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Distance learners' conceptions of reflection in higher education

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in Educational Technology

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Bethany Alden, MRes, MBA, BSc (Hons) Finance

Institute of Educational Technology

The Open University

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Abstract

Frameworks for reflective learning have developed over the past 40 years as researchers and practitioners have sought to enhance the learning journey. Some of these models include reflection as a necessary stage in the process of transforming experience into knowledge. Other models intimate that reflective activity happens at higher stages of competency. Some adult learners may have encountered reflective activities and theories in their workplaces as part of personal development planning or on previous educational courses in meeting a particular learning outcome. But, how do tertiary distance learners, who often have varied employment and educational backgrounds, relate to the notion of reflection?

This thesis employed a phenomenographic approach to identify the ways in which distance learners at the UK's Open University conceptualise reflection. The first phase of this research collected data through the use of an open-ended questionnaire to explore the different ways in which distance learners conceptualise reflection. A second phase involved three longitudinal case studies of level 1 undergraduate students. This study investigated the extent to which distance learners' conceptions of reflection change during their university experience. A final study explored distance learners' conceptions of reflection on a postgraduate professional development module. This third study attempted to determine whether distance learners with more experience of higher education hold different conceptions of reflection than distance learners with less university experience.

Findings from this thesis offer a set of seven qualitatively different conceptions of reflection held by tertiary distance learners. Owing to certain individual and institutional factors, distance learners' conceptions of reflection often change during their higher education experience. While literature suggests that distance learners with more experience of higher education may hold more sophisticated conceptions of reflection, their ability to articulate these conceptions may be restricted because of tacit knowledge.

Conclusions from this thesis have pedagogical implications for distance learning providers in terms of how reflective learning components are embedded in the curriculum. Distance educators will benefit from a growing understanding of students' conceptions of reflection in considering how facilitative strategies can promote learning and epistemological development through reflection. Finally, the findings of this study will contribute to the existing body of knowledge related to reflection and development in higher education.

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A note on the text

The Open University refers to its courses as modules. For this reason, the term module is used throughout this thesis. Also, phrases such as *tertiary distance learners* and *distance learners in higher education*, are used synonymously.

Chapter 1: Introduction

1.1 Background

This thesis was motivated by a desire to know more about what students in higher education think about reflection. At the time of starting this PhD, I had worked for several years managing distance learning activities for prisoners and as a distance lecturer for the UK's Open University. The prisoner-learners and my own students frequently commented on the reflective activities that were embedded in their learning materials and assessments. They wondered why reflection was important, why they needed to do these reflective tasks. These students' questions piqued my curiosity on the matter. Although I could see the inherent benefits of reflection, I wondered what students—particularly distance learners—really thought about reflection.

Initially, this thesis was designed to explore conceptions of reflection among tertiary distance learners studying from prison. However, after significant problems gaining access to prisoners as research participants, the focus of this thesis shifted to tertiary distance learners in general. Distance learners were the focus for this thesis because my own curiosities stemmed from my work with distance learners and my teaching experience was heavily based around distance pedagogies. Apart from these fundamental reasons, there were other characteristics of distance learners that made this group more appealing to study than, say, traditional university students. Distance learners are often nontraditional students. This means, among other things, that they possess a different set of life experience, work experience, and motivations for undertaking a learning programme than traditional

university students (Rautopuro & Vaisanen, 2001). In studying the *different* ways university students consider reflection, distance learners offered a potentially rich source of data.

In 2008, I had the opportunity to formally investigate this topic during a Master of Research (MRes) programme with The Open University. My dissertation explored distance learners' perceptions of reflective activities. This research involved interviews with distance learners enrolled on The Open University's 'Openings' programme (a set of modules pitched at pre-level 1 university study). At that time, the Openings curricula included three assessments per module. As part of each assessment, the students were asked to complete a short reflective task. Interviews with these students suggested that although some of the students could see the importance of these reflective tasks, many of them perceived the tasks as challenging, pointless and as barriers to engaging with the actual coursework (Alden, 2009a).

These findings ignited my motivation to understand more about students' perceptions of reflective tasks in their university modules. Around this same time, I began reviewing literature on students' conceptions of learning and on epistemological development. These areas of research pointed to the influence of learners' conceptual frameworks and personal belief systems on their approaches to learning. An idea for a PhD thesis started to take shape. This thesis represents this part of my research journey.

1.2 Context

Nowadays, reflection and reflective practice pervade myriad workplace and educational contexts. Reflection is described as the ‘cornerstone’ of reflective practice (Eby, 2000, p. 53) and reflective practice is described as the ‘bedrock’ of contemporary professional development (Eby, 2000, p. 52; Finlay, 2008, p. 1). Reflective practice is particularly central to certain professional domains, including teaching (Christie & Kirkwood, 2006) and nursing (Quinn, 2005). Critics have referred to reflective practice in the workplace as a ‘bandwagon’ onto which professionals have jumped in order to legitimise their practice (Jarvis, 1992). However, the mainstream view seems to suggest that being a reflective practitioner is an important aspect of workplace learning and a chief characteristic of being effective in one’s role.

Higher education institutions champion the idea of fostering reflective practitioners, often viewing reflective practice as a key learning outcome (Barnett, 1992). Increasingly, universities are embedding reflective practice into the curriculum, especially in courses that lead to professional qualifications (Stewart & Richardson, 2000; Alden, 2009b; Ross, 2011). In 2001, the Quality Assurance Agency called for a ‘progress file’ for each learner in higher education. These files consist of a personal development plan (PDP) and a transcript of scholastic achievement. PDPs are a formal way of recording a learner’s (or a practitioner’s) reflections on their ‘learning, performance and/or achievement’ in order to help them plan for future development (QAA, 2001, p. 9). PDPs are considered an important link between employability, enterprise and employer engagement (Watts & Butcher, 2008).

Apart from reflection being part of professional development, and therefore important to enhancing employability, there is a wealth of literature that suggests reflection is the key to being a ‘transformational’ learner and an agent of one’s own learning (see Mezirow, 1990; Brockbank & McGill, 1998, p. 4). Central to this, some literature hints that reflection can promote deeper level learning (Clare, 2007, Davys & Beddoe, 2009). Despite these apparent advantages to developing and promoting reflective skills, is it reasonable to assume that all learners will have the same understanding of reflection or the same perspective on reflection in learning?

1.3 Aims of this thesis

The broad aim of this thesis is to identify the ways in which distance learners on higher education courses conceptualise reflection in terms of learning and how those notions change as these learners progress into higher level courses. These are more clearly stated as three research questions.

Research questions

Research question 1: What are distance learners’ conceptions of reflection?

Research question 2: To what extent do distance learners’ conceptions of reflection change during their higher education experience?

Research question 3: To what extent do distance learners with more experience of higher education hold different conceptions of reflection from distance learners who have less experience of higher education?

1.4 Research brief

This thesis comprises three separate studies. Each of the studies addresses each of the research questions, respectively. Table 1.1 outlines the design of this thesis in terms of purpose, sample, data collection and analysis for each study.

Table 1.1: Design of this thesis

	Study 1 (May 2010)	Study 2 (February to October 2011)	Study 3 (October 2011)
Purpose	To investigate distance learners' conceptions of reflection in higher education.	To explore how distance learners' conceptions of reflection change during their level 1 undergraduate experience.	To understand whether distance learners studying at higher levels of university hold different conceptions of reflection than those studying at lower levels.
Sample	33 women (mean age 43 years old) 17 men (mean age 45 years old)	19 women (mean age 43 years old) 14 men (mean age 45 years old)	8 women (mean age 52 years old) 4 men (mean age 53 years old)
Data collection tools	Open-ended postal questionnaire	Face-to-face interviews, telephone interviews, email interviews	Open-ended online questionnaire
Analysis	Phenomenographic analysis: outcome space and exploration of variance	Phenomenographic analysis of longitudinal data supported by inferential statistics	Phenomenographic analysis supported by inferential statistics

1.4.1 Site for data collection

Although other universities offer distance learning courses, the UK's Open University is a relevant source of data for two reasons. First, The Open University was designed to be a distance learning provider and has, since its launch in 1969, become a well established

higher education institution. Its approach to distance learning is called ‘supported open learning’.

This [supported open learning] means that you study on your own, either at home or wherever suits you—reading, watching or listening to materials supplied, doing course activities and assignments with regular support from your tutor. (Open University, 2012a)

Approaches to distance learning and teaching at The Open University are not in their infancy, as may be the case with other universities. Second, as a full-time research student and an Associate Lecturer at The Open University, I was aware of the systems and structure of the University and could easily work within its parameters.

The Open University also offered the benefit of capturing data from a diverse student population. Students on Open University modules come from a variety of educational and employment backgrounds. And, as mentioned previously, this diversity was particularly appealing in understanding the different ways learners conceptualise reflection.

1.4.2 Participants

Study 1 used data collected from a sample of Open University students studying any module at any level. This sampling strategy was chosen to gain insight into distance learners’ conceptions of reflection in general.

Study 2 aimed to understand the effect of higher education on distance learners’ conceptions of reflection. For this study, I chose to sample learners on level 1

undergraduate modules because doing so provided an opportunity to elicit responses from students whose previous experience of higher education was limited. It is possible that students enrolled on level 1 modules have taken other higher education modules previously, perhaps even at higher levels. Nevertheless, I assumed that level 1 students would offer a rich source of data that, largely speaking, had been shaped by life experiences rather than by formal education. I hoped this would provide a clearer foundation for considering whether their experiences of higher education had changed their original ideas of reflection.

Study 3 used data from students on one of The Open University's postgraduate modules. I reasoned that this would offer insight into whether distance learners with more experience of higher education hold different views of reflection from learners with less experience of higher education.

1.4.3 Approach and methods

In order to explore distance learners' understanding of reflection, a phenomenographic approach was adopted for all of the studies in this thesis.

Phenomenography is a research method adapted for mapping the qualitatively different ways in which people experience, conceptualise, perceive, and understand various aspects of, and phenomena in, the world around them.

(Marton, 1986, p. 31)

A phenomenographic approach involves probing and interpreting individuals' accounts of their ideas and experiences related to a certain concept; in this case: reflection.

Interviews were used to elicit accounts and ideas from the research participants. These were carried out in several ways: face-to-face, over the telephone and through email exchanges. Each of these modes offered opportunities for in-depth discussions. Careful questioning encouraged the participants to articulate their ideas as fully as possible (Booth, 1997; Bowden, 2000).

Open-ended questionnaires were also used in this thesis. These were distributed by post (Study 1) and online (Study 3). They were used in order to collect written responses and accounts from a geographically distributed sample without the resource investment associated with interviewing (Sapsford, 2007, p. 109). These written responses offered a rich source of manageable data (Åkerlind, 2005b).

Although this thesis was approached using qualitative methods, quantitative methods were also used in Studies 2 and 3 to offer another perspective on the findings and to summarise demographic variables. An ideographic approach is desirable for understanding individuals' conceptions of reflection in their personal contexts, which is the main tenet of phenomenographic research. However, a nomothetic approach was helpful in knowing more about the participants as a group and in determining whether comparisons between and among participants could be supported by inferential statistics.

1.5 The significance of the research

Understanding the ways students think about reflection has implications for higher education institutions as they design curricula and implement employability-enhancing

strategies. Teachers, whether face-to-face or distant, need to ‘understand’ and ‘aspire to’ the mental frameworks that ‘students use to understand the world’ in order to be effective in their roles (Makoe, 2007, p. 5). Literature has suggested that a student’s conception of learning will influence his or her approach to learning (e.g. Svensson, 1977). Therefore, it is important for teachers to understand their students’ conceptions of learning in order to improve the learning experience (Price & Richardson, 2003). Analogous to this, it is important for teachers to understand students’ conceptions of reflection so that reflection can be facilitated in an effective way.

1.6 Outline of the thesis

This thesis is set out in four parts. The first part comprises Chapters 1, 2 and 3 and provides a backdrop for the studies in this thesis. The second part forms the section on methodology and includes Chapters 4 and 5. The third part of the thesis presents Chapters 6, 7 and 8, all of which report on the respective studies (Studies 1, 2 and 3) carried out for this research. The final section of this thesis—Chapters 9—offers a discussion of the findings, conclusions and reflections related to the studies herein and to the research journey.

Chapter 2: Reflection in learning—a review of literature

This chapter reviews literature dealing with reflection in learning, orientations to reflection and conceptions of learning. It starts by presenting a mostly chronological account of multiple theories and models of reflective learning. The chapter continues by discussing literature related to the ways students may orientate to reflection. Research dealing with

conceptions of learning is investigated. Chapter 2 concludes by revisiting and refining the rationale for research question 1.

Chapter 3: Conceptual change and epistemological development—a review of literature

Chapter 3 is a continuation of the literature review for this thesis. A case is made for locating this thesis research within the existing literature for epistemological development rather than among literature dealing specifically with conceptual change. The chapter continues by offering a discussion of theories and models pertaining to epistemological development. Chapter 3 concludes by revisiting and refining research questions 2 and 3.

Chapter 4: Research approach

This chapter makes a case for taking a qualitative approach to the studies contained in this thesis. Second, this chapter presents an argument for adopting a specific qualitative approach: phenomenography. Third, a discussion of some of the issues and limitations associated with phenomenographic research is presented. Aspects of phenomenographic research, such as data collection and analysis are addressed. Chapter 4 concludes with a statement regarding the chosen research approach along with summary points for moving forward.

Chapter 5: Methods of data collection and analysis

This chapter continues the discussion of methodology but deals more specifically with sources of data and with methods of data collection used in this project. First, this chapter

discusses the interview as the primary method of data collection in phenomenographic research. Second, this chapter outlines other methods employed in this thesis. Third, a brief overview of phenomenographic analysis is presented. Finally, this chapter discusses ethical considerations for working with human participants.

Chapter 6: Study 1—Distance learners' conceptions of reflection in higher education

This chapter presents Study 1, which focused on investigating distance learners' conceptions of reflection in higher education. Study 1 worked to address research question 1: What are distance learners' conceptions of reflection? Chapter 6 provides a report on the methods, participants, data, analysis and findings of Study 1. It concludes by setting the scene for exploring research question 2 in the next chapter.

Chapter 7: Study 2—A longitudinal perspective on distance learners' conceptions of reflection in higher education

Chapter 7 reports on the research processes and findings from Study 2. Study 2 sought to address research question 2: To what extent do distance learners' conceptions of reflection change during their higher education experience? This part of the research explored Open University students' conceptions of reflection throughout a level 1 module experience to see whether there was any evidence of conceptual change.

Chapter 8: Study 3—Postgraduates' conceptions of reflection

Chapter 8 reports on the research processes and findings from Study 3. Study 3 addressed research question 3: To what extent do distance learners with more experience of higher

education hold different conceptions of reflection from distance learners with less experience of higher education? This study investigated conceptions of reflection among Open University students enrolled on an online postgraduate module.

Chapter 9: Discussion of findings and conclusions

This chapter discusses the findings from Studies 1, 2 and 3 and links these findings to existing literature in order to locate and explore the outcomes of this research within relevant knowledge. This chapter offers a holistic reflection on the findings by considering the limitations and achievements of the thesis. Chapter 9 concludes with some issues and ideas pertaining to further research and some final reflections on the research journey.

Chapter 2: Reflection in learning—a review of literature

2.1 Introduction

This chapter reviews literature dealing with reflection in learning in order to refine and contextualise the research questions outlined in Chapter 1. The first section explores different ways of defining reflection. Then, the chapter offers a mostly chronological overview of the development of theory related to the role of reflection in learning. The chapter continues by considering learners' orientations to reflection. Conditions for reflection and the importance of context when considering reflection are discussed. The chapter concludes by exploring literature on conceptions of learning, setting the scene for investigating learners' conceptions of reflection. Chapter 3 continues the literature review section of this thesis by discussing literature on and around epistemological development.

2.2 Defining reflection in learning

A commonsensical definition of *reflection* explains the term as a way of considering solutions to complex problems (Moon, 1999). For example, a statement such as 'let me reflect on that' suggests there is no obvious solution available and to come to a conclusion requires a certain amount of thought. Such a view implies that reflection is a cognitive process that facilitates problem solving, or a means of 'validating what is known' (Mezirow & Associates, 1990, p. 18). But it also implies that this is done by drawing on one's own personal experiences, emotions, expectations, beliefs and other sources of knowledge (Ekebergh, 2007). Reflection could therefore be defined as a process by which past

experience is transformed into new knowledge as solutions to problems are considered and then put into practice (Ruch, 2000).

Beyond the everyday perceptions of this term lie many theoretical frameworks for considering the role that reflection plays in human development. While this relative abundance of theories on reflection often gives way to ‘multiple and contradictory understandings of reflective practice’ (Finlay, 2008, p. 1), the fundamental view of reflection appears to remain the same. Reflection is the catalyst for transforming theory to practice. This notion underpins the ways in which reflection is defined in learning contexts (Dewey, 1910, p. 215).

The rest of this chapter considers various theoretical models of learning and development, showing the ways in which reflection is depicted as an integral process. Many of these frameworks include reflective activities as a stage in a continuous loop (Kolb, 1984; Brookfield, 1987) or as a step in a developmental hierarchy or ‘ladder’ (van Manen, 1977; Schön, 1987, p. 115). Others have intimated that reflective activity is located in higher levels of thinking (Perry, 1970; Butler, 1996). These relatively popular views of reflection all appear to be couched in terms of movement—in a loop, along a scale, up a ladder. It is this implication of movement that raises the question: *How do people experience the journey?* And, perhaps more importantly: *How do they relate to reflection as the mode of conveyance?*

2.3 The role of reflection in learning

Dewey (1910) described a situation whereby there was a misunderstanding between two people. He explained that, up to the point of the misunderstanding, it was unnecessary, even 'imbecile', to cogitate on commonly understood ideas. He continued by saying that the resolution of the misunderstanding requires the two people to 'dig up and compare the presuppositions...on the basis of which each is speaking' (pp. 214-215). In this way, the implicit meaning is expressed and the root of the problem can be addressed. In this example, Dewey explained that reflection was a necessary activity in challenging a set of assumptions in order to learn from the situation.

Yet the fact that reflection originates in a problem makes it necessary at some points consciously to inspect and examine this familiar background.

We have to turn upon some unconscious assumption and make it explicit.

(Dewey, 1910, p. 215)

Habermas (1974) wrote of the role of 'self-reflection' in illuminating the factors of personal development that ultimately 'determine a contemporary praxis of action and the conception of the world' (p. 22). In a manner analogous to Dewey, Habermas expounded on his views of how reflection is the vehicle by which the unconscious moves to the conscious. His account highlighted the benefits of transforming theory to practice.

Self-reflection leads to insight due to the fact that what has previously been unconscious is made conscious in a manner rich in practical consequences...it renders explicit the intuitive knowledge that is given with competence with respect to the rules in the form of 'know how'. But this theoretical knowledge has no practical consequences. By learning logic or linguistics I acquire theoretical knowledge, but in general I do not thereby change my previous practice of reasoning or speaking. (Habermas, 1974, p. 23)

Kolb (1984) theorised that knowledge 'is continuously derived from and tested out in the experiences of the learner' (p. 27). Effective learners, according to Kolb, require four particular 'abilities': the ability to engage in 'concrete experiences', the ability to 'reflect on and observe their experiences from many perspectives', the ability to 'create concepts that integrate their observations into logically sound theories' and the ability to 'use these theories to make decisions and solve problems' (p. 30). Kolb depicted these abilities as a continuous loop called the experiential learning cycle, whereby reflecting on an experience leads the learner to theorise on this new knowledge. The transformation of experience to knowledge occurs as the theories are applied to real life situations, where additional concrete experiences are acquired and the loop continues (see Figure 2.1 for a simplified version of Kolb's cycle).

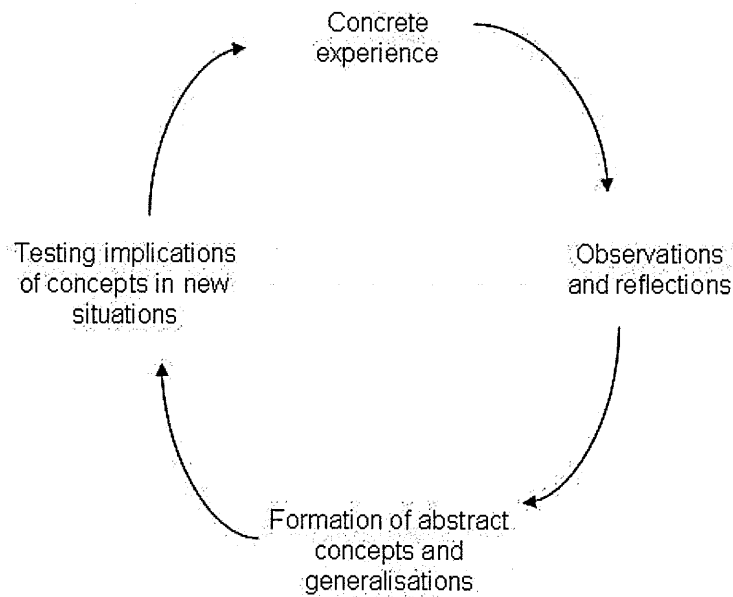


Figure 2.1: Kolb’s experiential learning model—simplified (adapted from Kolb, 1984, p. 42)

A critical view of Kolb’s cycle suggests that the likelihood of a learning situation requiring a combination of all four abilities is low (Quinn, 2005). Kolb’s cycle has been criticised by some who claim that while it is a useful tool for ‘day to day learning’ it is restricted to a single-loop model of learning that does not take into account emerging information and new ways of understanding phenomena (Brockbank & McGill, 1998, p. 44). Additionally, the conscious engagement in this loop of learning through experience can be problematic. Boud, Cohen and Walker (1993) described the process as a ‘struggle’ when trying to link this model to formal learning contexts (p. 1).

