.

Early in the year, in the first two meetings you will learn a little about the theory we will be using in our teaching and I hope you will then begin to have ideas to get started teaching with this theory. I expect that as it might seem rather new and complex, this might be a gradual process so please don’t feel any pressure, just allow yourself to process it and for the group and your journal to help this process. After we have started, the monthly meetings will be a forum to discuss our teaching, evaluate it and develop further ideas for teaching during the next month. All this will be informed by your journal writing (see later) and recollections of your experiences. As time goes on, we will probably reform, rethink and perhaps discard some ideas, but the aim is to become better. By the end of semester two, we might have a good idea about how effective teaching with the theory might look.

The focus in action research is the process as well as the content. Data from the meetings, peer observations, interviews and the DVD session will all provide evidence in regards to my main research questions, which will be answered using data about you, and your teaching as well as my interactions with you.

I am doing this research as I have found this theory valuable in my own work and I would like to know more about what educating with this theory looks like, as well as how to teach it to educators. As such this is a value laden enterprise for me.
How do I improve what I am doing?

(McNiff 2002, p.25)

Notes/questions
Section Two

Group discussion: ideas about critical thinking

In this section we will examine some of our ideas about critical thinking in higher education. We may have chatted about these in your interview already. The next section will then describe in detail the theory of critical thinking that we will be using for this research period. First, a little background of critical thinking.

The idea of critical thinking is apparently valued by many education establishments and industries. In higher education it is referred to in course documents: curricula, learning outcomes, learning objectives, desired graduate and educator attributes, documents upon which we build our practice, e.g:

The capacity to be a critical thinker, capable of weighing, evaluating, and integrating new information into his or her understanding of issues.

(ago, 2012)

Critical thinking theories are situated in a diverse and complex literature that precedes Dewey (1910) and new ideas continue to be added to this day. Vast numbers of industries and educationalists offer ideas about what critical thinking might be. Broadly, authors agree that critical thinking is both positive and useful but despite being valued, there is a persistent lack of consensus about its actual meaning and also, therefore, how to best go about developing it.

Q. What ideas do you have about what critical thinking actually is? (to establish a focus for beginning this research and encourage group members to begin examine ideas and thinking)

Q. How do you currently try to incorporate these ideas about critical thinking into teaching practice?

Q. What ideas do you have about the purpose of critical thinking?

Q. Have you ever encountered educators or students with different ideas about what critical thinking is to your own? What were these ideas and how did the teaching/discussion go?

Q. What role do you think polytechnics, schools and higher education establishments have in developing critical thinking? To what extent do you think this thinking should extend, e.g. to knowledge, clinical life and so on?
Q. What value do you think medicine places on critical thinking?

Notes/questions
Section Three

Introducing Barnett and the idea of critical being

To introduce you to the theory (the Barnettian Theory of Critical Being) used in this research, I will first talk about Ronald Barnett. Instead of developing ideas along the lines of just thinking, as had many others, Barnett instead developed the idea of critical being, which is foundational to the Barnettian theory. The practice of this theory is the focus of this research.

Ronald Barnett

Ronald Barnett is an educational philosopher whose book ‘Higher Education: A Critical Business’ was published in 1997. This book added remarkably different ideas to the critical thinking literature, resulting from Barnett’s various experiences working in higher education. Here is a summary of Barnett’s reasoning that led to his ideas:

- The debate about what critical thinking actually is has been going on a long time, without broad consensus.
- This lack of consensus means that when one person refers to critical thinking, another might not know what they actually mean.
- Educators and students in higher education find it hard to know how to inform their practice and are often unclear about what it means to be a critical thinker in teaching, assessment or study.
- Higher education institutions refer to the idea of critical thinking, and also broadly agree their role is to develop lifelong thinking skills in students. However, ‘consumers’ of graduates (industry, public sector, etc.) consistently find thinking skills of graduates underdeveloped, in particular thinking well about their own lives and the societies in which they practice.

(Barnett, 1997)

To illustrate these arguments further, think about institutions that might believe critical thinking is reasoning or logic (etc.). If they teach well to this theory, they might produce graduates capable of thinking well with knowledge (for example), but not so capable of thinking in other ways. (I’m making some gross generalisations here, but this general idea can be seen in the literature). If ideas about what critical thinking is are also different – across
the education sector, within the institution, across a paper, between colleagues – it becomes more apparent what Barnett means. Educators, faculty and students might easily miscommunicate; refer to critical thinking, but mean different things. In practice, an educator might also think they are educating for one kind of thinking but are actually encouraging another, a student might believe they are thinking critically but ‘doing’ something different to another and so on. Because of the vast and complex literature, even ‘Faculty’ might not mean, or understand what they say, or know how to get it.

Barnett (1997) goes on to argue that at the core of these issues is also the fact that current critical thinking concepts are limiting. He believes that many concepts of critical thinking are not enough for personal growth, higher education, or the world today (which, I think we might agree, is an increasingly complex area). Whilst acknowledging the various values of current critical thinking concepts, his ideas refocus the idea of critical thinking to address the question ‘what is it for?’ (Barnett 1997, p. 65). In his book he proposes ideas of critical thinking, but follows them with another idea of critical action, and ultimately, critical being.

Q. Do you have any comments, so far, about Barnett’s arguments?

Q. If you were to develop a theory of critical thinking, what would it look like?
Section Four

The Barnettian Theory of Critical Being

My thesis is that we should dispense with critical thinking as a core concept of higher education and replace it with the wider concept of critical being.

(Barnett, 1997, p. 7)

In his 1997 book, Barnett introduces his idea of critical being in detail but without empirical evidence from practice situations. Barnett made strong arguments and by 2008 no broad consensus about a critical thinking definition had yet been reached. Neither had Barnett’s ideas been the subject of empirical research. For my Masters’ thesis (Blakey, 2011) I examined teachers’ and students’ practice for evidence of his ideas in the place I thought I was most likely to find it, one which philosophically and practically supported the idea of developing thinking. I studied small groups in various health science teaching settings. In finding evidence for Barnett’s ideas, I added new details, culminating in the theory that we will use for this project. This theory is therefore a combination of Barnett’s original work and these additions.

Please note that I have deliberately changed some terminology for the purposes of this project. Instead of ‘critical thinking’ I use ‘criticality’ for the Barnettian theory in order to make a distinction between the project and other ideas of critical thinking. This term is also used by Golding (2011). Changing terminology might help avoid some of the difficulties, which as Barnett described, arise in practice. I have also used the word ‘educator’ (as also noted by Golding) rather than ‘teacher’, which has in some contexts latterly come to suggest one who brings a student to understand a body of knowledge (however complex!) rather than to develop thinking or ideas.

The Barnettian Theory consists of three main concepts: criticality, critical action and critical being. This next section is in three parts which will introduce these ideas together with examples drawn from practice situations from my 2011 research. There will be opportunities to comment and discuss throughout. Whilst I introduce these concepts separately, it should be noted that in reality there is much flux between them and depending on the context, they might appear in a different guise. This is why my research proposal suggests that there may be many ‘ways’ of teaching with this theory.
Also please note that the evidence that I present represents only one, or some, of the ways that this theory might be found. These were from the classrooms that I studied – but of course criticality, critical action and critical being will show itself in different ways, at different times and for different people.

In this resource, to simplify reading I also make no distinction between Barnett’s ideas and my own. If you would like further details about the theory developed, feel free to discuss in the group, access references given at the end of this resource, or research further.

Figure 1. The Barnettian Theory. This figure illustrates the theory in which a critical thinker values both thinking and action, and begins to use these in all walks of life (domains).
Criticality

What makes criticality?

Criticality is the first idea in the Barnettian theory and could be said to sit at the core of it. This section uses students in a classroom situation to illustrate one way that criticality might appear. Students had been set an essay which allowed scope for originality and were offered opportunities for discussing these ideas. Conditions for these students were good – the programmes in which the essays were set supported the idea of developing thinking, the teachers allowed for it, taught for it and rewarded it. Data from these discussions about the essay showed a process that was central to the idea of criticality:

Active, autonomous decision to engage critically

Purposeful evaluation of task

Examination of wider context

Formulation of work strategies

Persistent work with an appropriate decision to stop

This process is described in detail here. This data came from DVD footage of the students, and their reflections on it, similar to the process I hope to use for this research:

Active, autonomous decision to engage critically The essay task overwhelmed students initially, but they made a purposeful decision to engage with it, realising they had to decide what to do with it, and had to develop a sense of autonomy from their peers and educators to do so. Students spoke about this process emotionally but most felt able to continue on.