Although we spend most of our time learning from experience, this aspect of learning is greatly neglected in comparison with that which takes place in the formal classroom. (Boud et al., 1993, p. 1)

Boud, Keogh and Walker (1985) proposed a three-stage model for using reflection to learn from experiences (see Figure 2.2).

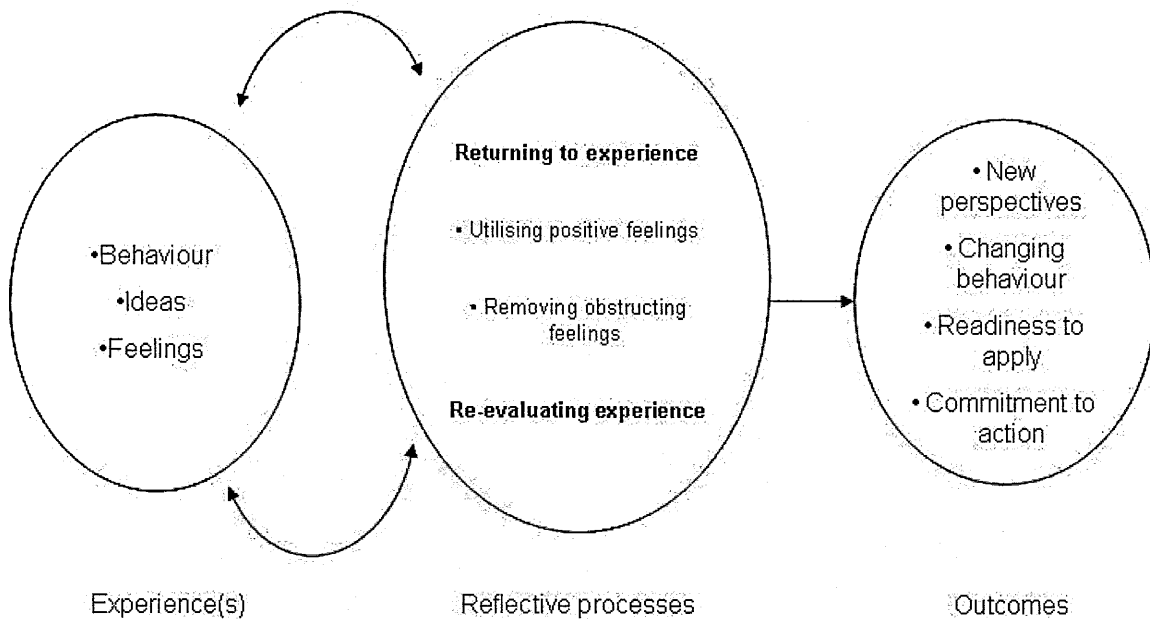


Figure 2.2: The Boud, Keogh and Walker model of reflection (adapted from Boud et al., 1985, p. 36)

In comparison to Kolb's model, the Boud et al. model makes human emotion more explicit, showing how behaviour, ideas and feelings feed into and are affected by the concrete experience. Also, the Boud et al. model highlights the varied outcomes that could occur as a

result of the reflective process. In later writing, Boud and Walker (1993) clarified that organised reflection is not the only way to learn from experiences.

What we can say is that learning from experiences is far more indirect than we often pretend it to be. It can be promoted by systematic reflection, but it can also be powerfully prompted by discrepancies or dilemmas which we are 'forced' to confront. (Boud & Walker, 1993, p. 85)

Brookfield (1987) presented a model for 'critical thinking' that is somewhat similar to Kolb's cycle and the Boud et al. model. Brookfield's model explains how a thinker experiences a 'trigger event' that leads to 'appraisal', 'exploration', 'developing alternative perspectives' and 'integration' (pp. 26-28). Kolb's stage of 'reflection' involves a similar process to Brookfield's idea of 'appraisal', each being necessary steps in the conversion of experience to knowledge.

It is important to note that critical thinking is related to but not the same as reflective thinking. Critical thinking comprises different types of reasoning (King & Kitchener, 1994). The notion of critical reflection, which has closer links to critical thinking, is discussed later in this chapter. However, Brookfield's model is relevant to consider alongside Kolb and Boud et al. because it is commonly included in this area of literature on reflection.

While Kolb's model does not explicate the role of human emotion in the learning cycle, the other two models do take this into account. Boud et al.'s model includes ideas, feelings and

behaviour as key parts of an experience. Also, the model refers to 'positive feelings' and 'obstructing feelings' during the reflective process. Brookfield (1987) suggested that human emotion can initiate double-loop learning by referring to life incidents as 'trigger events' that stimulate critical thinking. The Boud et al. model encapsulates 'returning to the experience' within the reflective activity and depicts the entire reflective learning process as one that is integrative and iterative, rather than a series of discrete stages. These features set it apart from the Kolb and Brookfield models. In any case, it is evident that Dewey's ideas on reflection as the catalyst in transforming the abstract to the concrete underpin the ways in which all three of these frameworks explain the processes of learning through experience.

Gibbs (1988) proposed a reflective cycle framework that focuses on action planning (see Figure 2.3). This model includes stages that are similar to Kolb's, Boud et al.'s and Brookfield's models but also includes a final stage that encourages 'personal action plans' (p. 47). At a glance, Gibbs' cycle looks similar to Kolb's learning cycle but it is actually more like the Boud, Keogh and Walker model. Both of these cycles mention good and bad feelings and Gibbs' 'analysis' stage is similar to Boud et al.'s stage of 're-evaluating the experience', although it is less specific (Quinn, 2005).

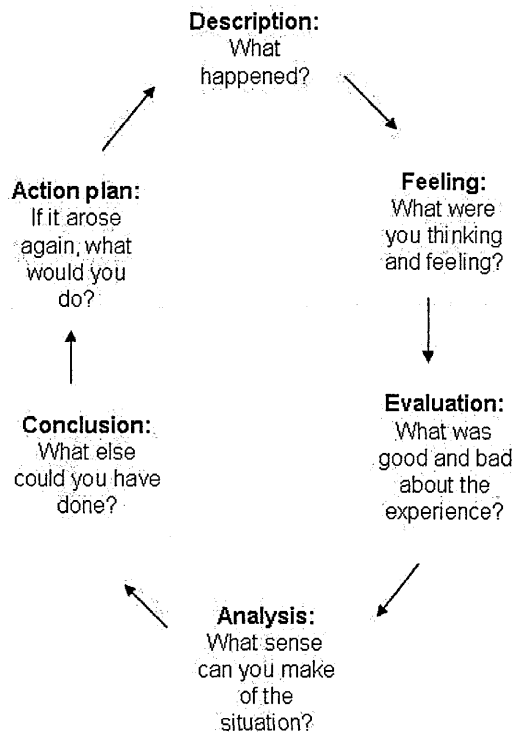


Figure 2.3: Gibbs' reflective cycle (adapted from Gibbs, 1988, p. 47)

Atkins and Murphy (1993) noted that literature dealing with reflective learning assumes that 'certain cognitive and affective skills' are required to carry out reflective thinking. They proposed a model that includes these skills: 'self-awareness, description, critical analysis, synthesis and evaluation' (p. 1190). Figure 2.4 depicts the Atkins and Murphy model.

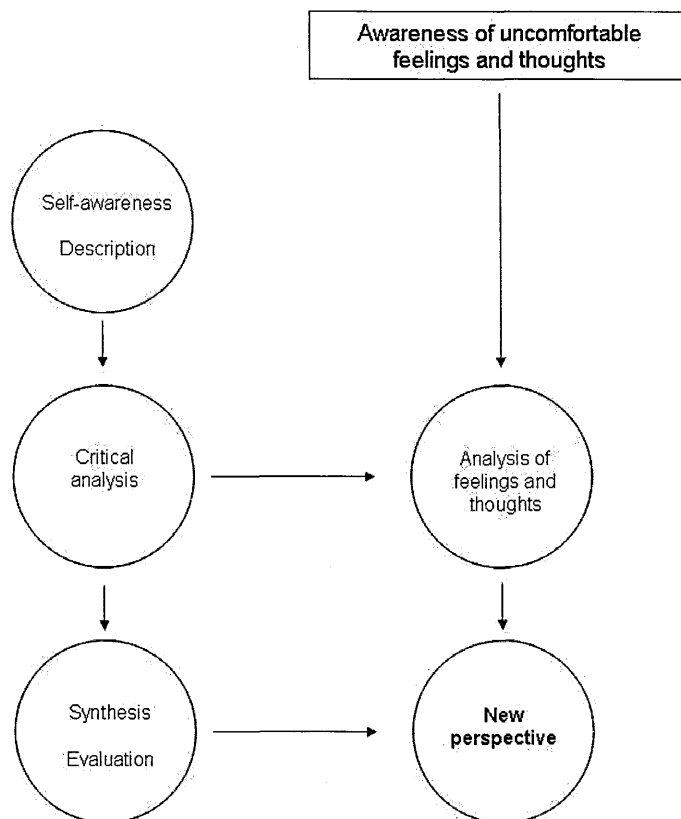


Figure 2.4: Reflective processes—a model including skills required for reflection
(adapted from Atkins & Murphy, 1993, p. 1191)

Both Gibbs' cycle and Atkins and Murphy's model include processes of analysing feelings and evaluating the experience. The Atkins and Murphy model is more explicit about the importance of self-awareness but both models imply an internal dialogue. Indeed, this relationship with one's self can be inferred in the reflective models discussed prior to this, but it is not obviously stated. Habermas (1974), however, had noted the importance of self-awareness and referred to it as a 'paradoxical achievement' in self-reflection.

One part of the self must be split off from the other part in such a manner that the subject can be in a position to render aid to itself. (p. 28)

Ekebergh (2007) explained that reflection requires a person to gain a 'distance to oneself' in order to become aware of 'himself/herself in relation to the phenomenon in consideration' (p. 334).

Johns (2000) developed a model for structured reflection in professional settings that can also be applied to other learning contexts. This model appears more detailed than the Gibbs and Atkins and Murphy model. Through analysis of dialogical patterns between himself and other nurse practitioners, Johns developed a set of reflective cues to prompt practitioners to deconstruct their experiences. As in the previous reflective models, Johns' framework aims to gain understanding and insight that can be applied to new experiences. Table 2.1 outlines Johns' model.

Table 2.1: Johns' model for structured reflection

Bring the mind home.

Write a description of an experience that seems significant in some way.

What issues seem significant to pay attention to?

How was I feeling and what made me feel that way?

What was I trying to achieve?

Did I respond effectively and in turn with my values?

What were the consequences of my actions on the patient, others and myself?

How were others feeling?

What made them feel that way?

What factors influenced the way I was feeling, thinking or responding?

What knowledge might have informed me?

To what extent did I act for the best?

How does this situation connect with previous experiences?

How might I respond more effectively given this situation again?

What would be the consequences of alternative actions for the patient, others and myself?

How do I now feel about this experience?

Am I now more able to support myself and others better as a consequence?

(adapted from Johns, 2000, p. 10)

Johns' model is clearly more thorough in guiding a learner (in this case a nurse practitioner) through a series of reflective questions. Although it can serve as a 'comprehensive checklist for reflection', the rigidity of such a model imposes a tight framework on the practitioner. This might prevent a practitioner from exploring a more personal approach to reflecting on his or her experience (Quinn, 2005, pp. 84-85).

This section reviewed literature spanning nearly a century to show how reflection plays a pivotal role in human learning. It is clear from reviewing this literature that there is a difference between reflection as a way of dealing with a problem or task and reflection as a purposeful, emancipatory activity. The latter is usually termed ‘critical reflection’ (Reynolds, 1998, p. 189) and is described by Reynolds as having four characteristics, as shown in Table 2.2.

Table 2.2: Characteristics of critical reflection

1. Concerned with questioning assumptions
 2. Focus is social rather than individual
 3. Pays particular attention to the analysis of power relations
 4. Concerned with emancipation
-

(adapted from Reynolds, 1998, p. 189)

Brookfield (2000) suggested that critical reflection is an integral component of adult education and is necessary for transformative learning. Brookfield’s explanation of this concept does not dismiss the usefulness of other versions of reflection.

Of course, just because reflection is not critical does not mean it is unimportant or unnecessary. We cannot get through the day without making numerous technical decisions concerning timing and process. These decisions are made rapidly and often instinctively. They are also made without an awareness of how the apparently isolated and idiosyncratic world of the classroom embodies forces, contradictions and structures of the wider society. (Brookfield, 2000, p. 126)

Lucas and Tan (2013) noted the importance of critical reflection in higher education in as much as it underlines professional judgement and ethical awareness. Developing skills for critical reflection is a necessary step for students in 'learning how to learn' (p. 104).

Dewey's idea that reflection is a catalyst for moving between theory and practice underpins each of the frameworks discussed so far. These models of reflection appear to consist of three elemental processes: 'retrospection', 'self-evaluation' and 'reorientation' (Quinn, 2005, p. 81). However, Dewey acknowledged that these frameworks for understanding the role of reflection in learning do not represent the processes or motivations of all learners.

Educators should also note the very great individual differences that exist; they should not try to force one pattern and model upon them all. (Dewey, 1910, p. 143)

Indeed, it is reasonable to assume that each learner will have a particular orientation to reflection and that this perspective will have implications for that student's learning.

2.4 Orientations to reflection in learning

Writings on the orientations to or perspectives on reflection appear to originate in theories related to the use of reflection in teaching and have developed to relate to reflection in learning. Van Manen (1977) drew on Habermas's (1974) ideas regarding the movement of theory to practice in terms of pedagogical effectiveness. He reasoned that if Habermas was able to construct links between theory and practice on the basis of 'cognitive interest', then it should be possible to apply these links to the activity of 'making students learn' (p. 225). Van Manen postulated that, in the pursuit of effective teaching, there existed three hierarchical levels of reflectivity, as shown in Table 2.3.

Table 2.3: Levels of reflectivity

Level 1	This level is orientated to the 'practical as a means to an end'.
Level 2	This level refers to the practical as the 'process of analysing and clarifying individual and cultural experiences, meanings, perceptions, assumptions, prejudgements and presuppositions'.
Level 3	This level focuses on 'worthwhile educational ends, in self-determination, community, and on the basis of justice, equality, and freedom'.

(adapted from van Manen, 1977, pp. 226-227)

Van Manen proposed that teaching required the higher level of reflectivity (Level 3) in order to impart the emancipatory benefits of knowledge. This way of thinking has been adopted by educators who believe that, in order to be effective in their roles, their teaching needs to promote 'justice and democracy' (Boxler, 2004, p. 210).

Building on van Manen's levels of reflectivity, Grimmett, Mackinnon, Erickson and Riecken (1990) summarised three perspectives on reflection in teacher education. They referred to the basic orientation to reflection as 'technical', meaning that reflection is a necessary tool in mediating action. The next, higher, perspective on reflection is called 'deliberative' and involves thinking between 'competing views of teaching'. The third, and highest, orientation to reflective practice is termed 'dialectical' and works to 'apprehend and transform' (p. 35). Two additional orientations to reflection were later proposed by Wellington and Austin (1996). They took the view that a more basic level was required, one where reflection did not really occur. This orientation, referred to as 'immediate', focused more on 'pleasant survival'. Additionally, Wellington and Austin proposed that an orientation beyond van Manen's and Grimmett et al.'s highest level of reflective practice should exist, one that centred on 'universal personal liberation'. This orientation was labelled 'transpersonal' (pp. 309-311). Table 2.4 summarises these five orientations.

Table 2.4: Orientations to reflective practice

Orientation	Practitioner characteristics
The immediate	<ul style="list-style-type: none">• Focuses on ‘pleasant survival’• Looks mainly at ‘the task at hand’• Makes records that are ‘essentially non-reflective’
The technical	<ul style="list-style-type: none">• Focuses on the ‘development and perfection’ of teaching methods• Looks at ways to diagnose and meet outcomes in an efficient and/or effective way
The deliberative	<ul style="list-style-type: none">• Seeks personal meaning from engaging with the learning context• Looks to negotiate new boundaries in order to explore outside the present setting• Reflects on ways to improve communication and to consider feelings and attitudes in the process
The dialectic	<ul style="list-style-type: none">• Champions ‘political liberation’ through ‘awareness’ and ‘activism’.• Questions institutional boundaries and seeks to foster change toward ‘democratic principles’
The transpersonal	<ul style="list-style-type: none">• Focuses on ‘universal personal liberation’• Reflects on ways of personal and/or spiritual growth

(adapted from Grimmett et al., 1990; Wellington & Austin, 1996; van Manen, 1997)

This framework provides a clear description of five ways that practitioners orientate to reflective work. However, Wellington and Austin recognised that the reliance on self-reported data in constructing the model meant that it may neglect tacitly held beliefs.

For many practitioners reflection is tacit; they do not realise that they engage in reflective practice until they encounter it in their reading, in their interaction with colleagues or as part of their professional training. (Wellington & Austin, 1996, p. 313)

Indeed, the notion of tacit knowledge may affect the ways in which people can articulate their ideas and beliefs about certain phenomena. Tacit knowledge is so ingrained within us that we frequently take it for granted, making it difficult to share (Polanyi, 1966; Argyris, 1990).

Furthermore, although van Manen's original theory described these orientations as hierarchical, the flowchart depicted in Wellington and Austin's work does not appear to provide space for practitioners to move between reflective orientations. Hughes and Lucas (2008) also referred to Wellington and Austin's model in their discussion of reflective frameworks for higher learning. However, the data collected by Hughes and Lucas supported the 'view that the teaching of reflection can initiate and support a change in the orientation of the learner towards reflection' (p. 3).

Ruch (2000, 2002) argued that van Manen's original model of three levels of reflectivity failed to consider the 'unconscious and conscious processes at work in inter-personal encounters' and suggested that a fourth level of reflectivity should be added. Ruch termed this level 'process reflection'.

The opportunity to reflect, to think about and feel, as well as act on, the relationship dynamics and associated thoughts and feelings, enables professionals (educators, practitioners, researchers) to gain insight into the experiences of those with whom they work and their own responses to situations. (Ruch, 2002, p. 205)

Mezirow (1981) developed seven major levels of critical reflectivity based around Habermas's (1974) ideas on the same topic. Table 2.5 outlines Mezirow's framework.

Table 2.5: Mezirow's levels of reflectivity

Reflectivity	The act of becoming aware of a specific perception, meaning or behaviour of our own or of a habit we have of seeing, thinking or acting.
Affective reflectivity	Becoming aware of how we feel about the way we are perceiving, thinking or acting or about our habits of doing so.
Discriminant reflectivity	Assessing the efficacy of our perceptions, thoughts, action and habits of doing things: identifying immediate causes; recognising reality contexts in which we are functioning and identifying our relationship in the situation.
Judgemental reflectivity	Making and becoming aware of our value judgements about our perceptions, thoughts, actions and habits in terms of their being liked or disliked, beautiful or ugly, positive or negative.
Conceptual reflectivity	Becoming conscious of our awareness and critiquing it as, for example, when we question the constructs we are using when we evaluate another person.
Psychic reflectivity	Recognizing in oneself the habit of making precipitant judgements about people on the basis of limited information about them, and recognizing the interests and anticipants which influence the way we perceive, think or act.
Theoretical reflectivity	Becoming aware that the reason for a habit of precipitant judgement or for conceptual inadequacies is a set of taken-for-granted cultural or psychological assumptions which explain personal experience less satisfactorily than another perspective with more functional criteria for seeing, thinking and acting.

(adapted from Mezirow, 1981, pp. 12-13)

Critical views of Mezirow's theory point to its failure to acknowledge the power of reflection in instigating social change (Jarvis, 1985). Boxler (2004) remarked that

Mezirow's framework implied that reflection 'is a process located within a thinker' and that this perspective failed to account for the social context of reflection (p. 211).

Mezirow (1991) did, however, differentiate between reflective and non-reflective actions, which arguably implies some focus on the social context for reflection. Non-reflective action, according to Mezirow, included habitual action, thoughtful action and introspection. Reflective actions included content reflection, process reflection and premise reflection (i.e. critical reflection).

Kember et al. (2000) attempted to develop an instrument to measure university students' reflectivity using Mezirow's (1991) types of reflective/non-reflective action. Their questionnaire asked participants to offer a response from 'definitely agree' to 'definitely disagree', with three other rankings in between. The questions were linked to four different 'actions' that were derived from Mezirow's framework. These were: 'habitual action', 'understanding', 'reflection' and 'critical reflection' (pp. 383-385). For example, a question determining habitual action asked the students to rate their beliefs toward the following statement: 'If I follow what the lecturer says, I do not have to think too much on this course' (p. 395).