Purposeful evaluation of task Students spoke about being frustrated in this phase and considered many options for how to go about the essay. Some described the difficulties of tackling something that’s not ‘black and white’ but that requires original thinking. They expressed frustration and that the task felt uncertain and difficult.

Examination of wider context Context is central to criticality. Students considered personal ideas (‘what’s important here? What am I going to do?’), which influenced both the content of
the essay and how they were going to carry out the essay: what learning strategy, or work strategy that they might use. Students’ contexts meant that they considered various ideas:

Personal ideas about success (I really want to put this idea across!)

Risks and sacrifices in learning (do I do something a bit left field?)

Influences of others (educators, peers, etc) (Bob gave me an idea….)

In discussions about their essays, students described the different ideas about what ‘success’ meant to them. These ideas included practical ideas (write an essay that would just pass the course), emotional (writing and learning for pleasure) or intellectual ideas (learning to research, communicating a point of view). Students were influenced in part by peers and educators, taking part in classroom discussions, not copying, but considering each other’s ideas carefully. What influenced students’ final choice isn’t clear, but considering these ideas meant their work gained a sense of originality (mostly, see later). Using personal ideas also meant taking risks (e.g. potential failure, cultural risks/risks with relationships) or sacrificing things (e.g. missing out on learning). Many more possibilities of ‘success’ might be possible and it was surprising seeing academically able students pursuing ideas that weren’t all about high marks. What is important to note is that a student who shows criticality seems to be responding to their particular context.

Formulation of work strategies  At the end of the thinking process, students devised strategies to approach the essay depending on ideas about success, how much risk they were prepared to take and the influences on peers and educators on them. Strategies required various approaches to learning and therefore different thinking skills.

Persistently works with an appropriate decision to stop  Students who thought critically about their work showed an awareness of what is reasonable and appropriate, deciding to stop ‘thinking’ about their project despite chances to continue refining their work (e.g. more research, more discussions with educator). They simply stopped when they deemed that they had put enough work into both the project design and actual writing. For these students, criticality ‘does the job we set for it’ (Ennis 1987, Paul 1993). Again this was surprising from what I had thought were ‘high achieving perfectionists’.
What might criticality look and sound like?

Of course the example of the essay is just one way that this theory about thinking could be ‘seen’. The students in this prior research were given scope for criticality: it was also made clear what was expected, it was supported and rewarded with grades. If this isn’t the case in what we ask students to do, we can assume that less criticality would be seen or that different aspects appear at different times.

However, thinking is by its very nature hard to perceive in another person, invisible and complex (Golding, 2011) – and might also look different in different people. Here are some things students said and did in my 2011 research that I believe let me know they were being critical. Some were also resisting or struggling with the ideas. These might be helpful to get us started on this current research.
<table>
<thead>
<tr>
<th>Criticality (abstract idea)</th>
<th>Students might be observed doing these things (concrete)</th>
<th>Students might say these things (concrete) when being critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Active, autonomous decision to engage critically</td>
<td>Deciding not to copy friends.</td>
<td>‘I’ve read the guidelines and this looks interesting’</td>
</tr>
<tr>
<td>b. Purposeful evaluation of task</td>
<td>Talks about a sense of purpose Finding out about the essay</td>
<td>Questions about task: ‘What is this meant to achieve?’</td>
</tr>
<tr>
<td>c. Examines wider context</td>
<td>Is able to read the context and make appropriate judgments; comes up with original ideas based on personal values, beliefs, and personal situation. Gives reasons based on the above. Might take risks in learning - miss out on grades, learning or experiences. Values ideas of others (takes bits of ideas but doesn’t copy).</td>
<td>Talks about what a successful (essay, etc). would mean to them at this time: ‘I think this issue is important here’ or conversely ‘I don’t mind getting a pass, I’ve something else I want to put my energy into this week’.</td>
</tr>
<tr>
<td>d. Formulates work strategies</td>
<td>Appears aware of and values different approaches to learning and thinking. Might, or might not result in higher order learning - those expected to excel might not. Students learn new strategies to make a point of view or use a tested one, depending on context in c.</td>
<td>‘I think that the way that we did the essay in English language might work for this point of view’.</td>
</tr>
<tr>
<td>e. Persistently works with a reasonable decision to stop</td>
<td>Shows willingness to invest <em>appropriate</em> effort in task, until its conclusion.</td>
<td>‘I think its time to hand it in now, I’ve reviewed it enough times.’</td>
</tr>
</tbody>
</table>
Signs that students are struggling with, or on the way to criticality:

<table>
<thead>
<tr>
<th>Abstract idea</th>
<th>Resisting criticality</th>
<th>Struggling with criticality</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Active, autonomous decision to engage critically</td>
<td>What are my mates doing?</td>
<td>Asks What should I do? I’m not sure what I should do here.</td>
</tr>
<tr>
<td></td>
<td>‘It’s not black and white, it’s too hard’</td>
<td>Struggling with many ideas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expressing frustration with task</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expressing anger with you, or the task/course</td>
</tr>
<tr>
<td>b. Purposeful evaluation of task</td>
<td>But what is it ABOUT?! I can’t find anything about that</td>
<td>What do you want me to write? What is everyone else writing?</td>
</tr>
<tr>
<td>c. Thinking about context</td>
<td>‘They didn’t ask for this in health sciences’</td>
<td>‘But I’ve always done it this way’</td>
</tr>
<tr>
<td>d. Formulation of strategies</td>
<td>I can’t be bothered. Just hand it in. Or, reviewing a document so long that the hand in date passes.</td>
<td>Wondering about how much is enough</td>
</tr>
<tr>
<td>e. Persistent approach with a reasonable decision to stop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*What does this mean for students and teachers?*

What this means in practice is that it can be hard to tell whether a student is engaged in criticality simply from their output, or academic achievement. Criticality also means showing evidence of all five parts of the process – which may be more or less evident depending on the task you ask of them. Here are some examples from my data that might help illustrate this idea:

**Example 1.** Mariana took a while to choose a topic for the essay, settling on breastfeeding as an important topic. She listened to what her educator and colleagues had to say about it, used ideas about content but decided against advice on being a little less controversial. Her in-depth, political account meant she took some cultural risks (due to her ethnicity) and she felt
she might not get top marks for being a bit left field. She had some help with her literature review from her friends and passed the essay well.

As far as I could see she was showing criticality: she took time to make the effort, had ability to write a well-constructed essay, listened to others but didn’t copy, researched her topic and followed it through.

**Example 2.** Marvin also took a while to decide what to do and decided, in the end, to ‘just Google it’ (took a ‘superficial’ approach). He presented a factual essay. During research he reported having many more interesting other things to do that he would put some effort into. He knew he might not get top marks or learn much from writing the essay and committed minimal time to it. He scraped through the essay.

As far as I could tell Marvin showed criticality: he took time to make the effort, (apparently) had the ability to write a well-constructed essay (but didn’t this time), thought about ideas of success to himself at that time, understood the topic but didn’t want to go into depth. I did make an assumption that he could construct good essays as well as factual ones, based on his comments about his other studies. That students might show criticality but not get top marks was the **biggest discovery of my research**.

**Example 3.** Bob didn’t take long to decide what to do. There were discussions about various topics in the group but he stuck to the one suggested by the educators as it seemed to be one the educator liked. He used a good strategy for doing a literature review that all students had used in health sciences and passed the essay.

As far as I could see he was not showing criticality: Bob took the easy option, didn’t have a varied range of thinking skills or learning strategies, listened to others but copied their ideas, understood the topic, spent a reasonable amount of time on it but was essentially taking the easy option.

Q. Can you venture what kinds of context drove these decisions about strategy? I have partially answered this in my comments, but what do your experiences of students tell you?
Try these (fictitious) examples yourself – the aim is to gain an understanding of this theory.

*Example 4.* Chris got bored with class discussions and liked the sound of the topic his mates were talking about so used that. This class was one of his least interesting, one he was yet to understand the point of. Leaving little time to complete the essay he exceeded the word count, including irrelevant topics. Most of his other essays looked similar.

*Criticality or not? Give reasons for your choice.*

*Example 5.* Melanie, a very clever scholarship student was serious about the essay and asked about criteria, marking schedules and so on. When assured that originality was required she was puzzled and frustrated. She researched the topic and, as always, presented a nicely formatted, factual and analytical account. She did well on the essay marking but not for originality (that was asked for).

*Criticality or not? Give reasons for your choice.*

*Q. What of the student who passed the essay, but might not be showing criticality? Is this significant, or, why should we care?*

…the results of inquiry can be positive, negative, or something in between.

*(Facione, 1990. p. 3).*
Summary

The fictitious examples of Bob and Melanie make a useful summary to this section which described what criticality might look like. These students appear to have successful strategies for learning yet, according to this theory, aren’t thinking critically.

Could such students benefit from being taught according to this theory? Consider wider contexts that we prepare students for, and the idea that Bob and Melanie’s successful strategies might be drawn from a limited scope, or lack of value for thinking. If we are educating students in higher education yet they graduate with limited thinking abilities, the idea of how we might teach for criticality begins to gather importance.

Barnett developed his foundational ideas on the premise that criticality prepares students for professional and social situations in wider society. The criticality seen here lends itself to open mindedness, learning new ways of doing as well as creatively developing strategies in learning. Students in my study who showed criticality seemed fairly well equipped for professional life as a health scientist in which reasoning (e.g., diagnosis) might be combined or alternated with rule-following (e.g., emergency situations) and creativity, rather than one way of doing: and one might assume that they might continue this thinking elsewhere. Appreciation of context, which the students showed, is a must here. Each of these is useful but, used in isolation, may not serve the profession well (Jones & Brown, 1991). This theory places value on all kinds of thinking and strategies for learning. Even ‘surface’ approaches to learning (e.g., rote learning, pursuit of isolated factual information), although maligned, can thus be argued to useful in our repertoire for life. As a general strategy therefore, criticality is about responding to a particular context and in doing so, valuing many kinds of thinking and learning.

Some ideas for our current research

How do we educate for criticality? How do we encourage our students who may have experienced success in one way, to explore and master other ways of thinking and therefore learning? How might be encourage them to respond to situations inside and outside of the classroom in such a way?
Critical Action

What makes an action critical?

The last section explained the theory of criticality and illustrated some ways it might appear in practice situations. This section now introduces the second idea in this theory. The idea of critical action is an integral part of this theory and might be pictured as following on from, and essential to, the idea of criticality. Again I will illustrate this idea with examples from my research, this time from both educators and students.

Barnett’s argument for including critical action in his original ideas was that some other definitions of critical action have been limited to those leading to personal pecuniary gain, or profit for industry. He argued that taking action should instead allow us to execute our criticality (thinking), and in doing so gain further opportunities for learning from this interaction. He proposed that criticality needs, necessarily, to be followed by critical action and that our interactions in the world should allow us to examine and develop knowledge, understanding and ourselves.

It is with this part of the theory that the actual meaning of ‘critical’ becomes more apparent. Critical is often viewed as ‘to critique’ or more colloquially ‘to criticise’. However, critical, in this theory comes to mean something more along the lines of ‘thought through well’: certainly not actions that are knee jerk, lazy, passive or driven by selfish means.

Critical action can either mean doing something with our criticality; taking action based on it, actioning it, e.g. writing an essay, the students described in the previous section bringing ideas about their essay to a group discussion. As criticality and thinking precedes what we do more generally, a critical action might simply be one that is how we interact generally e.g. bringing ideas to a discussion about a topic, the way we choose to speak to those around us, the way we choose to teach. The term might even be viewed as giving feedback, e.g. comments on a thesis chapter, commenting on ideas in a meeting.

In group work, I found that students and teachers showed evidence of critical action in that they all reported carefully thinking about how they acted (in whatever form). What made these actions (comments in discussion, how they spoke to each other, presented ideas, chose to teach) critical was, like criticality, multidimensional. Actions were:
As you can see, what the Barnettian theory means is something far more than simply ‘thinking’. It’s also about responding well to situations around us and personal learning. Here are some examples from my thesis to explain more exactly what I mean for students and educators.

**Critical action and students**

The overwhelming theme of how of students took *critical action* and did so positively was shown in their group interactions – I called this ‘collegiality’. Thinking hard about how they acted, students acted between tacit boundaries: at what could be viewed as one ‘end’ of a spectrum students would *act critically* to offer help to each other e.g., researching topics, with literature reviews or writing in order that they could fulfil their essay requirements. At the other ‘end’ of the spectrum, *critical actions* also meant putting limits on collegiality. Astutely, when one student in the group appeared to be copying ideas, another would withhold help from another to ensure their colleague learned from group work (didn’t get a free ride) which could also be viewed at an attempt to maintain their colleagues’ autonomy and criticality.

Within these boundaries, perhaps discussing their essay ideas in class, students seemed to view each other as equals. The overtly positive nature of critical action meant students weren’t concerned with imparting knowledge, one-upmanship or gaining kudos through group interactions but only used knowledge to contribute to discussions. On occasion, a positive contribution might also be one where a student chose to remain silent (i.e. silence can also be critical action) perhaps to let someone else have the floor to develop their ideas. Negotiating these boundaries meant that students had to think hard and like criticality, was not always easy and took some effort. Both ‘ends’ of the boundary seem to be needed for both emotional security and productivity of the situation: guidance needs to be balanced with expert input.
**What does critical action mean for students?**

The important thing about critical action is that when students take critical actions, it allows opportunities for themselves and others to further their learning. Taking critical action meant that all group members felt able to bring their ideas and thinking for the benefit of everyone and viewed their peers as potential sources of learning, as well as being encouraged to maintain criticality themselves; such actions meant that those struggling with criticality or critical action were encouraged to take responsibility for it themselves. All kinds of teaching and learning went on in between these negotiated boundaries and thinking hard about how to interact, and doing so positively, meant group members (almost universally) felt able to share ideas, knowledge and thinking, examine them in a new light and refine or change them.

Critical action offers the potential for further learning, again occurs within a context and even acts as quality control on thinking. This makes the idea of ‘critical thinking’, as presented by others (who mean logic, for example) look rather benign, perhaps? If we do something with our thinking….it might get better!

**Critical action and educators**

Educators in the research also thought carefully about how to interact, and also made deliberate choices to meet (teach) with students collegially. Like the students, an educators’ primary purpose seemed to be expressly developing the thinking of the group members and educators were not concerned with simply imparting knowledge, having authority or gaining kudos through teaching.

What was interesting about educators was that they used their critical actions to operate within tacit boundaries. These boundaries meant that they were able to use many and various strategies to develop thinking but what also made actions critical for educators was judging what to do and when. For example, at what might be perceived at one boundary, if educators perceived a student was not bringing their own thinking, e.g. copying the educator, educators would demand more of a student, offering guidance to get interactions going again. They reported doing this to ensure students look after their own needs in learning. Guidance might also be needed to get started in group work, to encourage. At the other boundary, educators were careful to deliver knowledge if needed, to get learning going again, if they deemed that students needed guidance for safety reasons or an ‘expert opinion’, to ensure students ‘get
something right’ for the discussion to progress. Educators acted thoughtfully and carefully about what to say and how to say it to develop thinking in the group. They offered expertise, and also used didactic teaching when necessary but did so very carefully. Both ‘ends of the boundary seem to be needed for both emotional security and productivity of the situation: guidance needs to be balanced with expert input. This seems to make sense – what good is it offering expert knowledge without encouraging students to develop it themselves?

**What does critical action mean for educators and their students?**

Negotiating these tacit boundaries seemed to have the purpose of developing autonomous learners with strong, safe foundations for practice and the capacity to develop their thinking and learning in groups. Educators in the study found this hard and reported that it took maintenance and development of a range of teaching strategies and also that the temptation to just ‘give’ the students’ knowledge – or say ‘I know more than you do’ was hard!

However, what this all meant was that educators acted deliberately to create conditions for students to develop, share, and evaluate thinking; and every group member also had opportunity to change and learn to participate in group work by being offered guidance to get involved in group work (at one end of the spectrum) and to be corrected, or pulled into line, if things get out of hand (at the other). In this way, students were able to use their actions as a form of ‘quality control’ for thinking, a testing space perhaps.