After trialling the questionnaire several times, a final version was completed by 303 students studying Health Science at a Hong Kong university. Responses from this sample were analysed using the four scales. Findings for the whole group showed that those who scored high in critical reflection scored low in habitual action. When the results were

analysed to compare the scores of the undergraduates to the postgraduates from within the same group, it was found that the postgraduates were less likely to engage in habitual action and more likely to employ reflection or critical reflection than the undergraduates (significant at 5%).

Like van Manen and Mezirow, others have theorised along the lines of levels of reflectivity. Schön (1987), when illustrating his idea of ‘reflection in action’, proposed ‘the ladder of reflection’ as having four rungs. The higher rung subsumes the lower rung(s), so to speak (see Table 2.6).

Table 2.6: The ladder of reflection

-
4. Reflection on reflection on description of action
 3. Reflection on description of action
 2. Description of action
 1. Action
-

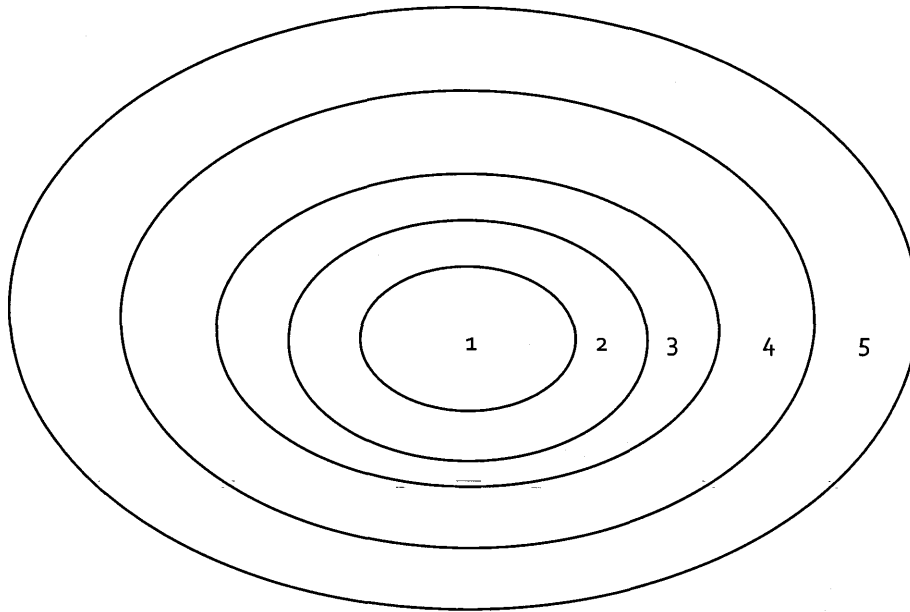
(adapted from Schön, 1987, p. 115)

In this model, Schön suggested that a dialogical relationship between a ‘student and coach’ creates a situation whereby one ‘party’s action triggers the other’s reflection or when one party’s reflection triggers the other’s action’ (pp. 114-115). Although he explained that the process of learning does not necessarily require the upward movement along this ladder, the ability to move between these stages, according to Schön, assists the pair in developing a

shared understanding. The inability, therefore, to orientate to any of these rungs would disadvantage the learning process.

Brockbank and McGill (1998) proposed another way of conceptualising Schön's ladder of reflection. Rather than viewing these steps as 'rungs', they suggested that thinking of them in terms of 'dimensions' creates a more accurate metaphor because the phases are then depicted as 'related and overlapping' (p. 77). Figure 2.5 shows these levels as dimensions and includes a fifth dimension proposed by Brockbank and McGill called 'reflection on the reflection-on-action' where learners are working to understanding their own learning processes (p. 81).

On this dimension, learners are working on the significance of reflection itself, that is, learning about how they learn! (p. 81)



5. Reflection on the reflection-on-action
4. Reflection on the description of the reflection-in-action (reflection-on action)
3. Description of the reflection-in-action
2. Reflection-in-action
1. Action

Figure 2.5: Five dimensions of reflection (adapted from Brockbank & McGill, 1998, p. 81)

Schön's theories of reflection in and reflection on action underline contemporary professional development (Eby, 2000). However, critics of Schön have noted that actually reflecting in action is problematic.

While a professional is consciously aware of the knowledge used while reflecting-on-action, this may not be so for reflection-in-action, and therefore it may be difficult for practitioners to articulate the knowledge they are using in action. (Atkins & Murphy, 1993, p. 1188)

Although Atkins and Murphy's criticism of reflection-in-action is from a professional perspective, Eraut (1995) suggested there is little proof that reflection-in-action works in classroom situations either. Schön's model has also been criticised for neglecting the importance of reflection before action (Greenwood, 1993). Usher et al. (1997) claimed that Schön's model is 'overcomplicating the relationship between thought and action' (p. 139), and argued that the reality of establishing a process for reflection-in-action is 'extremely difficult' (p. 146). The latter point corroborates Richardson's (1990) caution against 'technologizing' an 'abstract value such as competency or reflection' into a set of observable actions (pp. 13-14).

There are other models that suggest students develop orientations to reflection at higher levels of learning. Perry's study (1970) sought to understand the learning experience of undergraduates at Harvard University. Interviews were carried out with 31 participants over their four years of university study to explore their experiences more deeply. The findings of this study included a development scheme whereby a learner moves through nine 'positions' (See Table 2.7).

Table 2.7: Perry's scheme of intellectual and ethical development

Position	Meaning
1	The student sees the world in terms of right and wrong, good and bad, us and them. The teacher is the authority figure and is the one with the right answers. The role of the teacher is to convey knowledge.
2	The student sees 'diversity of opinion' and 'uncertainty' as characteristics of poor teaching or as teaching strategies that encourage them to go and find 'The Answer' themselves.
3	The student accepts that a degree of uncertainty and diversity will exist 'temporarily' but only because the teacher 'hasn't found The Answer yet'. The student is puzzled as to the 'standards' used by the teacher in assessing his or her work but figures it is based on 'good expression'.
4	The student accepts the existence of a lot of uncertainty but rationalises this in terms of 'everyone has a right to his own opinion' even though he or she still sees the teacher as having the 'right' answer. Alternatively, this position means that the student sees uncertainty as 'what They want'.
5	The student sees all knowledge as relative in particular contexts and relegates 'right/wrong' classification as relative to a 'special case in context'.
6	The student sees the need to make a personal commitment in order to orientate to a 'relativistic world'. This commitment is different to a commitment to an unquestioned belief in certainty.
7	The student makes a commitment in some area.
8	The student experiences the 'implications' and 'responsibilities' of his or her chosen commitment.
9	The student realises the commitment is an 'ongoing, unfolding activity through which he expresses his lifestyle' and, as a result, affirms his [or her] identity.

(adapted from Perry, 1970, pp. 9-10)

It is reasonable to say that a student begins to actively use reflection-in or reflection-on learning around position five, when the student perceives the world as relativistic. At this stage, it would appear the student is questioning his or her personal beliefs about the world and is working to break through these existing frameworks. This fits with Dewey's idea of problem solving through the questioning of implied belief systems. It also matches van Manen's second level of reflectivity because it is the stage at which the student engages in the 'process of analysing and clarifying individual and cultural experiences, meanings, perceptions, assumptions, prejudgements, and presuppositions' (van Manen, 1977, p. 226).

The link between position nine and reflective orientation is clearer. Here the learner experiences the transformative nature of learning through the act of making a particular 'commitment' and allowing that experience to shape his or her identity. Wellington and Austin's fifth orientation to reflective practice, 'transpersonal', suggests a similar notion: that a person at this stage (or orientation) experiences 'universal personal liberation' and focuses on personal growth (Wellington & Austin, 1996, p. 311). Whether or not it is achievable to arrive at Perry's position 9 is another matter.

Butler (1996) proposed a hierarchical model of competency development that also offers links between learning and reflective orientation at higher levels of competency. Here the learner moves from the 'novice' stage to 'advanced beginner', 'competent', 'proficient' to 'expert'. Butler suggested that reflection-on-action is the tool that is employed by the learner to generate knowledge in order to improve performance. This process, he argued underpins the highest level of competency development: 'expert' (pp. 277-280).

The literature reviewed here suggests that learners orientate to a particular level of reflection and that this orientation can change as they traverse their learning journey. Van Manen (1977) described this transition as ‘a shift from one reality to another’ (p. 212). At the start, the orientations appear to be based on a perception or natural inclination toward learning and then these change as the learner develops. The transformative benefits of learning appear to occur at higher levels of competency development and it is at these levels that reflective work seems to play a prominent role.

2.5 Conditions for reflection in learning environments

Boud and Walker (1998) explained that there were a ‘number of factors’ to consider in fostering reflection in learning environments (p. 199). One of these factors is a clear delineation between the institution’s objectives and the ‘personal domain of the learner’. Issues related to what teachers are and are not able to do, the ethical implications of developing trust between teachers and students, and awareness of ‘whose interests’ are actually being pursued are all important considerations in light of the learning context (p. 199).

Moon (1999) drew on existing literature to propose three sets of conditions for reflection based on the learning environment, the organisational perspective and the quality of reflective tasks. These conditions are summarised in Table 2.8.

Table 2.8: Conditions for reflection

The learning environment

- Learners need time for reflection and opportunities to reflect.
- Learners need someone who is a good facilitator of reflection.
- The facilitation of reflection will be more effective if it is supported throughout the curriculum.
- Reflection is more effectively facilitated if the environment is emotionally supportive.
- Facilitating reflection should be done in a sensitive way and the facilitator should be wary of the institution's 'hidden agendas'.

The organisation

- The purpose and outcome of reflection should be explicit.
- Strategies should be in place to guide reflection.
- Organisations should be aware of the dangers of following 'recipes' for reflection.
- Organisations should be sensitive and careful in dealing with public and private material in reflective work.
- A support role for reflection should be established.
- The organisation should be aware of different states of epistemological understanding.
- The organisation should help learners learn to reflect.
- There should be a curriculum that encourages reflection.
- There should be systems to transfer reflective habits to other situations.

Quality of task

- The task should not be 'messy' or 'ill-structured'.
 - The task should ask the 'right' kinds of questions to encourage reflection.
 - Setting challenges can promote reflection.
 - Tasks should encourage the integration of previous learning.
 - Tasks should prompt the ordering of thoughts.
 - Tasks should require evaluation.
-

(adapted from Moon, 1999, pp. 165-176)

Moon's conditions for reflection appear more practical in scope than Boud and Walker's factors. However, they both highlight the importance of approaching reflective tasks in a sensitive way. Hunt (2001) noted that reflection can sometimes be 'uncomfortable and

disorientating', eliciting personal issues that may be outside the scope of the educational programme (p. 275).

While certain issues may need to be dealt with quite carefully, the notion of discomfort in learning is not a new idea. Butler (1996) described learning as sometimes being 'a disturbing and unsettling process' but suggested that that being uncomfortable was a necessary aspect of learning.

If the learning event is intended to be transformational, then there must be a period when the participants are unsettled, wondering and challenged. (p. 275)

Such feelings have been referred to as 'anxiety producing' (Brookfield, 1987, p. 7) and as creating 'disorientating dilemmas' (Mezirow, 1990, p. 22). However, confronting these feelings is 'central to any notion of reflection' (Boud & Walker, 1998, p. 192).

As both Moon's and Boud and Walker's conditions for reflection imply, the role of the teacher is vital in facilitating reflection. Brockbank and McGill (1998) claimed that the idea of 'relationship' is crucial to learning and that this is accomplished through reflective dialogue between a teacher and a learner. This dialogical model of reflective learning focuses on the role of the teacher as a 'facilitator' and recognises the way in which the teacher engages in reflective practice while fostering a reflective learning environment for the pupil (p. 46). Schön's theories on reflection-in- and reflection-on-action also suggest that reflection is facilitated through dialogue with another.

2.6 Context and reflection

In identifying and discussing conditions for reflection in learning environments and in noting the importance of the teacher, the influence of the institution and the impact of the task, it is clear that reflection and context are intertwined. Context involves the whole picture: biography, society, culture and the political environment. However, Boud and Walker (1998) claimed that the role of context is a 'seriously underdeveloped aspect of discussion of reflection' (p. 196).

Context pervades all facets of the lives of learners and teachers. So, in considering reflection, it is important to note that we do not 'reflect in a vacuum' (Kemmis, 1985, p. 141). Reflection is a social process that is action-orientated (Kemmis, 1985; McWhinney, 2004). Ekebergh (2007) advised that a 'lifeworld perspective' was required to 'allow a new and deeper understanding of the role of reflection' in our lives (p. 331).

Mezirow and Brookfield have both been criticised for neglecting the social context of reflection (Boxler, 2004). However, models such as Butler's (1996) model of human action place reflection as the central mechanism by which 'open, active communication between the outside social context and the inner self' can happen (p. 270) (see Figure 2.6).

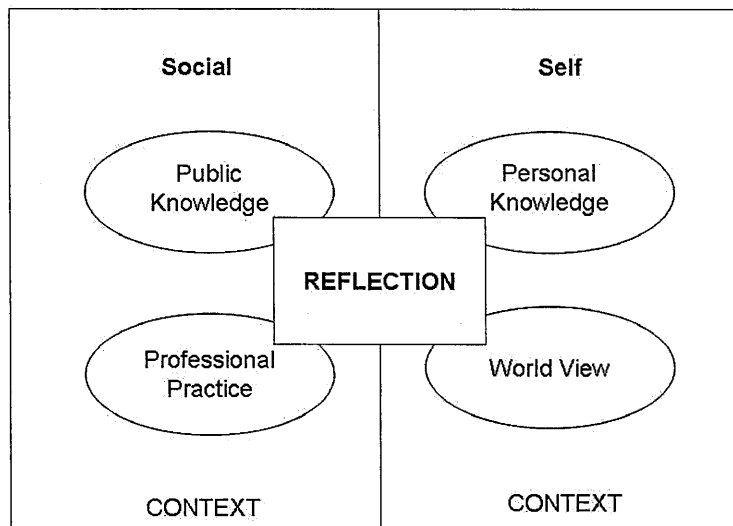


Figure 2.6: The model of human action (adapted from Butler, 1996, p. 270)

Butler also proposed a set of 'goals of reflection'. Here, the completion of the learning cycle is featured as just one of these objectives, which, when considered alongside his model of human action, suggests that reflection may serve a wider purpose in the realm of human learning (see Table 2.9).

Table 2.9: Goals of reflection

1. To review a process to see if it achieved the desired goals or outcomes
 2. To make learning visible
 3. To complete the learning cycle for each incident of our lives
 4. To give a more considered response to an event
 5. To achieve meaning and understanding inside actions
 6. To add value to self and to performance
 7. To move us from novice to expert
-

(adapted from Butler, 1996, p. 272)

This review of literature has discussed several models of reflection. These models are underpinned by Dewey's theory that reflection is the catalyst for moving between theory and practice. Also, this literature review has explored the notion that although these reflective models offer a variety of levels and description (Quinn, 2005), it may be difficult to apply them to every situation. This is because learners orientate to reflection in different ways.

There are also a variety of conditions that can foster reflection in learning environments. A discussion of these conditions helped to confirm the importance of context when discussing reflection. The next part of this chapter explores literature related to conceptions of learning to gain a better understanding of how orientation and context can help to illuminate the phenomenon of reflection.

2.7 Conceptions of reflection in learning

Marton's (1975) study suggested that when students read academic texts they employ two main levels of processing: a deep level and a surface level. Students employing a deep level of processing will focus on 'what is signified (what the discourse is about)', which implies an active engagement in the student's own learning. On the other hand, students using a surface level approach to learning will pay attention to 'the sign (the discourse itself or the recall of it)', meaning their processing is more passive and it might imply they are not taking ownership of their own learning (p. 276). But, could a particular level of processing be promoted through certain strategies?

Marton and Säljö (1976a) conducted an experiment using 40 female participants at the University of Gothenburg. They were divided into two groups (one being tested for their adoption of deep level processing and one being prompted to employ surface level processing). The participants were asked to read three chapters from a book. After reading the first two chapters, each group received a different set of questions about the reading. After reading the third chapter, both groups were asked to summarise the main points of the passage followed by a few questions to measure the deep and surface level approaches. The point of this study was to investigate whether the nature and repetition of these questions could encourage a particular approach to learning.

By giving questions which could be answered only if subjects paid very close attention to information in the surface structure of the text, and by making this demand highly predictable through repeated exposure to such questions, it was hoped that surface-level processing could be induced...Another group of subjects were exposed to questions which aimed at inducing deep-level processing. These questions were constructed with the specific aim of testing whether the subjects had comprehended some of the more fundamental assumptions and conclusions in the author's argument. (Marton & Säljö, 1976a, p. 117)

The findings of Marton and Säljö's study indicated that the differences between these two groups had to do with individual conceptions of learning. In other words, learning seemed to be defined based on the task that was imposed on them. Another finding suggested that individuals already have a 'normal conception of learning' that influences their approach to a task. In summary, the adoption of a particular approach may 'depend on the content, the context and the perceived demands of the learning task' (Richardson, 2000, p. 32).

Säljö (1979a, 1979b) explored conceptions of learning further by looking at a group with very different learning experiences. His study involved interviews with 90 participants ranging in age from 15 years 7 months to 73 years 3 months and in level of formal education from 6 years to 17 years. At the time of the study each of the participants was involved in some form of education. The interview questions were designed to get the students to describe their learning processes and to discuss their ideas and beliefs about

learning in more general terms. Toward the end of the interview, participants were asked: 'What do you actually mean by learning?' In this way, the interviewer elicited the participant's own understanding of learning, which had been implicit up to that point.

In one of the reports based on this study, Säljö (1979a) found that there is a 'taken-for-granted' perception of learning in which learning and the acquisition of knowledge are considered similar activities. This perspective matches the reproductive nature of surface level processing and can also be located in lower levels of developmental models such as Perry's scheme. However, Säljö noted that there seemed to be another set of conceptions that involved an active awareness of a student's own learning and that these conceptions were more commonly found in 'experienced learners' (p. 447).

From our interviews it was clear that for some of the participants *the phenomenon of learning in itself has become an object of reflection.* (p. 446, original emphasis)

In analysing this other set of conceptions, Säljö noted three themes in which the learners moved through as they described their conceptions of learning. He explained that, although these themes are interrelated, they can be discussed as separate notions for the purpose of analysis. The third theme is discussed as being the 'most interesting' because it involves the learner reflecting on the 'nature of what is learned' (p. 449) (see Table 2.10).

Table 2.10: Themes for learning

Theme 1	Awareness of the influence of the context of learning on what you should learn and how you should set about learning
Theme 2	Realising there is a difference between lifelong learning and learning in school
Theme 3	Understanding a distinction between learning and understanding

(adapted from Säljö, 1979a, pp. 448-449)

Säljö's (1979b) study offered a fuller report based on these findings. He presented the results as a hierarchical model of conceptions of learning (see Table 2.11).

Table 2.11: Conceptions of learning

Conception 1	Learning as the increase of knowledge
Conception 2	Learning as memorising
Conception 3	Learning as the acquisition of facts, procedures, etc., which can be retained and/or utilised in practice
Conception 4	Learning as the abstraction of meaning
Conception 5	Learning as an interpretive process aimed at the understanding of reality

(adapted from Säljö, 1979b, pp. 12-17)

In this framework, conceptions 1-3 represent perceptions of learning that are more reproductive in nature and would therefore be considered aspects of surface level approaches to study. Conceptions 4 and 5 represent notions of learning that are more active and therefore more closely linked to deep level approaches.

Van Rossum and Hamer represented the findings from their 1985 study as a set of six conceptions of learning (in van Rossum & Hamer, 2010). These six conceptions are detailed in Table 2.12).

Table 2.12: Conceptions of learning and teaching

-
- 1 Learning as the increase of knowledge
 - 2 Learning as memorising
 - 3 Learning as reproductive understanding; or application foreseen
 - 4 Learning as understanding subject matter
 - 5 Learning as widening horizons
 - 6 Learning as growing self awareness
-

(adapted from van Rossum & Hamer, 2010, p. 25)

Regarding the learner's development from one conception to another, van Rossum and Hamer suggested that movement between the third and fourth conception is perhaps the most difficult. The authors refer to this phase as 'crossing the watershed', which marks the shift from reproductive conceptions of learning to constructive thinking (p. 31). They also

proposed that the move from conception five to six is also significant because it means a change from 'learning-to-know' to 'learning-to-be' (p. 32).

When juxtaposed to theories of reflection in learning, these last two conceptions of learning are congruent to the ideas of moving between theory and practice that Dewey, Habermas and van Manen proposed. Conceptions 4 and 5 are also representative of the transformative role of reflection in learning that Perry, Grimmett et al., Wellington and Austin, and Butler intimated happens at higher orientations (or positions) to reflective practice (or learning).

2.8 Chapter conclusions and research question 1

The literature reviewed in Section 2.7 suggests that students' orientations to study will depend on how they conceptualise learning. Using an approach similar to Säljö's, the first part of this thesis seeks to explore the conceptions that distance learners have of reflection in higher education and, perhaps, just as importantly, the conceptions they have of themselves as reflective learners. In doing so, this thesis will address **research question 1**: How do distance learners conceptualise reflection in higher education?

The next chapter reviews literature around epistemological development to frame and refine research questions 2 and 3.

Chapter 3: Conceptual change and epistemological development—a review of literature

3.1 Introduction

The previous chapter reviewed literature around the role of reflection in learning, learners' orientation to reflection and conceptions of learning. This provided a context for the first research question of this thesis—How do distance learners conceptualise reflection in higher education? The second research question of this thesis investigates whether distance learners' conceptions of reflection change during their higher education experience. Chapter 3 reviews literature dealing with conceptual change and epistemological development. The aim of this chapter is locate the second research question among existing studies and theories of learning.

3.2 Considering conceptual change

There appears to be several ways of considering conceptual change. Some literature takes the view that changing from having one notion of a phenomenon to having another is an entirely cognitive process. Other research views cognitive development as a culturally situated activity and examines the influence of socio-cultural factors on conceptual change. Still, other research suggests individuals move through stages of understanding in their own epistemological development. While the latter approach to thinking about distance learners' conceptions of reflection appears to be most relevant for this thesis, it seems prudent to acknowledge these other ways of considering conceptual change. It is hoped that by recognising and examining these other approaches, a view will be sharpened for

considering whether distance learners' conceptions of reflection change during their higher education experience.

3.2.1 Conceptual change through cognitive shifts

Vosniadou (1994) carried out a cross-cultural study to investigate school children's conceptual development of the Earth's shape. The researchers used a set of criteria to assign the children's responses to a particular mental model category. As Vosniadou explained:

Identifying the mental models students use to answer our questions provides information we need to start unravelling the underlying theoretical structures that constrain them and to understand the process of conceptual change. (p. 52)

Three mental models of the Earth's shape were derived from the data: 1) an 'initial' model, which was based on the child's every day experiences and not influenced by scientific information; 2) a 'synthetic' understanding, which combined facets of the initial model with parts of a culturally-accepted view; and 3) a 'scientific' model, which was necessary for understanding the Earth as a sphere (pp. 52-54).

Movement from one conception of the Earth's shape to another was described by the author as being gradual and linked to age. Additionally, conceptual change occurred in a sequence from 'initial' to 'synthetic' to 'scientific'. Those children labelled as holding a 'synthetic' mental model were resolving the conflict between their previously held views and newly acquired information (p. 54).

Merenluoto and Lehtinen (2004) argued that ‘the perception of the task (task situation) is influenced by students’ cognitive, metacognitive and motivational sensitivity to the task’ (p. 523). These authors noted that in the process of conceptual change, learners follow one of three routes: 1) ‘no-relevant-perception’ path, where the student’s existing knowledge is not enough to support the conception of a new idea; 2) ‘illusion of understanding’, resulting from high certainty without the construction of a enriched synthetic model; and 3) ‘experience of conflict’, where the learner exhibits high sensitivity to motivational and meta-cognitive factors as well as a high tolerance to ambiguity (p. 524). The authors stated that it is the third route—experience of conflict—that is necessary for conceptual change to occur.

3.2.2 Conceptual change mediated by socioculture

3.2.2.1 The role of cultural artefacts in conceptual change

Schoultz et al. (2001) proposed that children’s interview responses are situated, discursive events and that their reasoning relies on cognitive tools. These researchers adapted Vosniadou’s (1994) design so that a model of the Earth was shown to the children during the interviews. After analysing interview responses from 25 Swedish school children, Schoultz et al. reported an outcome that was ‘drastically different’ from the results of Vosniadou’s research (p. 110).

Many of the questions borrowed from Vosniadou’s study created ambiguity among the children in Shoultz et al.’s study since the presence of the globe made these points more

obvious. All of the children recognised the globe as a representation of the Earth. The globe allowed the children to make links to larger concepts, such as gravity, in their responses.

The authors' main explanation for the improved performance was that the unit of measurement (utterances) was 'grounded with the presence of the globe as a shared object of attention' (p. 115). Schoultz et al. theorised that their use of a cultural artefact helped the respondents call to mind knowledge by relating to the globe. Furthermore, the tool offered the students space to reflect during the interview because they could use the globe as a 'prosthetic device for thinking' (p. 115).

3.2.2.2 The role of others in conceptual change

Hershkowitz and Schwartz (1999) asked 40 grade nine girls to solve a particular mathematical problem. After the girls had individually developed some ideas, they were asked to work in small groups to hypothesise and calculate an answer to a variation of the original problem.

This study focused on the discourse and problem solving processes of one particular group, chosen on the basis of their talkative nature. The authors presented the analysis of this group's collaboration as a chain of actions in solving the problem. The various objects and artefacts involved in each stage of the process were outlined.

Hershkowitz and Schwarz suggested that, from a cognitive perspective, there is evidence to show that individuals will use group reflections to construct alternative hypotheses in their

own pursuit to find the answer. Findings from this study suggest that actions taken by members of a group often will be followed by other members.

The role of the teacher in synthesising the group's outputs shifted the reflective thinking to the entire activity rather than to what had happened locally in the group, thereby helping the students redefine the activity as a whole. The authors felt there was evidence that these practices had been internalised or integrated into the mental frameworks of the students and into the social history of the classroom. (For similar studies, see: Guavain, 2001; Shirouzu et al., 2002).

3.2.2.3 The role of learning activities in conceptual change

Some literature points to the role of learning activities in dealing with challenging concepts. Orsini-Jones (2008) suggested that it was important for teachers to create learning activities that allowed students an opportunity to 'engage both in individual and collective reflection on the troublesome knowledge encountered'. These activities, it was proposed, could be supported by an open dialogue between peers and the teacher (p. 213).

Davies and Mangan (2008) used certain learning activities to help students consider different ways of approaching a problem. They reported that this gives the learner 'a base of conceptions that may be open to re-working through subsequent teaching and learning' (pp. 42-43).

3.2.3 *Cognitive conflict*

The aforementioned conceptual change studies aimed to create mental models of their participants' conceptual frameworks based on individual responses to questions and/or on other forms of discourse. In one study, the mental model was referred to as a 'route' (Merenluoto & Lehtinen, 2004) and in other, a 'chain of actions' (Hershkowitz & Schwartz, 1999). In any case, these frameworks imply that conceptual change occurs when learners arrive at a point of cognitive conflict. This is the point at which learners assimilate new information by modifying their existing mental frameworks or through reworking previously held notions of a particular concept.

The notion of cognitive conflict in learning is not a recent one. As noted in Chapter 2, Dewey (1910) explained that conflicting viewpoints cause us to question our existing frameworks in order to arrive at new ways of understanding a situation. Flavell (1979), when theorising about cognitive monitoring, explained the importance of 'metacognitive experiences', such as puzzlement, problem solving and critical thinking, in helping us develop our existing knowledge (p. 908). Vosniadou's model showed a single route from an initial mental model to a scientific understanding. Merenluoto and Lehtinen represented their findings with a multiple-route diagram that showed different pathways based on varying degrees of existing information and sensitivity to novel features of a phenomenon. Despite constructing their mental models in different ways, both Merenluoto and Lehtinen's and Vosniadou's studies agreed that the process of change is a gradual one.

Merenluoto and Lehtinen (2004) also proposed that ‘cognitive conflict does not always support conceptual change’ (p. 520). If the learner does not have enough pre-existing knowledge to grasp a new idea, their ability to shift to a more sophisticated notion will be hindered. Meyer and Land (2006) explained the importance of pre-existing knowledge in terms of a ‘threshold concept’, which they described as a route to previously unattainable ways of considering an idea (p. 3). For example, economics students need to internalise the threshold concept of ‘opportunity cost’ before they can grasp the fundamental relationship between ‘scarcity and choice’ (p. 6).

The studies reviewed so far in this chapter work to ground the cognitive aspects of conceptual change in the socially-situated context of a classroom. The practical implications of the findings from these studies offer a starting point in thinking about how to enrich learners’ conceptual frameworks while developing metacognitive awareness. It is also interesting to consider the role of sociocultural artefacts, other people and the learning task in promoting conceptual development.

3.2.4 A case for an epistemological development perspective

Another way of considering conceptual change is by examining students’ epistemological beliefs or, in other words, their ideas about ‘knowledge and knowing’ (Hofer, 2002, p. 3). Richardson (in press), when explaining the rationale for researching students’ epistemological development, noted:

This research has been motivated by the idea that how students themselves think about knowledge, learning and teaching is a primary factor influencing their experience of higher education itself. (p. 2)

Of particular interest to this thesis is the idea that students' conceptions of learning and teaching (and in this case, reflection) are linked to their beliefs about the nature of knowledge (Hofer & Pintrich, 1997; Moore, 2002). The research questions of this thesis clearly focus on the higher education experience. Exploring tertiary distance learners' conceptions of reflection and how these ideas might change during their higher education study aligns with Richardson's explanation.

There are two obvious differences between the studies reviewed so far in this chapter and the research questions for this thesis. The major difference between the studies on conceptual change and this thesis is the nature of the phenomenon being investigated. These researchers were interested in learners' changing conceptions of a particular, pre-defined phenomenon (such as the shape of the Earth). Indeed, such studies seem to deal with mathematical or scientific concepts although there are some examples of these approaches being used in liberal arts subjects (e.g. Carretero & Voss, 1994).

This thesis does not propose a universal way of understanding reflection. On the contrary, this research seeks to understanding the different ways distance learners conceptualise reflection. It did not seem appropriate to consider conceptual change as a shift from holding an 'initial' notion of reflection to holding a 'scientific' understanding of reflection, to apply

Vosniadou's terminology. In fact, it did not seem appropriate to presume these variations existed at all.

An epistemological development perspective will offer a view that is 'domain general' (Schommer & Walker, 1995; Hofer, 2002, p. 11). Learners' goals, expectations and needs—factors which may be neglected in strictly cognitive studies—have a place in some literature on epistemological development (Pintrich et al., 1993). As the literature reviewed in the rest of this chapter will confirm, studies on epistemological development deal with learning in a broader sense rather than in terms of specific phenomenal understanding. A broader approach is advantageous to this thesis since this research is exploratory rather than hypothetico-deductive (i.e. there is no hypothesis for when and how distance learners' conceptions of reflection change).

Another difference is that the studies reviewed in this chapter (so far) often involved younger learners, whereas the literature on epistemological development deals 'almost entirely' with adolescents and adults (Kuhn & Weinstock, 2002, p. 125). It is important to adopt a theoretical perspective that has already been used to make significant inroads into understanding adult learning.

The idea of cognitive conflict is still an important factor in epistemological development. When exploring any movement in conceptual understanding, points of uncertainty will be interesting areas to consider because, as Dewey (1910) explained, 'perplexity, confusion or

doubt' is the source of all thinking (p. 12). Indeed, as the literature presented in this chapter will confirm, the notion of uncertainty underlines these theories.

3.3 Epistemological development

3.3.1 Perry's model of intellectual and ethical development

Perry's model of intellectual and ethical development has been widely acknowledged as the forerunner for research on epistemological beliefs (King & Kitchener, 1994) and is considered as a 'heuristic for understanding' the ways university students experience education (Hofer & Pintrich, 1997, p. 90). Chapter 2 presented Perry's model as an example of a framework in which reflection plays a role at higher stages. Perry's study also serves as an example of longitudinal research that explored university students' 'moral' development, in the sense that their assumptions about 'values and responsibilities' were challenged and redefined at each position (p. 44).

Perry's study found that a student's motivation to move through these stages (or to stay still) seemed to be based on their internal drive to 'progress' or 'conserve' (p. 52) with little perception that the university itself was imposing these pressures. In Chapter 2, position 5 of Perry's model was identified as the point at which reflection may begin to play a prominent role in this development. Interestingly, this is also the position that Perry described as 'highly unstable', where students experienced the need to orientate themselves to something rather than stay in a state of 'diffuse relativism' (p. 212). Perry suggested that this was the position at which students move toward 'Commitment' (higher levels) or detach themselves from the scheme ('Escape') (p. 212). Table 3.1 is an excerpt from

Perry's scheme showing only positions 5-9 (see Chapter 2 for the full scheme). Positions 7, 8 and 9 were labelled by Perry as 'Commitments' (p. 58).

Table 3.1: Excerpt from Perry's model of intellectual and ethical development

5	The student sees all knowledge as relative in particular contexts and relegates 'right/wrong' classification as relative to a 'special case in context'.
6	The student sees the need to make a personal commitment in order to orientate to a 'relativistic world'. This commitment is different to a commitment to an unquestioned belief in certainty.
7	The student makes a commitment in some area.
8	The student experiences the 'implications' and 'responsibilities' of his or her chosen commitment.
9	The student realises the commitment is an 'ongoing, unfolding activity through which he expresses his lifestyle' and, as a result, affirms his [or her] identity.

(Perry, 1970, pp. 9-10)

In Perry's view, the most urgent problem from his study was:

What environmental sustenance most supports students in the choice to use their competence to orient themselves through Commitments? (p. 213)

Based on the accounts from his participants, Perry surmised that there were several supporting factors in a student's progression toward higher positions of his scheme. Namely, these factors included a sense of community and the student's own courage. The sense of community, according to Perry, held implications for both the learner and the educator in confirming membership through words and actions.

A critical view of Perry's model highlights that the participants in the longitudinal study were of traditional ages for university students, thereby neglecting to capture the development of nontraditional students. Cleave-Hogg (1996) carried out a study of 64 university students aged between 30 and 65 years and used Perry's scheme to analyse the interview data. Cleave-Hogg recognised aspects of Perry's model in this sample but found three other types of commitments that were not part of Perry's original framework (see Table 3.2).

Table 3.2: Three types of commitments made by nontraditional university students

-
1. A commitment to themselves and to the personal urge to develop their knowledge
 2. Commitments based on life experiences that have impacted their search for meaning
 3. Commitments to social and/or cultural values
-

(adapted from Cleave-Hogg, 1996, pp. 245-246)

3.3.2 Women's ways of knowing (Belenky et al.)

Perry's work was also criticised on the grounds that his sample predominantly comprised male university students. Belenky et al. (1986) sought to explore 'what else women might have to say about the development of their minds' (p. 9). Over a five year period, Belenky's team carried out interviews and case studies with 135 women enrolled in either a formal learning programme (i.e. university or college study) or an 'invisible college' (i.e. parenting

programmes) (p. 12). The participants were aged between 16 and 60 years old and came from diverse backgrounds.

Belenky et al.'s interview protocol was based, in part, on questions related to Perry's scheme. The first phase of analysis involved scoring the participants' responses against various epistemological development frameworks. When scoring the women's responses against Perry's scheme, a particular set of five epistemological perspectives, or ways of knowing, emerged. These are outlined in Table 3.3.

Table 3.3: Women's ways of knowing

1. Silence	Women experience themselves as mindless and voiceless and at the mercy of external authority.
2. Received knowledge	Women perceive themselves as capable of receiving knowledge from sources of authority but not capable of creating knowledge.
3. Subjective knowledge	Truth and knowledge are conceptualised as personal, private and subjectively known, or intuited.
4. Procedural knowledge	Women are invested in learning and applying knowledge using objective means.
5. Constructed knowledge	Women view all knowledge as contextual; they are the creators of knowledge; both subjective and objective tactics for learning are valued.

(adapted from Belenky et al., 1986, p. 15)

There appears to be some overlap with Belenky's ways of knowing and Perry's scheme. While the notion of 'silence' seems unique to women, 'received knowledge' is similar to position 1 in Perry's model—where there are right and wrong answers and these are

conveyed by an authority figure. 'Subjective knowledge' could be located among positions 2 through 4 of Perry's model, as the learner acknowledges a sense of uncertainty. 'Procedural knowledge' relates to Perry's positions 5 and 6, where knowledge is influenced by the learning context. 'Constructed knowledge' overlaps with Perry's stages of Commitments.

Belenky et al. acknowledged that, although similar categories could be found in men's ways of thinking, it was particularly interesting to consider the way women used certain metaphors to explain their ideas about knowledge.

We found that women repeatedly used the metaphor of voice to depict their intellectual and ethical development; and that the development of a sense of voice, mind, and self were intricately intertwined. (Belenky et al., 1986, p. 18)

3.3.3 Measure of epistemological reflection (Baxter-Magolda & Porterfield)

Another critical view of Perry's model refers to its reliance on students' inferences in establishing categories of ethical development. Baxter-Magolda and Porterfield (1985) designed the measure of epistemological reflection (MER) as a tool to measure movement on the Perry scale. The intention of the MER was to develop a tool that was more reliable than inferences based on students' accounts.

The MER was a set of open-ended questions covering various domains (see Table 3.4). These questions were administered to four groups of university students: first year, last year

and graduate students (all under the age of 30), and graduate students over the age of 30 in order to assess their conceptual level on the Perry scheme. Statistical analysis of the data showed that the 'initial support for the MER as a reliable measure of intellectual development was moderately high' but that further testing of the tool was required (p. 347). In follow-up studies, the analysis of different educational levels supported the validity of the tool. The MER was deemed an accurate measure of the Perry scheme and a tool which facilitated the matching of students' responses to levels of the model.

In later research by Baxter Magolda, the MER was not used to measure students' intellectual development (e.g. Baxter Magolda, 1996). Rather, Baxter Magolda reverted to qualitative methods such as interviews and written questionnaires, linking the analysis to Perry's epistemological positions.

Table 3.4: Measure of epistemological reflection (MER) model

Domains	<i>Absolute knowing</i>	<i>Transitional knowing</i>	<i>Independent knowing</i>	<i>Contextual knowing</i>
<i>Role of learner</i>	Obtains knowledge from instructor	Understands knowledge	Thinks for self; shares views with others; creates own perspective	Exchanges and compares perspectives; thinks through problems; integrates and applies knowledge
<i>Role of peers</i>	Share materials; explain what they have learned to each other	Provide active exchanges	Share views; serve as a source of knowledge	Enhance learning via quality contributions
<i>Role of instructor</i>	Communicates knowledge appropriately; ensures that students understand knowledge	Uses methods aimed at understanding; employs methods that help apply knowledge	Promotes independent thinking; promotes exchange of opinions	Promotes application of knowledge in context; promotes evaluative discussion of perspective; student and teacher critique each other
<i>Evaluation</i>	Provides vehicle to show instructor what was learned	Measures students' understanding of the material	Rewards independent thinking	Accurately measures competence; student and teacher work towards goal and measure progress
<i>Nature of knowledge</i>	Is certain or absolute	Is partially certain and partially uncertain	Is uncertain—everyone has own beliefs	Is contextual; judge on basis of evidence in context

(Baxter-Magolda, 1992, p. 30)

Following up on the findings of earlier research, Baxter-Magolda (1996) carried out a longitudinal study of 80 university students. Her findings showed that only two per cent of

the participants could be classified as what she called ‘contextual knowers’ as they came to graduation.

Contextual knowers believe that knowledge is uncertain and that one decides what to believe by evaluating the evidence in the context in the question. (p. 284)

She followed the development of these participants after they left university and reported on the perceptions of 25 of these students as they became contextual knowers during their postgraduate coursework. Table 3.5 outlines the five themes that grew out of these data.

Table 3.5: Themes of contextual knowers

1.	Students valued opportunities to think and explore for themselves, to struggle with ideas, and to formulate and support their opinions.
2.	Students valued connecting their beliefs with their own lives and identities.
3.	Students valued teaching/learning that utilised their own knowledge and experience.
4.	Students valued mutual respect in the student/teacher relationship.
5.	Students valued collaboration among peers in exchanging perspectives.

(adapted from Baxter-Magolda, 1996, pp. 290-298)

Baxter-Magolda suggested some teaching strategies to promote contextual knowing but also noted that the learners’ own assumptions would need to be taken into account when

employing specific pedagogical tactics. She also remarked that, armed with this insight, perhaps contextual knowing should be promoted by challenging learners' epistemological assumptions at an earlier age.

3.3.4 Argumentative reasoning (Kuhn)

Motivated by a desire to understand the beliefs underlying people's opinions on everyday matters, Kuhn (1991) sought to explore the process behind holding a reasoned view.

Implicit in all of the opinion surveying is the assumption that the views people hold are reasoned views—that a process of weighing pros and cons or positive and negative evidence regarding alternatives has at some level of consciousness gone into an argument for or against gun laws or abortion laws or increased foreign aid. (p. 4)

Kuhn explained that people are able to reason more easily if the problem is 'well-structured' or, in other words, if the problem has a 'single, well-defined answer'. 'Ill-structured' problems, on the other hand, do not have a clear answer and would include questions with open-ended answers (e.g. What does reflection mean to you?) (p. 7).

To investigate the thinking processes involved in solving ill-structured problems, Kuhn's team carried out interviews with 160 participants. These participants were evenly distributed across four different age groups: teenagers, 19-29 year olds, 40-49 year olds and 60-69 year olds. Participants in each group were recruited from a similar education or workplace setting. For example, the teenagers were from four different high schools; the

60s group were from a YMCA social group (p. 19). In addition to this main sample of participants, another sample of 'experts' was interviewed as part of Kuhn's study. These participants were recruited based on their potential expertise on the three ill-structured problems that Kuhn's team posed during the interviews.

Each participant was interviewed individually on two different occasions. The main part of the interview dealt with probing the participants' thinking about three ill-structured problems:

1. What causes prisoners to return to crime after they're released?
2. What causes children to fail in school?
3. What causes unemployment?