Good group work like this also offers something interesting for educators: research showed these educators were also able to use the group to check that their teaching was developing criticality. Here’s the logic:

Whilst some students critically choose to engage in ‘lower order’ learning for their essays and didn’t have much to offer group discussions, their thinking has also been shown to be individualistic and likely to be unique (e.g. Mariana’s breastfeeding essay). If encouraged to do so, students are likely to bring new thinking to group work at some point. If educators selected and maintained strategies to both encourage criticality and allow students to bring these ideas to the group, an educator was highly likely to learn from this exchange of ideas. Educators who use ineffective (uncritical) teaching strategies (e.g. didactic teaching all the time) were more likely to find they did not learn from their students. In the words of one of the educators:
I'm…someone who has knowledge and is approachable and is inclusive with that knowledge…willing to share it and develop my learning at the same time as they’re developing their learning. So they’re teaching me too (Deirdre).

**As an aside…..**

*Watching how the educators in my previous study interacted gave me some clues about how they ‘thought’ about their own practice.* Just as critically thinking students gained autonomy in learning, educators did too in their practice. They taught flexibly with their own strengths and weaknesses in mind, listened to feedback and treated professional development seriously. Educators constantly interrogated their practice to closely align philosophy with action and welcomed chances to improve. Importantly, rather than blindly follow a teaching doctrine, or be drawn into a historical hierarchical ideas of what educators should be (Smith 2003) educators developed their own, effective, teaching practices. Like students who developed criticality, this discovery implies that these teachers *value many kinds of teaching and also respond well to context.*
Exercise

From my research I also found that I began to know what a critical action might look like, its characteristics. What do you think critical actions might look like, for educators and students?

<table>
<thead>
<tr>
<th>Critical action in students</th>
<th>Critical action in educators</th>
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What might critical actions look like for educators and students?

<table>
<thead>
<tr>
<th>Critical action in students</th>
<th>Critical action in educators</th>
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</thead>
<tbody>
<tr>
<td>Collegial</td>
<td>Collegial</td>
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<tr>
<td>Equal power relationships</td>
<td>Equal power relationships</td>
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<tr>
<td>Gives opportunities to refine thinking (quality control)</td>
<td>Gives opportunities to refine thinking (quality control)</td>
</tr>
<tr>
<td>Has limits (withdrawing help)</td>
<td>Has limits (being an occasional expert)</td>
</tr>
<tr>
<td>Means thinking hard to negotiate tacit boundaries</td>
<td>Means thinking hard to negotiate tacit boundaries</td>
</tr>
<tr>
<td>Isn’t concerned with kudos/hierarchy</td>
<td>Isn’t concerned with kudos/hierarchy</td>
</tr>
<tr>
<td>Isn’t concerned with simply knowledge transmission</td>
<td>Isn’t concerned with simply knowledge transmission</td>
</tr>
<tr>
<td>Preserves the autonomy of group members</td>
<td>Preserves the autonomy of group members</td>
</tr>
<tr>
<td>Treat autonomy seriously</td>
<td>Treat professional development seriously</td>
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</table>
These ideas about critical action are of course a little abstract – so what might a person taking a critical action, doing or saying something they have thought about carefully, sound like?

<table>
<thead>
<tr>
<th>What might a student taking a critical action SOUND like?</th>
<th>What might an educator taking a critical action SOUND like?</th>
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<tr>
<td>‘I read a bit about that once [explains idea]. Does this sound right?’</td>
<td>‘Can I stop you there and just go over those pathways one more time? It’s important that you guys get that bit, so we can carry on’</td>
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<td>‘Danny had a good idea about that the other day, can you tell us again, please?’</td>
<td>‘I have a lot of experience of this disease, and I think this would be good to bring to the group’</td>
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<tr>
<td>‘I’ll show you how to do this one, seeing as you helped me the other day’</td>
<td>‘I really would like to hear from you guys over there, you’re being a little quiet’ What do you think about all this?’</td>
</tr>
<tr>
<td>‘I think you need to get a hang of that one yourself, mate, you need to learn to do it yourself now’</td>
<td>‘I need to let you try that yourself now. How are you going to start?’</td>
</tr>
<tr>
<td>[keeping silent to let their colleague try to explain]! (even though they knew the answer)</td>
<td>‘You need to go think about the essay – take some time considering what you want to say. It might be hard for a bit!’</td>
</tr>
<tr>
<td>‘I liked what you said [to the tutor] but I’m wondering if you meant the renal tubules?’</td>
<td>‘Tell me about your presentation, how are you going to tackle it? Is there anything you think is missing, shall we get some ideas together from the group?’</td>
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As you can see, it’s quite nice to see these ideas bearing out in how students and teachers speak to each other. After a couple of years of thinking with this theory, I’ve found it very
handy when I hear something that’s ‘uncritical’ – for group management, or manage tricky situations.
Summary

The last educator quote, from Deirdre makes a useful summary here. Fully expecting to learn from group work, and seeing clearly her role in it, this concept of critical action challenges the idea that knowledge transmission is the sole purpose of an educator’s practice. Educators and students can learn vastly when thinking independently but taking critical actions mean that more thinking and learning can take place and be refined.

Students and educators who show evidence of this theory clearly place value on using opportunities for action, equal relationships, and value people. Could students benefit from being taught with this theory? Students participate in a wide range of teaching and learning situations and if we teach them to do so critically, what might this do for them, for their learning, as a professional and in the community?

Some ideas for our current research: How might we educate with this theory?
Critical Being

What makes a critical being?

The first section described how criticality manifested itself when students were set a task. Next, critical actions in group work were examined and shown to be essential for developing that thinking. This section details what is meant by a critical being and uses the examples of Patrick and Deirdre, educators who featured in my Masters’ research.

To begin to illustrate the idea of critical being, think about a person who ‘thinks critically’ about professional life but makes serious errors of judgment elsewhere. A colleague once described this so: ‘even brilliant surgeons can be wife beaters’. Criticality and critical action need to be extended to other parts of our lives, and doing so consistently makes a critical being. Students and educators in my Masters’ research were examined undertaking limited tasks – essays, discussions and so on. Critical beings take their ways of thinking and acting and extend them to other domains of their lives, and indeed also begin to understand themselves critically. Whilst this idea could be said to be somewhat idealistic, there was evidence in my previous research to suggest that educators in higher education can begin to set this process off in students.

To complete the Barnettian Theory of Critical Being for my Masters’, I needed to establish why and how people would extend their thinking, or, why some people do it and not others (critical beings aren’t only found in education, and do develop without it!). In isolation, criticality and action seem essentially ‘good’ but don’t completely address Barnett’s original idea that educating for critical action and thinking should be a transformatory experience: we need to take these into other parts of our lives and even go as far as understanding ourselves critically. Here are two themes that emerged while searching for this reason:

Extending thinking: Patrick

This quote illustrates what is meant by extending thinking to different contexts:

When you apply critical thinking it’s difficult to know what comes first. Your critical thinking as a professional is either a reflection of your critical thinking in your life…I think as you get older or further into your career, then one probably matches the other, or they run parallel or are intertwined or the same thing. ...I think your profession in some ways starts to define you as you get further down the track because the way you
Patrick’s comments show how a relationship between different aspects of life might look. He suggested how we extend criticality into other contexts is complex, and was unsure whether criticality in his professional life began to influence his home life, or vice versa. It seems that a substantial amount of professional thinking transfers to ‘home’, takes some time to emerge and that given support, continues to grow throughout a lifetime.

Q. Have you any ideas about how ‘extending thinking’ might come about?

Changing people: Deirdre

This theme identified what a critical being might look like. Deirdre used her criticality and critical actions in her teaching:

…the lecturer...the white coat…I can’t be that kind of person…even in my practicing life I can’t be that kind of person. It’s alright…it’s sort of cool but it’s sort of scary too. I think I take risks in what other professionals within academia may think because I don’t speak professionally enough with the students at times and maybe because I laugh a lot and smile a lot…

(Deirdre).