During the interview the participants were asked to answer the question, then to justify their answer. At which point, the participants were asked to propose an opposing viewpoint and finally, to offer a remedy to the underlying social problem (pp. 15-20).

Kuhn reported that at least half of the participants belonged in the 'absolutist' epistemological category. Absolutists believed that an expert could know or find the specific causes of reoffending, poor educational achievement and unemployment. Those who held a 'multiplist' epistemology denied that there could be any certainty among experts and that their own viewpoints would be just as plausible as an expert's. And, those with an 'evaluative' epistemology also believed in the uncertainty of answers but considered an expert's view as more credible than their own (pp. 173-191).

There were a few participants that Kuhn labelled as having an absent epistemology and some whose beliefs were assimilated or reinforced with new information. Kuhn and Weinstock (2002) added a pre-absolutist category ('realist') when summarising the findings of Kuhn's original study (p. 124). See Table 3.6 for an outline of Kuhn's theory.

Table 3.6: Argumentative reasoning

<i>Level</i>	<i>Assertion</i>	<i>Reality</i>	<i>Knowledge</i>	<i>Critical Thinking</i>
Realist	Assertions are copies.	Reality is directly knowable.	Knowledge comes from external sources and is certain.	Critical thinking is unnecessary.
Absolutist	Assertions are facts.	Reality is directly knowable.	Knowledge comes from external sources and is certain.	Critical thinking is a tool for comparing assertions to reality in order to decide whether they are true.
Multiplist	Assertions are opinions.	Reality is not directly knowable.	Knowledge is generated by human minds and is uncertain.	Critical thinking is irrelevant.
Evaluativist	Assertions are judgements	Reality is not directly knowable.	Knowledge is generated by human minds and is uncertain.	Critical thinking is valued as a tool that promotes sound assertions and enhances understanding.

(adapted from Kuhn, 1991; Kuhn & Weinstock, 2002, pp. 124)

Findings based on the educational backgrounds of Kuhn's participants showed that those with more experience of education held more sophisticated epistemologies than those with less education. Interestingly, the only exception to this finding was between the epistemologies held by the teenagers and by the 20-29 year olds. Despite the 20-29 year olds having had experience of higher education, there were no significant differences between the two groups. Kuhn suggested that a question for schools and university is how to design learning experiences that 'optimize the development of argumentative skills' (p. 291).

3.3.5 Reflective judgement model (King & Kitchener)

King and Kitchener (1994) also recognised an aim for educators as one of helping students develop the way they think. Similar to Kuhn, King and Kitchener focused on how people deal with ill-structured problems: e.g. 'Deciding how to dispose of nuclear waste safely' (p. 11). They believed a person's ability to think reflectively can only be determined in relation to a difficult problem.

If educators neglect to engage students meaningfully in addressing ill-structured problems and if researchers fail to include ill-structured problems in their assessment of critical thinking, the teaching and evaluation of these important skills will also be neglected. (King & Kitchener, 1994, p. 13)

Also, like Kuhn, King and Kitchener referred to the process of considering ill-structured problems as critical thinking but they claimed that research on critical thinking failed to

take into account the role of reflective judgement. King and Kitchener's model of reflective judgement was based on interviews with participants from a range of different ages and backgrounds—from high school students to middle-aged adults—over a 15 year period. Table 3.7 outlines King and Kitchener's seven key stages of reflective judgement.

Table 3.7: Summary of the reflective judgement model

<i>Stage</i>	<i>Example statement</i>
1. Knowledge is absolute and concrete.	'I know what I have seen.'
2. Knowledge can be obtained through the senses or by way of an authority figure.	'If it is on the news, it has to be true.'
3. Personal beliefs can be known only when absolute knowledge is obtained.	'When there is evidence that people can give to convince everybody one way or another, then it will be knowledge; until then, it's just a guess.'
4. Beliefs are justified by giving reasons and using evidence, but the arguments and choice of evidence are idiosyncratic.	'I'd be more inclined to believe evolution if they had proof. It's just like the pyramids: I don't think we'll ever know. Who are you going to ask? No one was there?'
5. Knowledge is contextual and subjective since it is filtered through a person's own judgements and perceptions.	'People think differently and so they attack the problem differently. Other theories could be as true as my own, but based on different evidence.'
6. Knowledge is constructed into individual conclusions about ill-structured problems.	'It's very difficult in this life to be sure. There are degrees of sureness. You come to a point at which you are sure enough for a personal stance on the issue.'
7. Knowledge is the outcome of a process of reasonable inquiry.	'One can judge an argument by how well thought-out the positions are, what kinds of reasoning and evidence are used to support it, and how consistent the way one argues on this topic is as compared with the other topic.'

(adapted from King & Kitchener, 1994, pp. 14-16)

The stages in the reflective judgement model can be grouped into three categories: pre-reflective (stages 1-3), quasi-reflective (stages 4-5) and reflective (stages 6-7). Reflective thinking on one's beliefs requires knowledge, the ability to reason, and the capacity to 'understand and accept real uncertainty' (p. 17).

3.3.6 Epistemological belief system (Schommer)

Schommer (1990) considered personal epistemologies too complex to be categorised by a single dimension and proposed a belief system of five dimensions: structure, certainty, source of knowledge, control of knowledge acquisition and speed of knowledge acquisition (p. 498). Schommer explained that the first three dimensions were derived from Perry's scheme and the other two dimensions were linked to theories on the nature of intelligence.

To test this theory, Schommer carried out two separate experiments with students enrolled in junior college and university programmes. The first experiment investigated whether the students' beliefs were a system of independent epistemologies and explored any factors that might influence or predict these beliefs. This experiment asked the participants to complete a set of surveys and tasks.

The second experiment sought to establish links between the participants' epistemological beliefs and their comprehension abilities. This experiment asked the participants to read a passage from one of two domains (social sciences or physical sciences) and then to complete a set of comprehension tasks.

Findings from Schommer's first experiment pointed to four independent factors (or beliefs) that students held. These are outlined in Table 3.8.

Table 3.8: Epistemological beliefs

<i>Factor</i>	<i>Belief</i>	<i>Assertion</i>
Factor 1	Innate ability	'The really smart kids don't have to work hard to do well in school.'
Factor 2	Simple knowledge	'When I study, I look for specific facts.'
Factor 3	Quick learning	'Successful students learn things quickly.'
Factor 4	Certain knowledge	'Scientists can ultimately get to the truth.'

(adapted from Schommer, 1990, p. 500)

Schommer's findings from the first experiment also suggested that a student's background can influence their epistemological beliefs. Age was an important factor in understanding that learning can be an acquired skill. Also, students with more experience in higher education were more likely to view knowledge as uncertain.

Findings from the second experiment showed that a student's beliefs influenced their responses to the task. For example, a student with 'certain knowledge' provided absolute answers. Household variables also were important predictors for certain beliefs.

These results suggest that the more education parents have the more they expect their children to take responsibilities in the home and for their own thinking, the more likely children will develop a sophisticated system of epistemological beliefs. (Schommer, 1990, p. 503)

Schommer remarked that apart from family influence, education may be the most important factor in developing personal beliefs about knowledge and that this raises a host of implications for educators.

Later research by Schommer and Walker (1995) offered evidence that students' epistemological beliefs are not domain specific. Therefore, the beliefs students hold about the nature of knowledge can be generalised across various topics or domains. Schommer and Walker explained that these findings offer reasons for teachers to build epistemological issues into their curriculum and that this may involve an interdisciplinary approach.

3.4 Discussion

The studies reviewed in the previous section have several commonalities. Hofer and Pintrich (1997) presented a summary table of several key epistemological frameworks. Table 3.9 builds on their comparison to include findings from Cleave-Hogg (1996) and Schommer (1990).

The intention and outcome of Table 3.9 is to show how the theoretical frameworks overlap. Perry's model, although developed by other researchers through subsequent years of

theory-building, serves as a robust model from which to locate later theories. The starting line for each of these models is an epistemological stance of absolute certainty. The lines of development, regardless of the terminology used, show increasingly more sophisticated beliefs about the nature of knowledge.

Table 3.9: Key frameworks for considering epistemological development

Intellectual and ethical development (Perry)	Intellectual development of nontraditional students (Cleave-Hogg)	Women's ways of knowing (Belenky et al.)	Epistemological reflection (Baxter Magolda)	Argumentative reasoning (Kuhn)	Reflective judgement (King & Kitchener)	Epistemological beliefs (Schommer)*
<i>Positions</i>	<i>Commitments</i>	<i>Perspectives</i>	<i>Ways of knowing</i>	<i>Views</i>	<i>Stages</i>	<i>Beliefs (certainty)</i>
Dualism	Dualism	Silence Received knowledge	Absolute knowing	Realist Absolutists	Pre-reflective thinking	Certain knowledge
Multiplicity	Multiplicity	Subjective knowledge	Transitional knowing	Multiplicists	Quasi-reflective thinking	
Relativism	Relativism	Procedural knowledge	Independent knowing	Evaluatists	Reflective thinking	Tentative knowledge
Commitment within relativism	<ul style="list-style-type: none"> ▪ Commitment to themselves; ▪ Commitment based on life experience; ▪ Commitment to social values 	Constructed knowledge	Contextual knowing			

(adapted from Schommer, 1990; Cleave-Hogg, 1996; Hofer & Pintrich, 1997).

* Schommer's beliefs cannot be depicted fully within this matrix because, as she proposed, epistemological beliefs are multidimensional. Only the dimension of 'certainty' can be included here.

3.4.1 Reflection and epistemological development

Most theories on epistemological development seem to view an individual's intellectual development as a hierarchical path that moves from holding basic beliefs about knowledge toward understanding the emancipatory benefits of knowledge. Perry's and Cleave-Hogg's commitments, Belenky et al.'s constructed knowledge, Baxter-Magolda's contextual knowing and King and Kitchener's reflective thinking are pitched as aspirational, or ideal, ways of knowing.

Importantly, these higher order epistemological beliefs require reflection. Since critical reflection is necessary in questioning assumptions and transforming experiences to knowledge (Mezirow, 2000), it is therefore an essential activity in developing more sophisticated epistemological beliefs (i.e. in moving from an absolute way of knowing to a contextual epistemology) (Lucas & Tan, 2013).

3.4.1.1 Reflection on experience

In positions 8 and 9 of Perry's scheme, a learner engages with an experiential learning cycle as he or she experiences the impact of a chosen commitment and realises it as an ongoing activity. Belenky et al.'s idea of procedural knowledge and Baxter Magolda's notion of contextual knowing both involve the application of knowledge. In these ways, each of these frameworks links to Kolb's cycle of experiential learning, as presented in Chapter 2. Kuhn's ideas on critical thinking as an essential feature of higher order epistemologies corresponds with Brookfield's

model of critical thinking as presented in the previous chapter. Moving through experience in order to apply knowledge requires reflective (and critical) thinking.

3.4.1.2 Reflection within a social context

Perry's position 9 involves a learner's awareness of lifestyle and identity. Belenky et al.'s perspective of constructed knowledge views knowledge as constitutive, thereby created within a social context. Baxter Magolda's idea of contextual knowledge considers knowledge as being developed within a context and values the input from others in creating meaning. In Chapter 2, Butler's model of human action was presented as a framework that views reflection as the device that opens communication between the social context and the self. Therefore, in holding more sophisticated personal epistemologies, individuals employ reflection to contextualise their ways of knowing.

3.4.1.3 Reflection caused by cognitive conflict

Cognitive conflict occurs in movement along these trajectories. Perry's model implied this conflict would be fairly pronounced at positions 5 and 6, when the learner decides whether to make a commitment to a relativistic world. Baxter-Magolda's (1996) findings suggested that the process of becoming a contextual knower may be an uncomfortable one. Furthermore, once this stage of learning is achieved, these learners actually value conflict ('struggle with ideas'). Dewey expressed the central role of conflict and uncertainty in instigating reflective thinking. It is plausible to conclude that reflection, therefore, is an essential activity in overcoming barriers to higher levels of epistemological beliefs.

3.4.2 An epistemological perspective on conceptions of reflection

Students' orientations to critical reflection vary because their epistemological beliefs influence the ways they 'learn and make judgements' (Lucas & Tan, 2013). An epistemological development perspective offers a valuable way to think about whether distance learners' conceptions of reflection change during their higher education experience. The goal is not to investigate distance learners' personal epistemologies and link these to their conceptions of reflection. However, an awareness of students' beliefs about the nature of knowledge can illuminate students' learning and motivation (Buehl & Alexander, 2001) and therefore, may help to frame students' conceptions of reflection.

Early studies on levels of processing and conceptions of learning (Marton, 1975; Marton & Säljö, 1976b; Säljö 1979a, 1979b) have clear links to Perry's model of epistemological development.

For the most part, Marton's work clearly reinforces the Perry scheme, arguing that meaning-making needs to be considered the most central aspect of learning.

(Moore, 2002, p. 28)

Säljö's (1979b) conceptions of learning presented five ways of understanding learning. These conceptions, as outlined in Chapter 2, ranged from a basic, reproductive notion of learning to a social, interpretative understanding. Others have suggested a sixth conception of learning as personal transformation (e.g. Marton, Dall'Alba & Beaty, 1993; van Rossum & Hamer, 2010). All of these conceptions can also be linked to Perry's scheme.

Van Rossum et al. (1985) viewed learning development in a similar way to Perry, 'in short as an aspect of the growth to a personal philosophy' (p. 637). Moreover, the development from one conception to another was seen to be dependent on the context, including relationships with 'significant others', quality of teaching and social demands (p. 637).

Higher education, it seems, is a major influence on one's own beliefs about the nature of knowledge (Schommer, 1990) and is a catalyst for developing higher order conceptions of learning. However, a student's own objectives within a higher education setting may impact the conceptual change process (Pintrich et al., 1993). Additionally, the learning context can both facilitate and hinder a learner's development (van Rossum & Hamer, 2010).

These are interesting factors to consider when thinking about distance learning. Distance learners are classified as nontraditional university students due to factors such as age, part-time status and life experience. Compared to traditional university students, distance learners possess different motivations for pursuing a higher education programme (Rautopuro & Vaisanen, 2001). Richardson (1994) suggested that mature students may be more likely to take a deep approach to learning than traditional university students. Furthermore, distance learning environments can include online discussion forums, synchronous online classrooms, and the learner's own home or workplace. Distance learners, therefore, offer a unique set of attributes when thinking about the impact of higher education on one's epistemological development.

Increasingly, reflective activities are being promoted in distance education curricula. The UK's Open University, for example, has addressed reflective practice across its faculties by including reflection as a key learning outcome for many its distance modules and by encouraging students to undertake reflective activities (Alden, 2009b). Thorpe (1995) carried out interviews with Open University students on two different modules. The activities and assessments of each module were designed to encourage reflection on experience and critical thinking. The conclusions drawn from these case studies suggested that reflective activities, if correctly designed, can create powerful learning experiences. Thorpe also commented that well-designed assessment can support reflection on experiences and on one's own approach to learning. In a later case study, Thorpe (2000) looked at students' responses to reflective questions and respective tutors' comments on a set of assessments from a Technology module at The Open University. While the findings showed that, with clear guidance on reflective tasks and explanation of reflective theory, students were able to engage with some forms of reflection, the study also identified the need for distance tutors to be committed to facilitating reflective learning.

Thorpe's studies clearly indicate that reflection is part of the distance education agenda and it is prudent to further this line of research. Literature on levels of processing, conceptions of learning and epistemological development suggest that movement toward higher levels of thinking can be promoted through pedagogical strategies. Indeed, theorists such as Kuhn and Schommer claimed these strategies should be of utmost importance among educators. The notion that certain teaching strategies can encourage students to development along a certain trajectory offers implications for considering students' conceptions of reflection.

3.5 Research questions 2 and 3

The second research question of this thesis addresses the impact of higher education on distance learners' conceptions of reflection. **Research question 2:** To what extent do distance learners' conceptions of reflection change during their higher education experience?

While it is important to consider the basic notion of conceptual change, as posed by research question 2, it is also interesting to consider the differences in conceptions between distance learners with more experience of higher education and those with less experience. In terms of personal epistemologies, findings based on the educational backgrounds of Kuhn's participants showed that those with more experience of education held more sophisticated epistemologies than those with less education.

Schommer's findings from her first experiment also suggested that a student's background can influence their epistemological beliefs. Age was an important factor in understanding that learning can be an acquired skill. Additionally, Schommer reported that students with more experience in higher education were more likely to view knowledge as uncertain.

Chapter 2 presented Kember et al.'s (2000) study designed to measure the level of reflective thinking among undergraduate and postgraduate students. The findings suggested that postgraduate students are more likely to engage in reflective thinking than undergraduate students.

Prompted by the findings from each of these studies, it seems germane to explore whether the same differences occur among tertiary distance learners. **Research question 3** addresses this point: To what extent do distance learners with more experience of higher education hold different conceptions of reflection from distance learners who have less experience of higher education?

3.6 Chapter conclusions

The review of literature in Chapters 2 and 3 has provided a context in which to consider the three main research questions of this thesis:

1. What are distance learners' conceptions of reflection in higher education?
2. To what extent do distance learners' conceptions of reflection change during their higher education experience?
3. To what extent do distance learners with more experience of higher education hold different conceptions of reflection from distance learners who have less experience of higher education?

Literature dealing with the role of reflection in learning suggests that reflection plays a significant role at higher levels of an individual's epistemological development. However, distance learners' orientations to reflection may differ. These differences may be influenced by social or cultural factors and, in the case of Open University students, the differences may be based on factors such as age, educational background and employment experience, since these learners come from diverse backgrounds.

These learners' orientations to reflection may be largely dependent on how they conceptualise reflection and how they think of themselves as reflective learners. Understanding how distance learners conceptualise reflection will become a key undertaking for this research.

In the literature pertaining to conceptual change and epistemological development, the idea of cognitive conflict was discussed. This appeared to be the point at which a learner questioned existing beliefs and worked out how to incorporate new information. For this thesis, it may be important to think about the points at which cognitive conflict is happening in the distance learners' experience. And, from a sociocultural perspective, it would be pertinent to investigate how cultural tools (including other people) affect cognitive development.

Some of the literature reviewed here expressed the need for teaching strategies that enhanced learners' metaconceptual awareness so they could assimilate new information into a stronger theoretical framework. Also, through building students' metacognitive skills, it is likely that students could employ reflective thinking with a greater sensitivity to their own personal development. For this thesis, it is germane to explore the extent to which these factors have impacted (or are perceived to be important in) the conceptual change process.

Thinking about conceptual change and epistemological development as a pathway, it seems necessary to identify a starting point. Chapter 6 reports on Study 1 and proposes a model of distance learners' conceptions of reflection in higher education. The next section of this thesis—Chapters 4 and 5—discusses the research approach and methodology for this research.

Chapter 4: Research approach

4.1 Introduction

The previous two chapters reviewed literature dealing with reflection and conceptual development in order to provide a milieu for this thesis research. Several empirical studies were considered in terms of theory and method with the aim of sharpening the original set of research questions. In doing so, the line of inquiry driving this thesis was scrutinised in light of existing research. Consequently, a set of the researcher's personal curiosities about learners' notions of reflection has been reworked into three main research questions to guide this discovery.

Chapter 4 *Research approach* marks the beginning of a section on methodology. First, this chapter makes a case for a qualitative approach to the studies contained in this thesis. Second, an argument is presented for adopting a specific qualitative approach: phenomenography. Third, a discussion of some of the issues and limitations associated with this type of research is presented. Aspects of phenomenographic research, such as data collection and analysis are addressed. This chapter concludes with a statement regarding the chosen research approach along with summary points for moving forward.

4.2 Rationale for a qualitative approach

In light of multiple quantitative studies researching student learning and manifold issues related to considering the value of a particular approach, it seems both necessary and

worthwhile to provide a solid case for adopting a qualitative approach to this thesis research. This section argues for a qualitative approach to the studies contained in this thesis based on the following:

- 1) the nature of the research questions,
- 2) the nature of the participants in question, and
- 3) the possible pedagogical implications of this type of investigation.

4.2.1 Nature of the research questions

A hypothetico-deductive research design in which a hypothesis, or multiple hypotheses, is/are predicted and tested through controlled experimentation was not appropriate for this thesis research. Rather, the aim was to collect participants' thoughts, accounts and experiences about reflection in distance higher education. Therefore, it was more useful to devise a set of 'research questions' to explore certain aspects of student learning (Mason, 2002, p. 26). By not imposing a predicted outcome on the study, the participants' ideas about reflection were able to emerge in a relatively untreated way.

It was assumed that all humans have a certain understanding of the world and therefore a unique viewpoint. Therefore, in order to address the research questions for this study, it was important for this thesis to elicit descriptive accounts from the participants. This meant that the researcher could interpret meanings embedded in the participants' experiences and personal frameworks with an awareness of the context to which these participants related. This also meant that meanings were 'variable and renegotiable in relation to their contexts

of use' (Henwood, 1996, p. 27). Adopting a qualitative approach to this research allowed rich personal accounts to be obtained within a natural setting while avoiding the 'problem of inappropriately fixing meanings', which is sometimes problematic in quantitative research (p. 27).

4.2.2 Nature of the learners in question

Tertiary distance learners are accustomed to using correspondence techniques such as written responses to questions, email communication and telephone conversations to relate their ideas. It was realistic to assume that the participants in this study would be able to provide open-ended input in these ways since these tools are common in their student lives.

Tertiary distance learners often come from a range of educational and employment backgrounds. Some will not have been involved in formal education for some time. The notion of reflective learning may be relatively new to them. Students may have difficulty articulating their own meanings. However, a qualitative approach can view language as 'constitutive', or the 'site where meanings are created and changed' (Taylor, 2008, p. 6). A qualitative approach does not necessarily rely on a shared understanding of these concepts. Rather, meaning is created through the written and verbal accounts, and dialogue, that can take place using qualitative methods.

4.2.3 Possible pedagogical and research implications of this study

Qualitative methods are prevalent in education research (Cohen, Manion & Morrison, 2007). The need to understand the learner's perspective has become increasingly important for researchers and practitioners. By adopting a qualitative approach, a back-story can be drawn based on individual accounts and experiences. Indeed, one view in educational research is that 'humans are storytelling organisms who, individually and socially, lead storied lives' (Connelly & Clandinin, 1990, p. 2). For this thesis, these stories may offer insight into why tertiary distance learners hold a particular set of conceptions of reflection and whether these conceptions change over time. By eliciting personal accounts and descriptions of experiences, it might be possible to illuminate factors for conceptual change. Understanding the implications of 'why' these notions might change may translate into meaningful tools for educationalists.

A qualitative design may also offer the author and other readers more room for reflection on the research itself than what would be possible with quantitative research (Walford, 2000). It would seem plausible that a thesis about reflective learning should also invite reflection on its design, its data and its findings.

4.2.4 Reconciling the argument for a qualitative approach

The previous section contended that a qualitative design for this thesis research was more appropriate because the research questions called for a corpus of data related to tertiary distance learners' experiences and accounts of reflection. The rest of this section discusses

some problematic features of the preceding argument for adopting a qualitative research approach.

First, a qualitative approach requires the researcher to interpret the participants' meanings while remaining sensitive to their respective contexts. This activity of contextual interpretation holds the danger, or rather the actuality, of being affected by the researchers' own perspectives (Henwood, 1996). For this thesis, this aspect of qualitative research was addressed by bracketing the researcher's a priori assumptions prior to carrying out the research (Sandberg, 1997) and by inviting scrutiny from other parties (i.e. research supervisors). Furthermore, the iterative process of reflexivity offers the researcher a chance to revisit the research design to minimise her own impact on the data and its subsequent analysis (Hammersley & Atkinson, 2007).

Second, using a qualitative design for this research offered the opportunity for meaning-making to occur during semi-structured interviews (email, telephone and in-person) and open-ended written responses to survey questions. Therefore, participants articulated their ideas through their discourse, dialogue and/or written responses. The hazard for qualitative researchers is one of 'reactivity', the phenomenon whereby a participant provides responses they think the researcher wants to hear (Hammersley & Atkinson, 2007, p. 101). This notion is sometimes termed 'social desirability' (e.g. Joinson, 2006, p. 25). Hammersley and Atkinson claimed that, while reactivity can be eliminated through the use of other methods (e.g. complete observer), such methods were not practical for this thesis. To

overcome this potential problem, the researcher maintained a certain degree of self-awareness, which involved 'the imagined act of stepping back to observe oneself as an actor within a particular context' (Taylor, 2008, p. 17). This helped the researcher understand her own role and possible effect within the situation while still engaging in the constitutive activity of an interview.

Throughout the data collection process, participants were assured that there were no right or wrong answers and that their responses would remain anonymous. Additionally, an assumption was made by the researcher that the responses to interview questions would be meaningful no matter what version of reality the participants decided to relate. This logic was based on the idea that their responses would still be what the participants thought would be seen as important and appropriate to the context (Hammersley & Atkinson, 2007).

Thirdly, the preceding argument posited that pedagogical and research implications of these research findings would be enhanced through a qualitative approach. Using learners' narratives to consider how and why they hold certain conceptions of reflection may offer a richer tapestry from which practitioners and researchers might *know* the learner. However, in representing these data as research findings, the researcher faced the challenge of 'representation and legitimation' (Denzin & Lincoln, 1998, p. 21). The researcher was not able to claim her interpretation of the data was an objective account of reality. Nor were there ways to evaluate the findings against one true reality. The subjective nature of the

participants' accounts, as well as the reflexive way in which they were evaluated offered a particular version of reality. Replicating the study would create another version of reality but could potentially corroborate the findings of the thesis. Therefore, the researcher carefully designed and described the research so that other researchers could replicate these studies (Taylor, 2008, p. 318).

These treatments do not overwrite the effect of the researcher but they do temper the issues related to using qualitative methods. The next section discusses different types of qualitative research traditions and offers reasons for selecting a phenomenographic approach.

4.3 Qualitative research methodologies and design

This section reviews the chief qualitative methodologies and the theories that support their designs. As mentioned in the previous section, the researcher did not impose a strict design on this thesis research. The design of the thesis was shaped by a set of research questions, yet remained fluid enough to be 'data-driven' and 'context specific' (Mason, 2002, p. 24). This meant that the chosen methodology was one that offered the best strategy for addressing the research questions (Denzin & Lincoln, 1998).

Table 4.1 provides an overview of five qualitative research traditions in terms of focus, origin, data collection, analysis and form (Creswell, 1997, p. 65).

Table 4.1: Dimensions for comparing five research traditions in qualitative research

<i>Dimension</i>	<i>Biography</i>	<i>Phenomenology</i>	<i>Grounded theory</i>	<i>Ethnography</i>	<i>Case study</i>
Focus	Exploring the life of an individual	Understanding the essence of experiences about a phenomenon	Developing a theory grounded in data from the field	Describing and interpreting a cultural and social group	Developing an in-depth analysis of a single case or multiple cases
Discipline origin	Anthropology Literature History Psychology Sociology	Philosophy Sociology Psychology	Sociology	Cultural anthropology Sociology	Political science Sociology Evaluation Urban studies Other social sciences
Data collection	Primarily interviews and documents	Long interviews with up to 10 people	Interviews with 20-30 individuals to "saturate" categories and detail a theory	Primarily observations and interviews with additional artefacts during extended time in the field (e.g., 6 months to a year)	Multiple sources: documents, archival records, interviews, observations, physical artefacts
Data analysis	Stories Epiphanies Historical content	Statements Meanings Meaning themes General description of the experience	Open coding Axial coding Selective coding Conditional matrix	Description Analysis Interpretation	Description Themes Assertions
Narrative form	Detailed picture of an individual's life	Description of the "essence" of the experience	Theory or theoretical model	Description of the cultural behaviour of a group or an individual	In-depth study of a "case" or "cases"

(Adapted from Creswell, 1997, p.65)

Denzin and Lincoln (2005) pointed out that qualitative research does not have its own set of methods or practices. Qualitative research is interdisciplinary, sharing processes and formats across fields. Looking at Creswell's table, one feature of qualitative research that seems to appear across the traditions is the use of interviews as a primary means of data collection. The interviews vary in length and across different sample sizes, depending on the tradition but nevertheless, the popularity of this method indicates its efficacy in collecting qualitative data.

Although Creswell's table offers a clear way of thinking about these five traditions, the boundaries that distinguish these areas are often blurred. Indeed, Denzin and Lincoln (2005) described qualitative research as a 'complex, interconnected family of terms, concepts and assumptions' (p. 2). For example, Braun and Clarke (2006) reasoned that, although 'thematic analysis' involved elements of grounded theory (discovering themes in the data), it could be used in other approaches to research to develop themes from the data. Osborne (1994) explained that some research traditions (e.g. ethnography and grounded theory) can have 'phenomenological aspects' (p. 168).

So, while it was useful to consider the research approach for this thesis in a holistic way—as belonging to a particular tradition—it was important to understand the features of other traditions and how these could be used or adapted within the chosen tradition. Again, the goal was to adopt a research approach that addressed the research questions in the most effective way. The next section discusses the traditions in Creswell's table and gives

reasons for rejecting ones that did not offer a clear framework for investigating this thesis's line of inquiry.

4.4 Design choice

As mentioned in the previous section, interviews are used across the research traditions to collect data from participants. For this thesis research, interviews were used as one method of data collection. (See Chapter 5 for a discussion on the different methods used.) However, the nature of the research questions called for a more rigorous evaluation of the research traditions and the theories that underpin them. This section outlines the reasons for not adopting certain research traditions. It will conclude with a chosen research approach.

Biography, according to Creswell's description, is about one person's life and can quickly be ruled out as an option for this thesis research. The research questions deal with distance learners' conceptions of reflection in higher education and therefore involve multiple viewpoints. Ethnography and Case Studies can be rejected on the basis of method. Ethnographic research involves participant observation, looking at social behaviour and often requiring extensive time in the field (Hammersley & Atkinson, 2007). Behaviour was not the focus of this thesis research. Rather, this research explored mental frameworks of the participants and how their conceptions of a phenomenon were related to their context and to other conceptions. Case studies could be used to explain the studies contained in this thesis because the samples belonged to learners on particular tertiary distance learning modules. However, other features of the case study research tradition were not present in

this thesis. For example, the data came from survey and interview responses rather than from a range of artefacts.

Similarly, there are features of the grounded theory tradition that are present in this research. For example, the data analysis was done in a way that allowed categories of description to emerge from the corpus. And, although the research was driven by the researcher's own interests, efforts were made to foster a research design that was faithful to these students' conceptions of reflection.

Phenomenology, as described by Creswell, seemed the most likely fit for addressing this particular set of research questions. Indeed, this thesis intended to investigate distance learners' ideas about a particular phenomenon: reflection. However, Creswell's summary stated that phenomenology aimed to 'understand the essence of experiences about a phenomenon'. This was not the case for this thesis. Students' accounts of their experiences of reflection were useful to help understand their meanings of reflection. However, the research focused on understanding the ways in which students conceptualised reflection, not on gaining a deeper understanding of their experiences. The researcher concluded that, while Creswell's table offered a summary of possible data collection methods across multiple research approaches, it did not include a relevant framework for this particular research.

4.5 Phenomenography

Phenomenography is a research approach that has been inspired by 'hermeneutic, ethnographic and phenomenological methodological traditions' (Svensson, 1997, p. 164) yet is markedly distinct from these designs. On the one hand, phenomenology works on the basis that all knowledge is grounded in our immediate experience of the world. Phenomenography, on the other hand, tries to understand relationships between people and different features of the world around them, regardless of whether those connections are shown as experiences, thoughts or behaviours (Marton, 1986). As noted in Chapter 1:

Phenomenography is a research method adapted for mapping the qualitatively different ways in which people experience, conceptualise, perceive, and understand various aspects of, and phenomena in, the world around them.

(Marton, 1986, p. 31)

The etymology of 'phenomenography' is derived from the Greek words *phainomenon* (appearance) and *graphein* (description), literally meaning that phenomenography is a 'description of appearances' (Hasselgren & Beach, 1997, p. 191). Although there is some evidence to suggest an earlier use of the term, it is widely acknowledged that the term was first used by Ference Marton in 1981 to describe research that had been carried out by his team in Gothenburg (Hasselgren & Beach, 1997).

There is evidence that phenomenography is an offspring of phenomenology, a field of research commonly attributed to Husserl (1921/1970). This connection, however, has been

heavily disputed. Marton (1986) specifically argued that phenomenography was born out of a need for a practical way of researching student learning from a second order perspective. Giorgi (1999) echoed Marton's argument by describing the emergence of phenomenography as 'a grassroots development that leapt from problem to solution' (p.70). However, there exists a paradox when considering that 'phenomenography' was used to describe research that had already taken place in Gothenburg and that this research had phenomenological features (Hasselgren & Beach, 1997). This might imply that, although the earlier research may have been underpinned by the phenomenological tradition, Marton's subsequent reflections on the research helped to sharpen phenomenography as a field in its own right.

Svensson (1997) explained that phenomenography

makes its own ontological, epistemological and methodological assumptions with inspiration from and similarities to several older and concomitant traditions, without agreeing entirely with any of those. (p. 171)

Svensson listed these assumptions as follows.

1. Knowledge has a relational and holistic nature.
2. Conceptions are the central form of knowledge.
3. Scientific knowledge about conceptions (and generally) is not true but uncertain and more and less fruitful.
4. Descriptions are fundamental to scientific knowledge about conceptions (and generally).
5. Scientific knowledge about conceptions is based on exploration of delimitations and holistic meanings of objects as conceptualised.
6. Scientific knowledge about conceptions (and generally) is based on differentiation, abstraction, reduction and comparison of meaning. (p. 171)

Svensson's list of assumptions represents many of the beliefs that underline this thesis research. The notion that knowledge is uncertain is the basis for the higher order epistemological beliefs discussed in Chapter 3. And, it is through distance learners' descriptions of their conceptions of reflection that a reduced set of different beliefs can emerge and be compared to one another.

Trigwell (2000) incorporated these assumptions and represented them as points of departure (Figure 4.1). Here phenomenography is summarised as being non-dualist, meaning it assumes that the human mind and body do not operate as separate entities. It is a qualitative approach to research that seeks to understand the world through a second-order

perspective or, in other words, from the individual's perspective rather than the researcher's viewpoint. A phenomenographic approach to research aims to establish a set of ways that people understand particular phenomena. The variation and relations between these ways of thinking are of utmost interest.

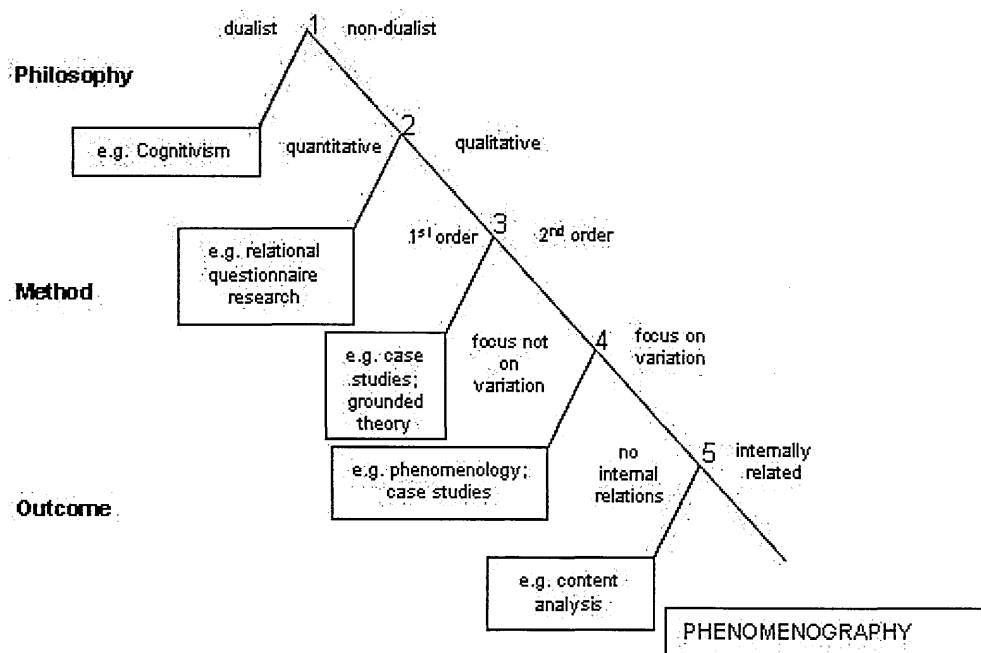


Figure 4.1: Points of departure in phenomenography (Trigwell, 2000, p.78)

This section outlined the chosen research approach for this thesis and described the tradition of phenomenography. The next section offers a rationale for adopting a phenomenographic approach.

4.6 Rationale for a phenomenographic approach

This section offers an explanation of why phenomenography was chosen as the research approach for this thesis based on:

- 1) the nature of the inquiry,
- 2) the unit of measurement, and
- 3) the practical significance of this research tradition.

4.6.1 Nature of the inquiry in phenomenography

Phenomenographic research investigates the qualitatively different ways in which people understand a particular phenomenon (Marton, 1986). One way in which this approach differs from previous research in learning is that ‘the point of departure in phenomenography is always relational’ (p. 33). This means that phenomenographers seek to gain a ‘second-order perspective’ (Marton 1981, p. 177) whereby their goal is to describe ‘an aspect of the world as it appears to the individual’ (Marton, 1986, p. 33). This is in contrast to a first-order perspective (based on the researcher’s ideas about the world), which Marton (1981) argued is still useful because both perspectives are ‘complementary’ (p. 177). However, Marton claimed that only by taking a second-order perspective would we be able to capture the ways people understand particular phenomena.

For this thesis research, a second-order viewpoint was needed in order to explore the ways in which students considered the idea of reflection and how they thought of themselves as reflective learners. Marton also referred to this as a ‘from the inside’ perspective (1981, p.

181). However, in phenomenography, the idea of learning is also relational—‘it takes place through an interaction between the student, the content of learning material, and the overall learning environment’ (Entwistle, 1997, p. 129). The ability to understand an individual’s ways of thinking about a learning phenomenon, such as reflection, would need to be based on descriptions of their own experiences with reflection.

4.6.2 Unit of measurement in phenomenography

The basic unit of measurement in phenomenographic research is a ‘conception’, or an individual’s way of understanding a particular aspect of reality (Sandberg, 1997, p. 203). In other phenomenographic studies, conceptions have also been referred to as ‘ways of conceptualising’, ‘ways of experiencing’, ‘ways of seeing’, and ‘ways of understanding’ (Marton & Pong, 2005, p. 336).

Marton (1981) explained that conceptions are not considered as separate entities but rather as categories of description ‘to be used in facilitating the grasp of concrete cases of human functioning’ (p. 177). In other words, categories of description come together within an outcome space as a collection of knowledge. Marton noted that this collection of knowledge is, ‘an evolutionary tool in continual development’ (p. 177). It is within this space that phenomenography seeks insight into how the categories relate to one another (Marton, 1986).

Indeed, illuminating and exploring the relationships between individuals' conceptions of a phenomenon is at the core of phenomenographic research.

It is a goal of phenomenography to discover the structural framework within such various categories of understanding exist. Such structure (a complex of categories of description) should prove useful in understanding other people's understandings. (Marton, 1986, p. 34)

This interest in conceptual differences, or variation, is explained by Marton (1986) as the prerequisite for 'discernment'. By way of example, Marton suggested that one cannot discern a noise if that noise is happening all the time. And, as Marton reasoned, there needs to be discernment before there is meaning.

Marton and Booth (1997) theorised that the structure within the categories of description and the meaning that is derived from discernment are 'dialectically intertwined and occur simultaneously when we experience something' (p. 87). Therefore, in order to experience something we need to be able to discern the 'something' from its context and to discern the parts of the 'something' within its context.

The studies contained in this thesis are motivated by the researcher's interest to know more about learners' conceptions of reflection. In basic terms, this is in line with the aims of phenomenographic research. However, it is not just the notions these learners' hold of these phenomena, rather it is the differences between, and perhaps within, these conceptions that is of interest. Moreover, this thesis seeks insight into the landscape of these different

categories of description within an outcome space. In the pursuit of mapping and interpreting these ways of thinking, a phenomenographic approach was the clear choice. The next section looks at the practical significance of phenomenographic research thereby adding another layer to the decision to adopt this particular approach.

4.6.3 Practical significance of phenomenographic research

Early phenomenographic research led to several important insights. One of these was that there is a small, finite set of qualitatively different ways that learners understand various phenomena. This is often considered the ‘cornerstone of phenomenographic research’ (Booth, 1997, p. 136). Another insight was that there are different ways that students go about the activity of learning.

Investigating the ‘what’ and the ‘how’ of learning is useful to practitioners (Marton & Booth, 1996). Booth (1997) suggested that phenomenographic research sheds light on the ways in which learners come to ‘see something in a certain way as a result of undertaking learning tasks that are met in educational settings’ (p. 136). It would be logical to assume that a method, such as phenomenography, that ‘so vividly portrays differing conceptualisations’ must be highly relevant to teaching and learning (Entwistle, 1997, p. 129). This notion echoed Marton’s (1981) reasoning that ‘the pedagogical potentiality and necessity of the field of knowledge to be formed’ is a clear factor for adopting a second-order perspective in research (p. 178). Learners’ reflections on their own experiences, as

elicited in phenomenographic research, are the type of information needed by educationalists.

Staff in higher education do not have a good appreciation of how teaching is affecting students...The interview extracts used [in phenomenographic research] to delimit the categories of description communicate these experiences in a very direct way through the differing perspectives found among students. (Booth, 1997, p. 129)

It is with some of these ideas in mind that pedagogical implications of phenomenographic research were considered as an argument for adopting a phenomenographic approach to this research. Trigwell and Richardson (2003) commented that phenomenography has greatly enriched the knowledge associated with teaching and learning in higher education. Early phenomenographic studies were focused on understanding learners in a learning environment. It seems reasonable to consider phenomenography for a study that attends to a similar basis. This approach to research is critical for practitioners in understanding the ways in which students conceptualise reflection and themselves as reflective learners.