Some of her ways of teaching are obviously important to Deirdre, she has assessed them and stuck to them and believes she is doing the best she can. Deirdre suggested that as a result, she is regarded as a little different to the norm, and not always met with a good reception. That critical beings might look a little different to what we expect was anticipated by Barnett when he proposed his original ideas. According to Deirdre, she is happy with her ways of
being but that her professional community regards her as unprofessional, not clever enough and a ‘problem’. This sentiment was echoed by her students although more positively, apparently finding her a little different to usual:

I felt they looked at me like I was insane because the way I presented to them…I told them about myself and I tried to get them involved and I think some of the other tutors aren’t quite as out there as me.

(Deirdre).

These comments suggest that rather than being assimilated or seeking acceptance into profession or community, or any walk of life, critical beings might look or behave differently. Deirdre’s experience tells us that this might be hard but seems ‘right’.

Q. What of all this? What do you think she is doing?

Deirdre seemed to have retained a sense of self in her teaching practice and also aimed to encourage this in her students. She plans that:

if they [the students] can do that then they’ve won because they’ll go through life thinking, I can be the kind of practitioner I want to be… in [this programme]… lots of things are put upon you… it’s time we should throw away some of these things. I wanted to allow them to be who they want to be… think outside of the box that they
are taught here and how to look and how to be… I want them, when they graduate as professionals…to be able to look at something, think about it and take their beliefs or their thoughts, their experiences, the academic reasoning that they’ve put in place to make a decision.

(Deirdre).

Another educator described how some ‘mass’ education programmes might neglect to focus on growth of the self and instead focus on factual knowledge. Another educator, Denise, views this practice as contradictory to the aims of higher education:

…these environments are just interested in biffing out professionals. Instead we want these people to come into academia and develop and challenge and run things…With the McDonaldisation of universities and mass lectures the focus has changed from great learning, that you are here to learn…to learning for an end purpose and knowledge’s sake rather than for the betterment of yourself.

(Denise).

Q. Can you think of any examples of what Deirdre describes, from your experiences?

Why is Deirdre prepared to tolerate such risk-taking rather than simply conform? Harland and Pickering (2011, p. 5) note that ‘the academic who dares to think differently is often labelled nonconformist or cast as a troublemaker’. Deirdre’s comments ‘their beliefs, their thoughts’ suggest she is driven by something intensely personal. Is she simply being individualistic, or authentic as the idea of criticality suggested?
Authenticity has been referred to as being assured about what we value, and also as ‘having a sense that one is operating from a sense of self that is defined by oneself as opposed to being defined by other people’s expectations’, Tisdell (2003, in Kreber, et al, 2007, p. 27).

Q. Can you think of any problems with this idea to explain critical being? What if Deirdre was simply misinformed about good teaching practice, or being bloody minded?

The problem with simple authenticity is that if we are authentic, we might also be ‘authentically evil’ (Trilling 2006). Authenticity is also about living our values fully (Harland and Pickering 2011) and I suggest what drives Deirdre is realising and acting on her values. Not only this, but being prepared to re-evaluate them.

Values are about making choices, and all behaviours and thinking reflect our values. However, it is important to note that ‘some value decisions are simply better…we know this intuitively’ (Harland & Pickering, 2011, p. 10). These authors suggest that at the basis of our values is also our conscience, the internal voice which tells us right from wrong and ensures we act for good, not evil. Realising and acting on values must occur with a strong sense of conscience and should be a positive act. When we make choices, justify decisions, articulate or negotiate a value position, we choose wisely.

Q. Can you think of any ‘authentic’ but ‘evil’ people?

How and why some might be changed by an education, and aspire towards critical being is driven by being prepared to realize and re-evaluate all of one’s values.
Summary

Criticality and critical action have been shown to be about valuing thinking and learning of many kinds, and valuing action, and people, as vehicles for quality control on thinking and further learning. Critical being, the encompassing concept goes further to suggest that a critical being does these things but also is prepared to turn this criticality in on themselves to evaluate or change values that drive all parts of their lives. Educating for critical being might thus be able to change people, for the better, as Barnett anticipated.

Whilst perhaps aspirational, my research showed it is possible to begin to educate for critical being in higher education. We might not see results of such teaching during our time, but such a possibility suggests an obligation for us to try. For some, critical being might offer great potential for professional and personal growth. Tricky, however, which I guess is one of the points if this research. We put lots of effort into educating doctors to be doctors, think and act like doctors and of course this must be achieved – and is hard on its own. But what if we can educate for more? Better?
The Barnettian Theory of Critical Being

**Figure 2. The Barnettian Theory**  This figure illustrates the theory in which a critical thinker values both thinking and action, and begins to use these in all walks of life (domains).
Some ideas for our current research

How might we educate for critical beings, especially since they might have a hard time in being this way?

What might a critical being look like and sound like in the health care setting? (this idea will also be revisited at the end of the research period)
Section Five

Introduction to Reflective Journaling

Keeping a journal is, according to Boud (2001), especially useful for making sense of the world we operate in and how we do so. Journaling can be especially good for our practice by allowing us to record events and experiences, to begin to think about them and hopefully find some meaning to move forward with. As well as obvious benefits making sense of things, reflection in general can be great for emotional resilience. I’m hoping that journaling will help this research by allowing us to untangle some knotty bits of teaching practice and offer us some insight into what do and why we do it. This might be familiar to many of you, but I need to check we are all alright with it – Faculty are also introducing a bit of this for us in training this year, I think.

What is reflection? Roughly speaking, reflection is an opportunity to recapture an experience, think about it and evaluate it (Begg, 2010). Schön (1987) spoke of reflection as a vital component of being an effective practitioner. Reflection is often spoken about as taking place at various points in time e.g. reflection in action (during), reflection on action (after) and in anticipation of events (before). Journaling is most often used for reflection on action but is useful for all categories.

Whilst it might feel rather negative and difficult at first, reflection has been shown to be genuinely useful and tends to feel more positive as you go along. Schön was said to believe that this is because after a while there is less need to reflect on negative things, as we grow to understand good practice better (Schön, 1983).

Using a journal for reflection Try to write five minutes every day about your teaching, what you did, how you did it, why, whatever comes to mind as successful, interesting, tricky, tedious and so on. If you see a theme developing, note it in a margin. Then look forward and have a think about using your themes to plan what to do next, and how. These themes provide a foundation for more learning. You might like to divide your journal up into sections, if this seems to work for you. The journal is both the place where the events and experiences are recorded as well as the forum in which they are processed and re-formed (Boud, 2001). Please bring your journal to the monthly meetings where we will discuss what has happened over the month for you, and use the group to develop your ideas further if we can.
It is hoped that for this research, journaling becomes a tool with which to move our thinking forward throughout the year as we strive to improve our practice, focusing on the ‘new’ theory with which we are developing our practice. If you find journaling hard, don’t worry. There are many reasons that people might not find journaling easy so try to stick with it, and even write about what you find hard and perhaps why. If the thought of someone reading your work is putting you off, I would like to reiterate that the journals, if you consent for me to access them at the end of the year, will remain unidentifiable. If you can write about it, working out why some things are hard would be useful, e.g. why some find journaling tricky or if tensions between group members arise. These things are all par for the course in this kind of research: we can learn from them.

The main function of the journal is to inform your own group work through the year, develop your practice and for me to gather some additional data about your teaching. There are no criteria for assessment and if there are any parts of your journal you wish to keep confidential, please do so. Journals will be collected in at the end of the academic year and returned to you at the end of the analysis period.

Practicing a 5-minute reflection

Adapted from Moon (1999), Boud (2001), and Wear, Zarconi et al. (2012).

Here is a short exercise to get started on journaling, find how it might work for you during this research period and ‘turn experience into learning’ (Boud (2001), p. 2.).

Pick an event from your teaching practice that is memorable (e.g. pleased you, troubled you, confused you, etc.).

Take a minute to think about the event and when ready, begin to write (use this page, or your journal). It doesn’t matter whether punctuation, grammar etc. are attended to. Try to write for five minutes without stopping. Revisit the moment and all its incumbent feelings.

When the time has ended, go through your writing and try to assign some sense of meaning to each part. This might be a section, paragraph (if used) or sentence. What is the ‘theme’ of what you are saying? Write the theme, be it a word or phrase in the margins.
Think about your future teaching. What does all this mean, therefore, for your future practice? (E.g. are you going to try something new, if so what, and why?) Write these ideas in the margins, or summarise at the end of the writing.

Periodic summarising can be a good idea as a journal can be a complex document. It might help our group meetings if you summarise these themes and what you are going to do, weekly, or at end of month to bring to our meetings. **In particular I would like you to sum these themes up at the end of the research period.**
Section Six

These are some personal spaces for you to record notes from the conversations we have after the two peer observation sessions. As with your reflective journal, it might be useful to summarise these into ‘themes’, think about if you would like to bring any ideas to monthly meetings, and what you might take from these observations about your future teaching practice. I won’t need to see these notes!

Session 1 (space)

Session 2 (space)
References


Otago (2012). *Medical Graduate Profile*. Dunedin NZ: Faculty of Medicine, University of Otago


**Reflective Journal – see own book.**

Please try to write your journal in whatever style suits you. It might be helpful to summarise or try to find themes as your writing progresses. Try to write something each teaching day about your experiences of all kinds and be prepared to bring some of these ideas to the monthly group meetings. If there’s anything you would like to keep private, that’s just fine.
Appendix B

Ethical approval and participant documents

- Ethics application
- Teacher participant information sheet
- Teacher participant consent form - Interview and group discussions
- Teacher participant consent form – Observation and IPR sessions
- Student participant information sheet
- Student participant consent form – IPR sessions
- Advert for teacher participants
HUMAN ETHICS APPLICATION: CATEGORY B

(Departmental Approval)

1. University of Otago staff member responsible for project:

Supervisor 1. Dr. Clinton GOLDING

Supervisor 2. Dr. Neil PICKERING

Supervisor 3. Dr. Anthony BARRETT

Department: Higher Education Development Centre (HEDC)

Contact details of staff member responsible:

Dr. Clinton Golding

Senior Lecturer in Higher Education

Higher Education Development Centre/Student Learning Centre,

University of Otago

Dunedin, NZ

+64 3 470 4682

Title of project: Pedagogy for Critical Being

5. Indicate type of project and names of other investigators and students:

Staff Research Names

n/a
When will recruitment and data collection commence?

Participant recruitment November - December 2012 as ethics application allows

Interviews early February 2013

Peer observations February-May 2013

Reflective journaling Feb-October 2013

Group meetings for teachers late February 2013-October 2013 (four weekly, total 10 sessions)

When will data collection be completed?

October 2013

Brief description in lay terms of the aim of the project, and outline of research questions (approx. 200 words).

In this project I will be working with four medical teachers over one academic year with the primary aim of introducing them to a theory of critical thinking (‘critical being’) and asking them to use the theory to inform their teaching over the year. I will be gathering information in two forms. First, introducing teachers to this theory will require that I, as researcher, take the role of ‘teacher’ and I will gather information about how teachers learn this theory, and
how to teach it. Second, I will be gathering information from teacher participants about how they developed and taught with this theory in their small group work over the year.

I will be an active participant in this research process (‘action research’) as I will be engaged in professional development with the participants, and the method (outlined below) is designed to allow myself and teacher participants to continually and collaboratively reflect, revise and improve our teaching practice throughout the year. As such I will be acting as teacher, offering professional development and at the same time facilitating the teachers’ reflections and collaborative development of their own practice.

This data will generate information that will contribute to our understanding of how teachers understand this theory, how it is best taught to teachers and how they teach students using this theory. This project will add to the literature about critical thinking, how to teach for it and how to train teachers in higher education.

The main questions that I hope to answer with this research are:

1. How do teachers learn to use this theory?
2. What are some of the ways this theory might be taught?

These questions will be answered by the use of mixed methods which are described in the next section.

**Brief description of the method. Please include a description of who the participants are, how the participants will be recruited, and what they will be asked to do:-**

**Teacher participants**

Four experienced teacher participants will be recruited from the University of Otago Faculty of Medicine (MBChB) Early Learning in Medicine Healthcare in the Community and/or Integrated Cases programs. These teachers might teach one to six small groups of medical students per week depending on workload, where a typical group contains 10 students taught in tutorial style once per week for two hours.

To be eligible for participation, teacher participants will need to consider it important to develop critical thinking in their students and be willing to collaborate with the researcher, and the other participating teachers to develop ideas about teaching with this new theory.
Teachers will therefore be purposively sampled, approached initially by university email and give consent prior to research commencing.

Teacher participants in this project will be asked to undertake the following:

An individual semi-structured interview (recorded and transcribed verbatim) with the researcher, (1-1.5 hours duration), at the beginning of the academic year, prior to group sessions (as described below) beginning. This interview will not follow a prescribed format. Exact questions will depend on what arises in discussion. The following questions will be used as a framework to guide this discussion:

- What does the participant think critical thinking is?
- What positive and negative experiences do they have of teaching small groups?
- What are their experiences developing thinking in students?

Two peer observation sessions. The researcher will observe each teacher participant in normal teaching practice (approx. two hours in length each), followed by a short (30 mins.) discussion, recorded and transcribed verbatim. The purpose of this observation is to generate material for the teacher to bring to group discussions and that will be useful for their professional development. These sessions will occur in the first half of the academic year as convenient.

Group sessions meeting with the researcher and other three teachers throughout the 2013 academic year at 4-weekly intervals (one to two hours, depending on what arises), total 10 sessions. The first two sessions will be held at weekly intervals to allow teachers to develop some thinking around the theory as it is introduced, and prepare initial ideas to use in practice.

Throughout the academic year 2013, teachers will be required to keep a reflective journal, writing every day about their teaching, and to bring these ideas to the group sessions for discussion and allow the researcher access to the journal for analysis at the end of the research period.

A DVD session towards the end of the academic year. The method (Interpersonal Process Recall, IPR) involves one class being DVDed whilst proceeding as usual (two hours). The
DVD will then be played back to the teacher (one to two hours, depending on concentration levels), and their comments and reflections about their teaching recorded and transcribed verbatim. This technique enables the researcher to encourage teachers to reflect and comment on what they see on the DVD, is not formally structured and depends on what arises in discussion. This playback will take place immediately after this class or as convenient for the teacher. The researcher will not be present for the recording session and the students will not be present for the playback to the teacher. If it is deemed that the participant is finding concentration difficult and that there is a significant amount of DVD not yet watched, this session will be repeated at a later date, as convenient, to finish the task and ideally the whole DVD will be watched.

**Student participants**

One group of students from each of the teacher participants will also be asked to participate in the research to be filmed as part of the IPR. These will be second or third year medical students enrolled on the University of Otago MBChB Early Learning in Medicine programme. Which student group is selected will depend on the class that the teachers select (e.g. students not on clinical placement). Students will therefore be chosen by default, i.e. taught by one of the teachers in the project and also undergo consent process prior to research commencing. Having determined availability, the whole class (~10 students) will need to consent for the group to participate. Students will be sent information sheets by email by the researcher and then written consent sought during a class some weeks prior to research taking place, as convenient. The purpose of this technique is to gain insight into the teachers’ practice.

For the students in the selected groups (total four groups, one for each teacher participant) who consent, the research will involve the following:

One class session of approx. 2 hours will be recorded by DVD, as described above. The groups’ teacher will then be asked to watch the DVD of the class and comment upon it. Students will not be present for this.

**Stages of research method (chronological)**

November-December 2012, or earlier as ethics application permits, recruitment of teachers.

Early February, teacher interviews (four).
February-May, peer observations (two per teacher).

February-September, group sessions at four-weekly intervals (as holidays, etc. permit) total 10 sessions.

Late academic year, i.e. September–October (as streaming, tutorial schedules and holidays permit), IPR session, one for each teacher.

9. Please disclose and discuss any potential problems: (e.g. medical/legal, issues with disclosure, conflict of interest, etc.)

Anonymity

Every effort will be made to ensure the anonymity of participants in this research. Data collected will refer to each teacher or student by pseudonym which will also be used for the subsequent analysis, thesis and any publications. No personal information about the participants will be sought.

I also will be vigilant in removing any identifying features (such as other places of work) should they be mentioned, from the resulting thesis and papers. Raw and transcribed data will be placed in a locked filing cabinet/password protected computer at the University of Otago Higher Education Development Centre for the duration of the research, for at least five years afterwards and then destroyed.