To summarise, this section presented a case for adopting a particular qualitative approach: phenomenography. The central argument for choosing this approach was three-fold. First, phenomenography was considered based on the nature of the inquiry. The research questions in this thesis deal specifically with individuals' ways of thinking about a particular phenomenon—reflection. By seeking the learner's perspective, it was reasoned

that this research is characteristic of phenomenography. Second, it was proposed that this research should be approached in a phenomenographic manner since the unit of measurement is a conception. This research seeks to develop categories of description based on learners' conceptions of reflection. It also aims to identify the relationships between the different categories within an outcome space. By using a conception as the unit of measurement for this research, and by having research objectives such as these, this thesis adopts obvious features of a phenomenographic design. Third, the findings of phenomenographic research have important practical implications. This thesis elicits learners' conceptions of a learning phenomenon to gain a better understanding of teaching and learning in higher education.

4.7 The process of phenomenographic research

Bowden (2000) offered a framework for thinking about the process of phenomenographic research (see Table 4.2). He claimed that focus, validity and reliability were important to consider at all stages.

Table 4.2: Phenomenographic research processes

Plan	Purpose Strategies
Data Collection	From whom? Why? How? Relation to purposes
Analysis	How is it carried out? Who does it? (How many; expertise; roles?) Relation to purposes
Interpretation	Context of study Context of application When no longer phenomenography?

(adapted from Bowden, 2000, p. 7)

Broadly speaking, this thesis follows Bowden's suggested approach. Chapter 5 offers a discussion of the methods of data collection used in this thesis research, while Chapters 6 through 8 are reports on the analysis and findings from each of the three studies herein. Chapter 9 presents an interpretation and discussion of these findings within the larger context of higher education.

This thesis comprises three studies, each involving different groups of students. The aim was to capture input from learners on particular modules and, in doing so, delineate a finite

set of conceptions. A set of demographic characteristics were recorded from the participants when the samples were formed. These data were used to deepen the investigation.

The strategies for collecting participants' viewpoints involved asking open-ended questions in a variety of formats: face-to-face interviews, telephone interviews, email interviews, postal questionnaires and online questionnaires. These are discussed in more detail in the next chapter. This section addresses pertinent phenomenographic issues for collecting and analysing data for this thesis. As Bowden illustrated, it is important for phenomenographers to consider the research focus, validity and reliability at all stages of the research process.

4.7.1 Phenomenographic data collection

Interviewing is a primary means of data collection in phenomenography (Marton, 1986). Interview methodologies possess manifold issues in terms of data collection, some of which were outlined and discussed in Section 4.2 of this chapter. Generally speaking, the effect of the researcher on the interview, the relationship between the researcher and the participant, and the situated and constitutive nature of the interview should be considered when carrying out interviews. However, there are issues related specifically to carrying out phenomenographic interviews, which are discussed in this section. For this thesis, data were collected through interviews and open-ended questionnaires. Much of what applies to phenomenographic interviews is also relevant to written instruments. Particular aspects of these methods, however, are discussed in Chapter 5.

Data collection for this research involved capturing distance learners' ways of thinking about reflection. Although individuals' conceptions can emerge in different forms of action, the most available form is language (Svensson, 1997). These conceptions are not stored in a person's memory. Rather 'the meaning resides within the interconnections of remembered instances and has to be reconstituted in providing an explanation' (Entwistle, 1997, p. 127). Therefore, phenomenographic data collection requires methods of eliciting descriptions, stories and examples, usually in a narrative form.

The nature of the questioning is an important aspect to consider in phenomenographic research. Questions need to be open-ended so the individual can choose the 'dimensions of the question' they want to answer (Marton, 1986, p. 42). Marton explained that the dimensions the individual chooses to answer are a useful feature of the data because they expose an aspect of the person's 'relevance structure'. The questions need to be worded in a way that allows the researcher to probe the individual's understandings (Booth, 1997). Follow-up questions such as 'Could you explain that further?' or 'What do you mean by that?' encourage the participant to articulate their ideas as fully as possible (Bowden, 2000, p. 10).

The extent of questioning also needs to be considered. Åkerlind (2005) reflected on her own experiences of phenomenographic data collection in terms of knowing when to stop. In anecdotal terms, she referred to this threshold as an 'ah-ha' feeling. Or, in other words, a

point at which the researcher feels they have uncovered a hidden meaning within the participant's response.

There are several considerations to make when designing and carrying out phenomenographic interviews. Some of these deal with interview protocol but, as with any human encounter there are other practical aspects to consider. For this thesis, issues surrounding health and safety, human ethics, confidentiality, technology and the environment presented factors for consideration. Many of these issues are outlined in Chapter 5.

4.7.2 Phenomenographic data analysis

Analysis of phenomenographic data involves identifying a small set of 'qualitatively distinct descriptive categories', or conceptions (Booth, 1997, p. 138). The process was summarised by Marton (1994) as follows:

The interviews are transcribed verbatim and the analysis is carried out in an iterative manner on those transcripts. Distinctly different ways of experiencing the phenomenon discussed in the interview are the units of analysis and not the single individuals. The categories of description corresponding to those differing understandings and the logical relations that can be established between them constitute the main results of phenomenographic study. (p. 4424)

Booth (1997) described this process as requiring the researcher to 'immerse' themselves in the data, thereby 'knitting together as whole a picture of the meaning of the phenomenon as possible' before a set of categories comes into view (p. 138). This, Booth said, is achieved when a hierarchical structure between the categories can be identified, which may necessitate many analytical revolutions. Booth's description corroborated Marton's (1986) explanation that, when carrying out phenomenographic analysis, eventually there will be a 'decreasing rate of change' and the 'whole system of meanings is stabilized' (p. 43).

Marton and Pong (2005) explained how they analysed their data from a phenomenographic study of students' conceptions of price and trade using a 2-stage analytical model.

1st stage: focused on identifying and describing the conceptions in terms of their overall meanings. This was done by marking and segmenting the transcripts according to the themes addressed. A unit was formed whenever there was sufficient evidence that a particular overall meaning had been expressed.

2nd stage: focused on identifying the structural aspect of each conception expressed. The units, now denoted by the various overall meanings, were studied in detail, to identify within each unit the elements of the phenomenon that were focused upon, and to devise a description of each conception's structural aspect. In doing so, we paid attention to the explicit variations that the student brought in as they focused on a particular element, as well as the variations that were implied by that element. (p. 337)

The process of phenomenographic analysis is as Marton (1986) wrote: 'tedious, time-consuming, labor-intensive and interactive' (p. 43). And, as with any interpretive activity, there is a danger of misunderstanding and/or misrepresenting the data. Bowden's advice to remember the research focus, validity and reliability throughout the phenomenographic process is understandable (see Table 4.2). Sandberg (1997) reasoned that since replicability is the primary measure of reliability in mainstream qualitative research, the same could be true for phenomenographic studies.

Marton (1986) noted that there were two questions to consider when calling for replicability in phenomenographic research:

1. Would other researchers reach the same categories of description as the original researcher?
2. Would other researchers recognise the conceptions identified by the original researcher? (p. 35)

He argued that while replication could be helpful in the second instance, it was not relevant in the first. Another way he put it was: 'Would two botanists discover the same plants and species if they independently explored the same island?'. The question, he explained, had to do with discovery and a discovery does not need to be replicated. However, Marton also explained that it would be useful to reach a level of agreement as to their existence if others are going to use the findings.

Säljö (1988) proposed that 'interjudge reliability' would assist in this case because it measures the 'communicability of categories and thus gives the researcher information that someone else can see the same differences in the material as he or she has done' (p. 45). Sandberg (1997) criticised the use of interjudge reliability in phenomenographic analysis because, as a measure, this procedure is based on an objectivist epistemology. He argued that the epistemology of phenomenography (like phenomenology) assumes that 'as the researcher is a human being, he/she is always intentionally related to the research object' (p. 208). Therefore, it would be a 'fundamental mistake' to use another's interpretation of phenomenographic data as a measure of reliability (p. 208). [See Figure 5.1 in the next chapter for Bowden's (2005) model of phenomenographic relationality.]

Sandberg suggested 'interpretive awareness', deliberately acknowledging the researcher's subjectivity throughout the research process, as an alternative measure of reliability (pp. 209-210). He proposed the following set of interpretive guidelines for researchers doing phenomenographic analysis.

1. Orientate to the phenomenon as and how it appears throughout the research process. (Establish clear research questions.)
2. Orientate to describing what constitutes the experience under investigation, rather than attempting to explain why it appears as it does. (Do not generate descriptions that surpass the individuals' experience).
3. Treat all aspects of the lived experience under investigation as equally important (horizontalization).
4. Search for structural features (or the basic meaning structure, of the experience under investigation).
5. Use intentionality as a correlation rule to assist in explicating the variation in the conceptions identified. The intentional analysis consists of three separate steps:
 - a. identify what the individuals conceive as their reality;
 - b. identify how the individuals conceive that reality;
 - c. relate individuals' ways of conceiving to what they conceive as their reality. (Sandberg, 1997, p. 209)

Threats to validity in phenomenographic research rests primarily on what Åkerlind (2005) explained as being faithful and focused on the aims of the research.

Validity is widely regarded as the extent to which a study is seen as investigating what it aimed to investigate, or the degree to which the research findings actually reflect the phenomenon being studied. (p. 330)

Åkerlind's explanation summarises Sandberg's guidelines. Van Rossum and Hamer (2010) noted that in remaining aware of their own subjectivity, they had achieved reliability in their phenomenographic research. Their explanation of how they used interpretive awareness in their own studies echoed Åkerlind's quote.

The analysis stages of this thesis research involved each of Sandberg's points to some degree. The research questions were clearly set out in Chapters 2 and 3. The researcher was careful not to stretch the analysis to find what was not there. All data were considered important by the researcher and the analysis of conceptions, categories of description and variation between these was handled with care and rigour.

Furthermore, the researcher identified her a priori assumptions before the studies were carried out (see Chapter 5). These were referred to again at the conclusion of this monograph. By maintaining an awareness of these preconceived ideas, the researcher worked toward what Sandberg, Åkerlind and van Rossum and Hamer suggested as ways to achieve reliability and validity in phenomenographic analysis.

4.8 Chapter conclusions

This chapter provided a rationale for selecting a qualitative rather than quantitative approach to this thesis. A case for phenomenography has been put forward and the processes of data collection and analysis were discussed. The following points regarding

the choice to adopt a phenomenographic approach were important to take forward into the next stages of research.

1. A solid and constant focus on the research questions will not only guide the research activities but will assist in achieving a high level of validity.
2. Carefully planned interview and questionnaire protocol will elicit rich, descriptive accounts of the participants' experiences and ideas. These accounts will serve as corpora data from which to interpret underlying meanings.
3. A rigorous and iterative analysis of data will produce more meaningful categories of descriptions from which to consider variation and structure.

The next chapter will discuss the methods of data collection for the three studies contained in this thesis.

Chapter 5: Methods of data collection and analysis

5.1 Introduction

The previous chapter addressed the decision to adopt a phenomenographic approach to this thesis research. Chapter 5 continues the discussion of methodology but deals more specifically with sources of data and with methods of data collection used in the studies herein.

There are three phenomenographic studies contained in this thesis. Each study investigates distance learners' conceptions of reflection in higher education using different research designs and methods. The first study used an open-ended, self-administered questionnaire that was distributed by post. The second study involved a series of face-to-face, telephone and email interviews. The third study employed a two-stage open-ended online questionnaire. Each of these studies involved particular groups of distance learners on higher education modules. Table 5.1 summarises these methods by study.

Table 5.1: Methods of data collection by study

Study	Methods used	Reported in
Study 1: Distance learners' conceptions of reflection in higher education	Open-ended postal questionnaire	Chapter 6
Study 2: A longitudinal perspective of distance learners' conceptions of reflection in level 1 undergraduate study	Face-to-face interviews Telephone interviews Email interviews	Chapter 7
Study 3: Distance learners' conceptions of reflection in postgraduate study	Open-ended online questionnaire	Chapter 8

First, this chapter discusses interviewing as a means of collecting data in phenomenographic research. Second, this chapter outlines other methods employed in this thesis. Third, an overview of phenomenographic analysis is presented. Finally, this chapter discusses ethical considerations for working with human participants.

5.2 Interviewing

The interview is possibly the most widely used method in qualitative research (Mason, 2002) and is the primary method for data collection in phenomenographic studies (Trigwell, 2000). The decision to use individual interviews should be based 'on sound ontological and epistemological principles' and linked to a set of robust research questions (Mason, 2002, p. 83).

The researcher's own epistemological position is probably best described as a 'contextual knower' (Baxter Magolda, 1996, p. 284). As outlined in Chapter 3, this means the researcher believes that knowledge is uncertain and problems should be considered in relation to their context. Additionally, as a mature student, the researcher also identifies with Cleave-Hogg's (1996) epistemological 'commitments'. In this sense, the researcher is aware that her beliefs are influenced by her commitment to personal development and social values. It also means that the researcher is conscious of her own biography and how this has affected her ways of knowing. However, when deciding to use interviewing as one of the data collection methods for this thesis, certain other assumptions were made.

First, an ontological assumption was made that people's views and experiences were important aspects of their 'life world' (Kvale, 2007, p. 11). Indeed, phenomenographic research aims to identify the 'qualitatively different ways in which people experience, conceptualise, perceive and understand various aspects of, and phenomena in, the world around them' (Marton, 1986, p. 31). In this study, interviewing offered an opportunity to collect distance learners' notions of reflection in the social world and to analyse these ideas for 'distinctly different ways of experiencing' reflection in distance higher education (Trigwell, 2007, p. 78).

Second, an epistemological assumption was made that, in order to acquire a particular intensity within the data, a method was required to elicit rounded, descriptive input from

participants. Data collection in phenomenographic studies is usually conducted in an 'explorative' manner (Svensson, 1997, p. 169).

For instance in an interview this means that it is not necessarily explorative in the sense of asking and talking about a lot of different things forming part of the experience of an interviewee. The interview becomes focussed on specific parts of the interview expressing conceptions of objects or phenomena and the exploration concerns the interviewees' delimitation and experienced meaning of these objects. (p. 169)

This exploration is largely accomplished by encouraging the participant to 'reflect on previously unthematized aspects of the phenomenon in question' (Trigwell, 2000, p. 77) and to describe feelings, experiences and particular actions (Kvale, 2007). Interviews, as a tool for data collection, provided scope to gather rich, descriptive data from some of the participants in this thesis research.

Third, the choice to use interviewing as one of the methods for data collection was based on the epistemological assumption that interview discourse is constitutive and contextual. Data, in this view is not merely collected; it is 'generated' (Mason, 2002, p. 32). Meaning is developed through the interaction between the interviewer and the interviewee (Kvale, 2007). In phenomenography, this is done in a relational way, acknowledging the inter-relationships between the researcher, the participant and the phenomenon (Bowden, 2005). The non-dualist nature of phenomenography means that 'reality is not seen as being "out

there”’, rather it is created through these inter-relationships (Trigwell, 2000, p. 79). A point of interest in this thesis was the ability of interviews—as social, discursive events—to uncover underlying meanings of reflection.

While these assumptions helped to make the decision to use interviews as one method of data collection for this research, Mason (2002) warned that the decision to use individual interviews should not be made lightly. For interviewees to open a door to their own life-world, they need to be able to articulate their ideas in a way that is meaningful between themselves and the interviewer. The less articulate participant may create a challenging interview scenario for the researcher and may offer impoverished data to the project (Creswell, 1998).

There are other difficulties in relying on participants’ accounts to illuminate our understandings of worlds. Säljö (1997, p. 178) cautioned researchers against relying on discourse for ‘indicating a way of experiencing’; rather he noted that in talking, humans are attempting to achieve something. The constitutive feature of discourse means that the interviewer plays a significant role in the development of meaning within the interview event.

The consequence is that the data produced by interviews are social constructs, created by the self-presentation of the respondent and whatever interactional cues have been given off by the interviewer about the acceptability or otherwise of the accounts being presented. (Dingwall, 1997, p. 59)

The phenomenographic interview creates a complex situation whereby the researcher and the participants have a relationship, not only with each other, but also with the phenomenon. Bowden (2005, p. 13) termed this ‘phenomenographic relationality’. The object of study in phenomenography is the relationship between the participants and the phenomenon, as depicted in Figure 5.1. An interview scenario may cloud and distort this view with the other relationships involved.

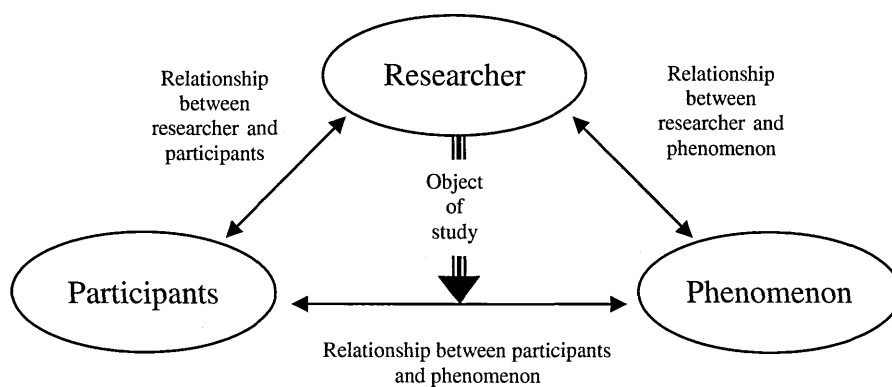


Figure 5.1: Phenomenographic relationality (adapted from Bowden, 2005, p. 13)

Despite these issues surrounding the use of interviews as a method of data collection, there are ways of reducing the threats they pose. Phenomenography attempts to ‘maximise the variation in ways of seeing’ different phenomena (Green, 2005, p. 35). For this reason, it may be helpful to have participants with a range of experiences, which may also mean a range of abilities in articulating their ideas. Willig (2007) noted that seemingly articulate participants can sometimes offer overly elaborate responses that hold little value, whereas there is sometimes something of value in the raw data collected from the less well-spoken interviewee.

Issues related to the construction of reality that occurs in the meaning-making between the interview and the interviewee can be hedged in several ways. First, a ‘purposeful selection of participants’ can offer a more strategic sample for data collection (Creswell, 1998, p. 118). Second, the ‘bracketing’ of the researcher’s own beliefs can help to maintain a focus on the participants’ relationships with the phenomenon in question during the interview event (Ashworth, 1996, p. 11; Sandberg, 1997). Third, a rigorous approach to the interview process can create awareness of potential threats to validity and reliability (Green, 2005). These three topics—sampling, bracketing and the interview process—are discussed in the following sections.

5.3 Sampling

Creswell (1998) explained that interview participants in phenomenological research need to be individuals who have ‘experienced the same phenomenon’ being investigated in the

research and who can 'articulate their conscious experiences' (p. 111). The same could be argued for recruiting participants for phenomenographic studies, since ideally they would have had experiences with the phenomenon under study and would be able to express themselves in a meaningful way. Selecting and recruiting these participants from a larger population are critical tasks in a qualitative research project (Mason, 2002). The fact that participants will be chosen from a 'wider universe' implies there were others who were not chosen. Therefore, it is imperative for researchers to provide a rationale for how they went about sampling (p. 122).

A number of sampling strategies exist to rationalise the ways in which participants are selected in qualitative studies. Table 5.2 summarises some of the strategies that were considered for this thesis research.

Table 5.2: Summary of qualitative sampling strategies

Sampling strategies	Descriptions
Maximum variation	Documents diverse variations and identifies important common patterns
Confirming and disconfirming cases	Elaborates on initial analysis, seeks exceptions, looks for variation
Theory-based	Finds examples of a theoretical construct and thereby elaborates on and examines it
Extreme or deviant cases	Learns from highly unusual manifestations of the phenomenon of interest
Typical case	Highlights what is normal or average
Intensity	Information-rich cases that manifest the phenomenon intensely but not extremely
Stratified purposeful	Illustrates subgroups and facilitates comparisons
Random purposeful	Adds credibility to sample when potential purposeful sample is too large
Criterion	All cases meet some criterion
Combination or mixed	Triangulates, is flexible and meets multiple interests or needs

(adapted from Creswell, 1998, pp. 119)

For this project, it was decided that a ‘combination’ strategy would be most useful. More specifically, the combination would be a blend of ‘maximum variation’ and ‘criterion’

strategies. It was felt that this pairing would promote a fertile sample for generating a variety of conceptions from distance learners, as Green (2005) suggested. The 'criterion' strategy would harness a sub-group of the population who have likely experienced the same phenomenon: reflection (cf. Creswell, 1998). Arguably, other strategies could have been adopted for different studies contained herein. Most obviously, those dealing with specific 'cases' and 'theory-based' would have been relevant in testing different groups against a theoretical model. However, this was not the rationale used when recruiting research participants for this thesis.

Relatively speaking, qualitative research employs smaller numbers of respondents than quantitative research. Miles and Huberman (2004) noted that between 20 and 30 participants offer 'sufficient variation' in qualitative studies (p. 28). These sample sizes would also offer manageable data sets for phenomenographers. For phenomenographic research, the sample size is typically small (e.g. $N=30$) (Trigwell & Richardson, 2003, p. 41), although there are examples of studies using a variety of sample sizes. In what would later be described as phenomenographic research, Säljö (1979a, 1979b) carried out interviews with 90 participants and Watkins and Regmi (1992) analysed written data from 333 university students in their phenomenographic study.