Consent

All participants will be asked to sign a consent form prior to the research commencing and be reassured they can withdraw from the project at any stage without consequence to them. Teacher participants will be reminded of this at the commencement of all interview/group meeting/IPRs and that they are free to withhold from research anything they say in interviews/group meetings as they wish.

Teacher participants will be offered a copy of their interview/group/IPR transcripts and advised that they can request a copy of any information held about them at any time. Their reflective journals will be returned to them at the end of the analysis period.
Results of this research will be written up and submitted as a thesis towards the degree of Doctor of Philosophy at the University of Otago, will be available at the University of Otago library and may also be disseminated through other publications within the fields of Higher Education and Medical Education. Participants will be invited to request a copy of the results of the project.

**Ethical considerations and teaching**

Teachers are not under the supervision of the researcher, or vice versa. Tutorial groups used will not be undertaking any summative or formative assessment procedures during the classes used for the recordings. It might be assumed that any impact of research on teachers and students would be positive.

No other issues anticipated.

**Applicant's Signature:** .................................................................

*(Principal Applicant: as specified in Question 1, Must not be in the name of a student)*

**Signature of *Head of Department:*** .................................................................

**Name of Signatory (please print):** .................................................................

**Date:** .................................................................

**Departmental approval:**

*I have read this application and believe it to be scientifically and ethically sound. I approve the research design. The Research proposed in this application is compatible with the University of Otago policies and I give my consent for the application to be forwarded to the University of Otago Human Ethics Committee.*

IMPORTANT: The completed form, together with copies of any Information Sheet, Consent Form and any recruitment advertisement for participants, should be forwarded to the Manager.
Academic Committees or the Academic Committees Assistant, Registry, as soon as the proposal has been considered and signed at departmental level.

Forms can be sent hardcopy to

Academic Committees, Room G23 or G24, Ground Floor, Clocktower Building, or scanned and emailed to gary.witte@otago.ac.nz.

[Reference Number as allocated upon approval by the Ethics Committee]

[Date]
Pedagogy for Critical Being

INFORMATION SHEET FOR PARTICIPANTS

Teachers

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate I thank you. If you decide not to take part there will be no disadvantage to you and I thank you for considering my request.

What is the aim of the project?

This research project offers teachers a chance to take time in a positive and collaborative environment to investigate and develop their teaching. I am a PhD student at the University of Otago, Higher Education Development Centre and also a Professional Practice Fellow at the Faculty of Medicine. As such I may be known to you. This research will form the basis of my PhD thesis.

In this project I will be working closely with four medical teachers over one academic year with the aim of introducing them to a theory of critical thinking (‘critical being’). Teachers will be asked to use this theory to inform their teaching over this year. The purpose of introducing the theory is to gather information about it in two forms. First, introducing teachers to this theory will require that I, as researcher, take the role of ‘teacher’ and I will gather information about how teachers learn this theory, and how to teach it. Secondly, I will be gathering information from teacher participants about how they developed and taught with this theory in their small group work over the year.

I will be an active participant in this research process (‘action research’) as I will be engaged in professional development with the participants, and the method is also designed to allow myself
and teacher participants to continually reflect, revise and improve our teaching practice throughout the year. As such I will be partly acting as teacher, offering professional development, and partially facilitating the teachers’ reflections about their own practice. It is hoped that as well as gathering sufficient data for my Doctoral thesis, teacher participants will experience a chance to concentrate on their development as a teacher.

This data will generate information that will contribute to our understanding of how teachers understand this theory, how it is best taught to teachers and how teachers teach students using this theory. The main questions that I hope to answer with this research project are:

1) How do teachers learn to use this theory?
2) What are some of the ways this theory might be taught?

**What type of participants are being sought?**

Four experienced teacher participants are being recruited from the University of Otago Faculty of Medicine (MBChB, Early Learning in Medicine) Healthcare in the Community and/or Integrated Cases programs. Teachers might be involved with any number of small groups per week.

Teacher participants will need to consider developing critical thinking in their students important in their teaching. They should also be willing to collaborate with the researcher, and other teachers in the project to develop ideas about their teaching and teaching with a new theory, over one academic year.

**What will participants be asked to do?**

If you agree to take part in the research you will be asked to undertake the following:

A semi-structured interview (1-1.5 hours) early in the 2013 academic year. This interview will not follow directed questions but rather develop ideas around the following: what you think critical thinking is, how you find teaching small groups and about your experiences developing thinking in students.

You will be asked to take part in two teacher observation sessions (with the researcher as observer) during one of your normal classes, followed by a short (30min) discussion that will be recorded and transcribed. These will be planned for the beginning of the academic year.

You will be asked to undertake group sessions meeting with the researcher and three other teacher participants throughout the 2013 academic year, at four-weekly intervals (max one hour),
total 10 sessions. In these sessions we will first be introducing a new theory of critical thinking, and after this use the group to collaboratively develop ideas about how best to use this theory to develop critical thinking in our students. We will also discuss how you, as a teacher, might learn about the theory. Throughout this year the researcher will therefore be an active part of the group, acting as ‘teacher’. The first two sessions in which the theory is introduced will be at one-week intervals.

Throughout the year you will be required to keep a reflective journal, writing every day about your teaching and will be asked bring ideas from the journal to group sessions and to allow the researcher to access this journal for data analysis. This journal will be returned to you at the end of the data analysis period.

A DVD session towards the end of the academic year. This involves one of your classes being filmed whilst proceeding as usual, for one two-hour session. The DVD will be played back to you (one to two hours, depending on concentration levels) and you will be asked to reflect and comment on what you see on the DVD, and your comments recorded. This playback will take place after class or as convenient. The researcher will not be present for the recording session and the students will not be present for the playback to you. The focus for this method is your teaching.

**Students from the teachers groups will also be doing the following:**

One group of your students will therefore also be asked to participate in the research. These will depend on the class that you select as being most convenient (e.g. not on clinical placement). Students will be asked to consent prior to research commencing. Having determined availability, the whole student class (~ 10 students) will need to consent for the group to be used. Students will be sent information sheets initially by email by the researcher and then consent sought during a class some weeks prior to the research taking place. The purpose of this technique is to gain insight into the teachers’ practice.

Students in the selected group will be asked to undertake the following:

- One class session of approx. two hours will be recorded by DVD, as described above. The group’s teacher will then be asked to watch the DVD of the class, comment upon it and these
responses recorded and transcribed verbatim. Students will not be present for the teacher’s comments.

Consent

All participants will go through a consent process prior to research commencing.

Can participants change their mind and withdraw from the project?

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind. You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What data or information will be collected and what use will be made of it?

Data collected includes:

Interview audio tapes and transcriptions of these.

Notes, audio tapes and transcriptions from the peer observation process.

Notes, audio tapes and transcriptions from the group meetings.

DVDs of the class IPR, tapes and transcriptions of the teachers' responses to this.

Reflective journals, collected at the end of the year. These will be returned to the teacher participants at the end of the data analysis period.

Access to raw and transcribed data is limited to researcher, supervisors and transcriber.
No personal identifiers will be used on any of the electronic or paper data. Participants will be identified by pseudonym in raw data and any analysis that follows. The results of the project will form the basis of my PhD thesis, may also be published and will be available in the University of Otago Library (Dunedin, New Zealand). Every attempt will be made to preserve your anonymity.

The data collected will be securely stored in such a way that only the researcher, three supervisors and transcriber will be able to gain access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

If you would like the opportunity to review, change, or withdraw any aspect of the raw or transcribed data used for analysis, please feel free to do so at any stage of the research. Your input is welcomed. If you would like to receive a copy of the completed research, please make this known to the researcher.

For the initial interview in February this project involves an open-questioning technique. The precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops. In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s), ask that particular comments are withdrawn from the research and you are reminded that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

This proposal has been reviewed and approved by the Higher Education Development Centre, University of Otago

What if participants have any questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-
Althea Blakey and /or Dr. Clinton Golding

Higher Education Development Centre
University of Otago

Telephone Number
027 261 6423  (03) 470 4682

Email Address:
althea.blakey@otago.ac.nz  clinton.golding@otago.ac.nz

This study has been approved by the Department stated above. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph. 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Pedagogy for Critical Being

CONSENT FORM FOR PARTICIPANTS

Teacher - interview and group sessions

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Personal identifying information [audio-tapes] will be destroyed at the conclusion of the project but any raw data on which the results of the project depend (transcripts, notes) will be retained in secure storage for at least five years;

4. This project involves an open-questioning technique. The general line of questioning includes experiences of teaching for critical thinking, what you think critical thinking is, experiences in the classroom prior to the research. The precise nature of the questions which will be asked have not been determined in advance, but will depend on the way in which the interview develops and that in the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind.

5. There are no discomforts or risks identified.

6. There is no remuneration attached to this project.
7. The results of the project will form the basis of my PhD thesis. Results may also be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

................................................................. ........................................
(Signature of participant) (Date)
Pedagogy for Critical Being

CONSENT FORM FOR PARTICIPANTS

Teacher observation and Interpersonal Process Recall (IPR) sessions

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Personal identifying information [DVDs, audio-tapes] will be destroyed at the conclusion of the project but any raw data on which the results of the project depend (transcripts, notes) will be retained in secure storage for at least five years;

4. This project involves an open-questioning technique for the IPR session. The general line of questioning will follow what is happening on the DVD and might include experiences of teaching for critical thinking and what your reflections on your teaching are. The precise nature of the questions which will be asked has not been determined in advance, but will depend on the way in which the tape develops. In the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind.

5. There are no discomforts or risks identified.

6. There is no remuneration attached to this project.
7. The results of the project will form the basis of my PhD thesis. Results may also be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

.................................................................................................

(Signature of participant)                     (Date)

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Pedagogy for Critical Being

INFORMATION SHEET FOR PARTICIPANTS

Students

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate I thank you. If you decide not to take part there will be no disadvantage to you and I thank you for considering our request.

What is the Aim of the Project?

I am a PhD student at the University of Otago Higher Education Development Centre and also a Professional Practice Fellow at the Faculty of Medicine. This research will form the basis of my PhD thesis.

In this project I will be working closely with four medical teachers over one academic year with the aim of introducing them to a theory of critical thinking (‘critical being’). Teachers will then allow this theory to inform their teaching over the year. The purpose of introducing the theory is to gather information about it about how teachers learn this theory, and how they teach it in their small group work. This research is designed to allow teacher participants to continually reflect on, revise and improve their teaching practice over the year. The broader aim of this project is to add to the literature about critical thinking, how to teach for it and how to train teachers in higher education. The main questions that I hope to answer with this research project are:

1) How do teachers learn to use this theory?

2) What are some of the ways this theory might be taught?
What type of participants are being sought?

Your tutor in ……… has agreed to participate in this research. As one of their students I would like to ask you to consent to this process. Your teacher has selected this class as being at a time suitable for this research in the academic year, and the main focus of this research is your teacher.

What will participants be asked to do?

Should you agree to take part in this project, you will be asked to:

1. Participate in a normal class that is also being DVD recorded. The researcher will not be present for this. DVDs from this class will be played back to your teacher and their comments on the class interactions and their teaching recorded, and transcribed. You will not be required for this.

What data or information will be collected and what use will be made of it?

Data collected includes DVD, comments from your teacher and transcriptions of these. Your teacher will be watching the DVD recording for their part in the research and may request a transcription of their comments on this. Access to raw and transcribed data, apart from this, is limited to researcher, supervisors and transcriber.

No personal identifiers will be used on any of the electronic or paper data. Participants will be identified by pseudonym in raw data and any analysis that follows. The results of the project will form the basis of my PhD thesis, may also be published and will be available in the University of Otago Library (Dunedin, New Zealand). Every attempt will be made to preserve your anonymity.

The data collected will be securely stored in such a way that only those mentioned in this information sheet (researcher and three supervisors) will be able to gain access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Consent

All participants will be asked for consent prior to research commencing. You can decline consent at any time without disadvantage of any kind.
Can participants change their mind and withdraw from the project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

This proposal has been reviewed and approved by the Higher Education Development Centre, University of Otago

What if participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Althea Blakey and/or Dr. Clinton Golding

Higher Education Development Centre
University of Otago
Telephone Number 027 261 6423
Email Address: althea.blakey@otago.ac.nz

Higher Education Development Centre
University of Otago
University Telephone Number (03) 470 4682
Email Address: clinton.golding@otago.ac.nz

This study has been approved by the Department stated above. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Pedagogy for Critical Being

CONSENT FORM FOR PARTICIPANTS

Students

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Personal identifying information [DVD-tapes/audio-tapes] will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for at least five years;

4. There are no discomforts or risks identified.

5. There is no remuneration attached to this project.

6. The results of the project will form the basis of my PhD thesis. Results may also be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

............................................................................. ........................................
(Signature of participant) (Date)
Pedagogy for Critical Being

Do you value developing critical thinking in your students?

Are you keen to enhance your practice in a collaborative environment?

This research project offers teachers a chance to take time in a positive and collaborative environment to investigate and develop their teaching. I am seeking four medical teachers from the Faculty of Medicine Early Learning in Medicine Healthcare in the Community/Integrated Cases Programme to participate in my PhD research. I will be working with these teachers over one academic year with the aim of introducing them to a theory of critical thinking (‘critical being’) and investigating how this theory informs their teaching.

I plan to gather information about this theory in two forms. First, introducing teachers to this theory will require that I, as researcher, will participate in the research in the role of ‘teacher’ and I will gather information about the ways this teaching might work. I will also gather information about how teacher participants teach with this theory in their small groups. I will be an active participant in this collaborative research process (‘action research’) and the method all participants to continually reflect on, revise and improve our teaching practice throughout the year by offering professional development and facilitating teachers’ reflections.

This data will allow me to contribute to our understanding of critical thinking, how to teach for it and how to train teachers in higher education. The main questions that I hope to answer with this research project are:

1) How do teachers learn to use this theory?
2) What are some of the ways this theory might be taught?

Participants will be asked to take part in an interview, two peer observation sessions (with researcher as observer) and regular small group meetings with the researcher and three other teachers in the project at four-weekly intervals throughout the 2013 academic year. You will be asked to keep a reflective journal about your teaching throughout the year and I will also ask you to undertake one DVD session of a class in action, and comment on this, towards the end of the year.

If you are keen to be part of this project, please contact: Althea Blakey,

Higher Education Development Centre,

Ph: 027 261 6423 E-mail: althea.blakey@otago.ac.nz

This project has been reviewed and approved by the Higher Education Development Centre, University of Otago

Notes concerning Category B Reporting Sheets

This form should only be used for proposals which are Category B as defined in the policy document "Policy on ethical practices in research and teaching involving human participants", and which may therefore be properly considered and approved at departmental level;

2. A proposal can only be classified as Category B if NONE of the following is involved:-

   • Personal information - any information about an individual who may be identifiable from the data once it has been recorded in some lasting and usable format, or from any completed research;

   (Note: this does not include information such as names, addresses, telephone numbers, or other contact details needed for a limited time for practical purposes but which is unlinked to research data and destroyed once the details are no longer needed)

   • The taking or handling of any form of tissue or fluid sample from humans or cadavers;

   • Any form of physical or psychological stress;

   • Situations which might place the safety of participants or researchers at any risk;

   • The administration or restriction of food, fluid or a drug to a participant;
• A potential conflict between the applicant’s activities as a researcher, clinician or teacher and their interests as a professional or private individual;
• The participation of minors or other vulnerable individuals;
• Any form of deception which might threaten an individual’s emotional or psychological well-being.
• The research is being undertaken overseas by students.

[If any of the above is involved, then the proposal is Category A, and must be submitted in full to the University of Otago Human Ethics Committee using the standard Category A application form, and before the teaching or research commences];

3. Please ensure the Consent Form, Information Sheet and Advertisement have been carefully proofread; the institution as a whole is likely to be judged by them;

4. A Category B proposal may commence as soon as departmental approval has been obtained. No correspondence will be received back from the University of Otago Human Ethics Committee concerning this Reporting Sheet unless the Committee has concerns.

5. Please submit a Category B Reporting Sheet immediately after it has been signed by the Head of Department to the Human Ethics Committee:

Manager,

Academic Committees

Academic Services

Room G23, Clocktower Building

University of Otago