Regardless of the sample size, the qualitative researcher needs to consider direct implications for 'whether and how generalisation is consequently possible' (Mason, 2002, p. 120). Phenomenographic research is concerned with understanding the 'qualitative

variation in the ways a group of people experience a phenomenon' (Trigwell, 2000, p. 76). So, although it is useful for phenomenographic research to yield findings that are generalisable to other groups, its first priority is to investigate differences between conceptions of a particular group. This thesis research focused on obtaining a range of input from participants who met certain criteria (i.e. belonged to a particular group).

Ultimately, the primary question is whether the sample is large and diverse enough to address the project's research questions without being so big that it becomes 'diffuse' (Mason, 2002, p. 136). Miles and Huberman (2004) suggested that sampling in qualitative research requires two actions that often create tension: first, to set boundaries for the study and second, to create a frame through which to analyse the data. This allows the researcher to sample 'within and across cases' and to keep the project linked directly to the research questions (p. 27). This project involved three different samples, each containing between 12 and 50 distance learners. This number was large enough for the researcher to discover different conceptions within each group, yet manageable enough to work with the data and to compare conceptions within the outcome spaces.

Sample attrition occurs when members of the sample decide not to participate in a study (Sapsford, 2007). There may also be instances where it is not possible to use input from a participant, such as an unintelligible interview recording. In studies that are carried out in waves, people may 'lose patience with the survey' and drop out (p. 93). For this project, there was a significant drop out rate in the second study. As explained in Chapter 7, the

second study involved longitudinal panel data, meaning it measured the same sample 'two or more times'. Although this method is helpful in determining net change and in investigating the source of change, these studies typically suffer from attrition (Wiersma & Jurs, 2005, p. 161).

Thomas (2004) suggested that it is a good idea to keep a record of those who choose not to take part in the study. This could offer insight into the representativeness of the sample by 'estimating the likely biases in the sampling' (Sapsford, 2007, p. 94). However, for this study, contact information was only provided (to the researcher) for those who consented to participate in the sample. This was done in compliance with the University's policies on the use of student data. Attrition for each of the studies in this thesis is addressed in greater detail later in the thesis.

5.4 Bracketing

Bracketing is a concept rooted in the tradition of phenomenology. As noted in Chapter 4, phenomenology is a field of research that is commonly attributed to Edmund Husserl (1921/1970). According to Tufford and Newman (2012), Husserl's book, *Ideas* (1913/1931), proposed the notion of '*das unmittelbare Sehen* or direct seeing' as the core activity to 'understanding the lived experience' (Tufford & Newman, 2012, p. 82). Gearing (2004) summarised Husserl's concept of direct seeing:

Essentially, to know is to see, and to see is to look beyond constructions, preconceptions, and assumptions (our natural attitude) to the essences of the experience being investigated. (p. 1430)

Bracketing became known as one term for ‘the process of tapping this essence of experience and looking beyond preconceptions’ (Tufford & Newman, 2010, p. 82). Starks and Trinidad (2007) explained that:

In phenomenology and grounded theory researchers engage in the self-reflective process of bracketing, whereby they recognize and set aside (but do not abandon) their a priori knowledge and assumptions, with the analytic goal of attending to the participants’ accounts with an open mind. (p. 1376)

As previously mentioned, a challenge of phenomenographic interviewing is to allow the ‘life-world’ of the participant to ‘emerge in clarity’ so that a particular aspect of that world can be investigated (Ashworth, 1996, p. 11). Bracketing allows researchers to recognise and set aside their own presuppositions and assumptions (Stark & Trinidad, 2007; Willig, 2007) so that the focus can rest on the relationship between the interviewee and the phenomenon under study (Bowden, 2005).

Bracketing, in practice, is not an altogether foreign activity. Dukes (1984) explained that bracketing happens frequently and naturally in our daily lives.

This is something human beings do all the time and take for granted. Were I to write to a friend about the loss of my dog, my friend would not ask me what kind of dog he was, how much money he was worth, what color he was, whether or not he was a good watchdog. My friend would consider all such factual particulars irrelevant, beside the point, and would immediately grasp the point—the nature of grief...Similarly, when we read a book or watch a play, we automatically bracket out the merely contingent, accidental factual particulars. We are not bothered by such considerations as how much sleep Othello got last night, or what he ate for breakfast, or even what his early relationship to his mother was like. We do not consider those facts as relevant to the action at hand, or as possible causes of Othello's current mental state. The point of the play is, rather, the structural necessity of a kind of experience—the tragically self-reinforcing nature of jealousy. (p. 199)

Tufford and Newman (2010) proposed that bracketing plays a role in all forms of qualitative research. Their model (Figure 5.2) provides a useful way of considering the pervasiveness of bracketing in all facets of phenomenographic research as well.

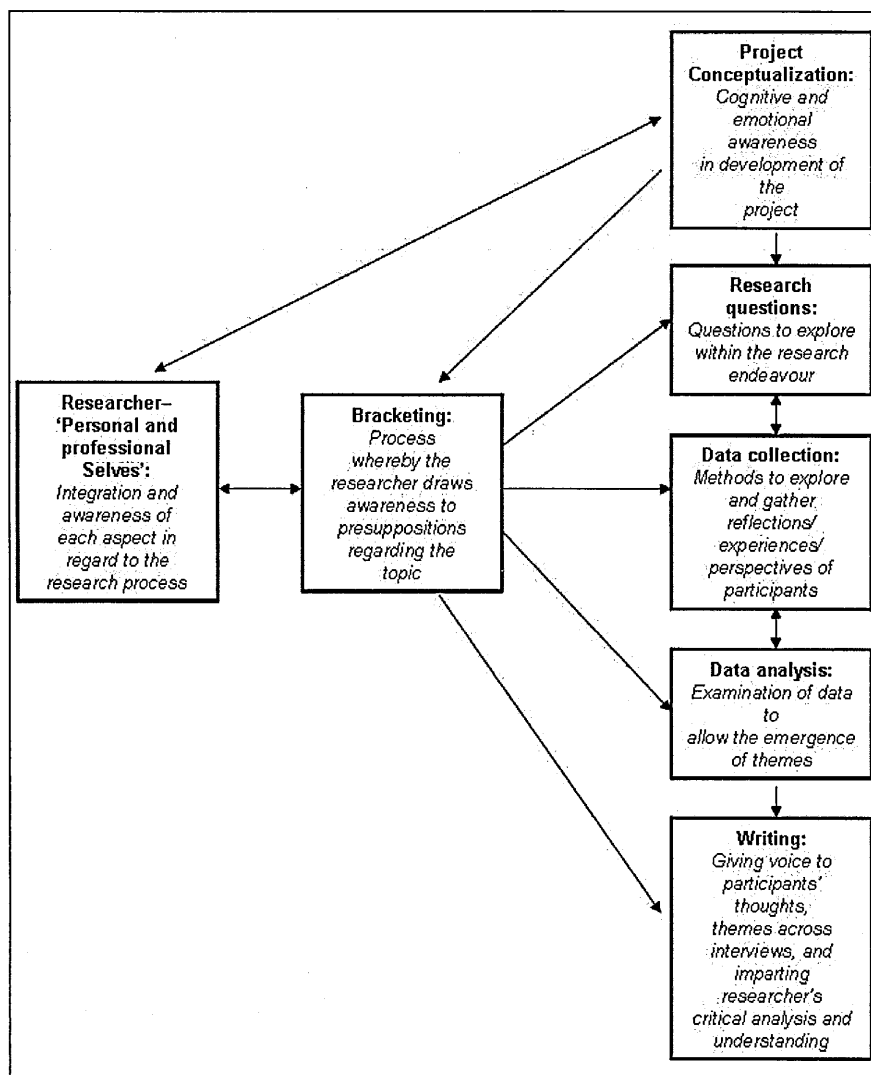


Figure 5.2: The integration of bracketing into qualitative methodology (adapted from Tufford & Newman, 2012, p. 88)

Viewing the process of bracketing in this way, one can see how intertwined the researcher’s self and the researcher’s conceptualisation of the project are with the activity of bracketing. The bracketing process then affects the formulation of research questions, the methods of data collection and analysis, and finally, the writing up of the research findings.

In order to bracket the researcher's own ideas for this thesis, a set of a priori assumptions were acknowledged regarding the interviewees' life-worlds (Sandberg, 1997), their relationships to the phenomenon of reflection and the researcher's own relationship with reflection. Table 5.3 outlines this researcher's assumptions, which are organised according to Bowden's (2005) dimensions of relationality to show how these were considered for each relationship.

Table 5.3: This researcher's a priori assumptions for bracketing

Relational dimension (Bowden, 2005)	A priori assumptions
Relationship between researcher and phenomenon (reflection)	<ul style="list-style-type: none"> • Reflection is a multi-faceted activity people use to make sense of their own journeys through life. • Reflection is a necessary tool for personal development. • Reflection is a meta-cognitive process that assists in the 'enrichment' or 'revision' of existing mental models (see, e.g. Vosniadou, 1994, p. 46). • Reflection is critical in problem-solving and in collaboration with others. • Reflection can manifest in (and be prompted by) a variety of forms and methods. • Reflection is a significant aspect of the researcher's own practice as a tutor and as a member of society. • The researcher believes reflective methods can be taught and doing so would improve society as a whole. • The researcher sees enforced reflection as often time-consuming but believes practice can make this a more efficient and built-in activity.
Relationship between interviewer and participant	<ul style="list-style-type: none"> • The researcher discloses herself to be a student at the same organisation as the participants in the belief that there is a general sense of membership that is shared between the two people. • The researcher is aware that the participant may see a student in a postgraduate position as academically more advanced. The researcher believes this could result in participants deferring to the researcher's ideas, asking for approval and/or advice, or possibly interrogating the researcher.
Relationship between participant and phenomenon (reflection)	<ul style="list-style-type: none"> • The researcher believes the participant has some understanding of what reflection means. • The researcher believes that some of the participants can probably consider reflection in terms of their own learning. • The researcher assumes that the participant does not have an overly developed personal definition of reflection. • The researcher believes that the participants have already experienced reflective activities in their university modules. However, the researcher assumes that some of the participants will not fully understand why they are being asked to carry out reflective tasks.

Attention to bracketing was critical for this thesis research. Chapters 6 through 8 report on the research carried out for each of the three studies. Throughout the stages of planning, data collection and analysis, and writing up, the researcher was keenly aware of her own a priori assumptions. Working in this way, the researcher hoped to achieve reliability through interpretative awareness (see Chapter 4) and to be faithful to the tradition of phenomenographic research.

5.5 The interview process

Bowden (2005) suggested that issues surrounding relationality in phenomenographic interviews exist at various stages of the interviewing process. These can be dealt with by following a set of methodological processes.

1. Devise an interview schedule about a chosen phenomenon.
2. Invite each participant individually to comment in various ways about the phenomenon.
3. Encourage full disclosure by each participant of their ideas about the phenomenon by using various interview techniques.
4. Record the interview.
5. Analyse the transcripts as a group so as to map out a limited number of categories of description.

(adapted from Bowden, 2005, pp. 13-14)

Bowden explained that the avoidance of any unplanned inputs during this process was important in order to keep the focus on the phenomenon. Green’s (2005) advice corroborated Bowden’s list of methodological processes. She reflected that the rigour of her own phenomenographic research included systematic strategies to ‘avoid as much as possible unplanned researcher impact’, striving for ‘consistency’ in data collection and analysis (p. 45). This section covers the interview process by discussing two aspects—interview design and data processing.

5.5.1 Interview design

Mason (2002) offered a diagrammatic representation for a system of planning and carrying out interviews (Figure 5.3).

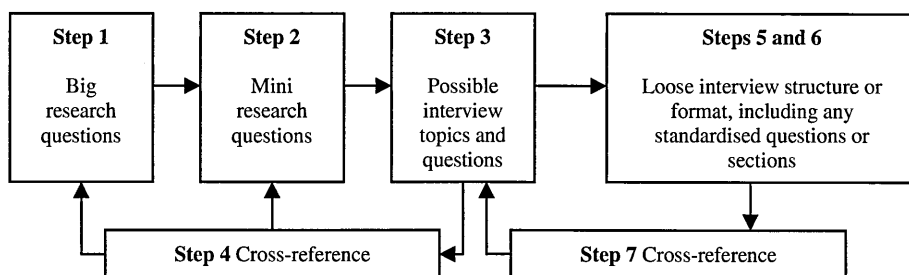


Figure 5.3: Overview of the planning and preparation procedure for qualitative interviews (adapted from Mason, 2002, p. 72)

Steps one to three address the translation of research questions to interview topics. Some may refer to this as developing an 'interview guide' (Kvale, 2007, p. 58) or an 'interview protocol' (Mason, 2002, p. 69). In any case, the content and order of the questions are very important to consider in phenomenographic research.

Phenomenographic interviews are semi-structured, with the researcher clearly setting the interview topic(s) through the use of a number of set questions, but then making substantial use of unstructured follow up questions to further investigate interviewees' responses to questions.
(Åkerlind, Bowden & Green, 2005, p. 80)

Here, there is a distinction between semi-structured and unstructured interview designs. This implies that a 'structured' design also exists. Indeed, Fontana and Frey (2005) noted that in structured interviewing all participants are asked the set questions in the same way; there is 'little room for variation' aside from the rare use of an open-ended question (pp. 701-702). The 'unstructured' interview, on the other hand, includes open-ended questions that are not necessarily asked in any particular order, or with any degree of consistency. The depth that is sought in an unstructured interview is usually derived from a thematic conversation between the interviewer and the participant. However, the label 'unstructured' is misleading. The themes of the interview still provide a framework for questioning. This misnomer has led some to adopt the term 'semi-structured' when discussing flexible interview protocol (Mason, 2002, p. 62).

Åkerlind (2005b) suggested there are three main types of questions in phenomenographic interviews.

1. Contextual questions: to set the scene
2. Primary questions: open questions about the meaning of the phenomena for participants (e.g. What does reflection mean to you?) and asks for 'situated' examples (e.g. Can you give me an example of when you used reflection to solve a problem?).
3. Unstructured follow-up questions: to encourage further elaboration or to check meaning. (p. 106)

The unstructured follow-up questions offer the phenomenographers an important opportunity to elicit the 'why' rather than the 'what' of the interviewee's conceptions of a phenomenon (Åkerlind, 2005a, p. 65).

Other factors need to be considered alongside the development of the interview protocol. For example, it is important to have clear entrance and exit strategies so the interview gets off to a smooth start and finishes in an appropriate way. King (1996) explained that the introductory section of the interview should be 'relatively short and unambiguous' and that it is important to give time for interviewees to ask questions. This can provide a greater understanding of the nature and purpose of the interview (p. 179).

In terms of ending an interview, Kvale (2007) noted that this might be difficult if the interviewees want to carry on exploring 'the insights in their life world brought about by

the interview' (p. 14). For this reason the purpose of the interviews carried out for this thesis was explained in advance and the interviewees were often supplied with the interview protocol before the session took place. This provided the participants with an idea of what the beginning, middle and end of the interview would be like. The interview protocol for the initial study was piloted with a separate group of learners to test the ways in which the interviewees may respond to certain questions. Bowden (2005) advised that it is important to carry out pilot interviews before interviewing your actual sample. This helped to refine the wording and order of the questions that were asked in the real interviews. Chapter 6 describes the pilot study in greater depth.

5.5.2 Data storage and processing

Effective storage and retrieval of data is an important objective of research (Creswell, 1998). Typically speaking, phenomenographic interviews are recorded and then transcribed. The transcripts, therefore, serve as the focus of the data analysis (Åkerlind 2005c). For this thesis research, interview data was stored as transcripts, either from recordings or from email correspondence.

Specific methods of data storage will be discussed in later chapters however the use of transcripts for data analysis raised particular issues regarding validity and reliability. Mason (2002) warned against assuming interview transcripts were objective records. In order to provide a faithful account of the interview, it is also important to record 'observations,

interpretations and experiences of the interview' (p. 77). These records can then be used alongside the transcripts to inform the analysis stages of research.

Kvale (2007) suggested that there is no way of creating an objective written account of an oral transaction. And, although two or more people could transcribe the same recording in order to assess inter-judge reliability, the work involved would be complex and time-consuming. (Other reasons for not using inter-judge reliability as a measure of validity were presented in Chapter 4.) Rather, Kvale argued, a more helpful way of approaching this issue is to ask: 'What is a useful transcription for my research purposes?' (p. 98).

5.6 Other methods of data collection

Interviews are relatively new methods of data collection. Only recently have people's accounts and experiences been regarded as sources of knowledge. People were not always so willing to share their thoughts and ideas as openly as they are today (Gubrium & Holstein, 2001). Nowadays, the interview is 'part and parcel of our society and culture (p. 11). However, the use of interviews as a method of data collection is problematic when compared to other research methods.

Mason (2002) suggested that an interview can be viewed as a 'conversation with a purpose' (p. 74). Yet, this point of view is in conflict with Bowden's (2005) suggestion that phenomenographic researchers should avoid any unplanned input during the interview

process. How can a conversation, which is widely accepted as a dialogue between two people, be controlled so that nothing unplanned occurs?

Also, Dingwall (1997) referred to an interview as a 'deliberately created opportunity' to satisfy a researcher's needs for data about a particular topic. In this view, the interview is a social construct whereby the participants are put under pressure to offer an 'adequate performance' (pp. 58-59). Earlier literature proposed that participant observation is superior to interviewing (cf. Becker & Geer, 1970). This was not suggested as a way to avoid the pressure described much later by Dingwall, but because it provided 'a rich experiential context' in which researchers can observe and make connections with greater relevance to the topic of study (Becker & Geer, 1970, pp. 142-143).

Participant observation was not relevant for this thesis research because it was not practical to observe distance learners in study environments. Not only are distance learners fairly autonomous in their learning but also they are geographically distributed. Furthermore, a phenomenographic approach to research, as chosen for this thesis, is not typically characterised by methods of observation. In response to claims such as Dingwall's—that participants are merely acting during the interview process—there is a view that since interview talk is social action it is not necessarily an impoverished substitute for unobserved social activity (Atkinson & Coffey, 2001).

Indeed, there are different ways in which an interview can be carried out and different reasons for doing so (Kvale, 2007). For example, face-to-face interviews may capture higher response rates and could better deal with complex and sensitive issues than other types of interviews (Shuy, 2001). Telephone interviews allow researchers to have access to participants they may not normally be able to reach (Creswell, 1998). For this thesis research, much consideration was given to the best interview mode for each of the three studies. In addition to face-to-face interviews, this thesis used telephone interviews, email interviews and self-completed questionnaires (both postal and online) as ways to collect data from participants. The rest of this section discusses each of these modes of interviewing research participants.

5.6.1 Telephone interviewing

Shuy (2001) noted that there were several advantages to telephone interviewing. These include:

1. reduced interviewer effects
2. better interviewer uniformity in delivery
3. greater standardization of questions
4. researcher safety
5. greater cost-efficiency and fast results

(p. 540)

Disadvantages to carrying out interviews over the telephone could be that they seem more formal and have a higher refusal rate than face-to-face interviews (Sapsford, 2007). In order

to address the problems associated with formality, the researcher referred to Lavrakas's (1993) tips for helping interviewees relax when collecting telephone interview data.

I recommend that the introductory spiel contain enough information to reduce as much as possible any nervousness on the part of the person answering the telephone who hears that a stranger is calling to conduct a telephone survey.

(p. 101)

Also, for this research, telephone interviews were prearranged with the participants. In this way, the potential intrusiveness of the telephone call was reduced and the likelihood of someone refusing to take the call was minimal (since they had already consented to participate in the study).

Other criteria for choosing between telephone interviews and face-to-face interviews were summarised by Shuy (2001).

1. the type of interview to be carried out
2. the type of information sought
3. the attitudinal variability, safety and workload of the interviewers
4. the need for consistency and/or uniformity among multiple interviews
5. the social variability of the individual participants
6. the need for contextual naturalness of response and setting
7. the need to let participants generate responses with little or no influence from the questions
8. the complexity of the issues and questions
9. the economic, time and location constraints of the project (pp. 538-539)

Several of these criteria were deciding factors in using telephone interviews for one of the studies in this thesis. The workload was lessened by using this method rather than by travelling to meet a geographically dispersed sample (criteria 3 and 9). Safety was heightened since the interviews were done in designated offices rather than in public meetings spaces or in participants' homes, as might have been the case with face-to-face interviews (criterion 3). Telephone interviews allowed a wide range of participants to be involved in the study. This enhanced the social variability of the study (criterion 5). The interview protocol for the telephone interviews in this thesis was fairly structured, which made the telephonic mode desirable as well (Fontana & Frey, 2005).

5.6.2 *Email interviews*

Using the internet to collect data from individuals can be more economical, farther reaching, more inclusive and more efficient in terms of data storage and processing than other forms of qualitative data collection (Bryman, 2004). For Study 2 of this thesis, email interviews offered an asynchronous method of collecting data at several points over a period of time. Debenham (2007) termed this method an 'epistolary interview' and corroborated the same benefits proposed by Bryman. Price, Jelfs and Ferguson (2013) however, asserted that email interviewing can also 'democratise relations in the interview process' since a friendly rapport and ongoing disclosure can develop over time (p. 20).

While these advantages posed key factors for deciding to use email as a way to collect data, the researcher was keenly aware of the potential problems of this method. Kivits (2006) noted:

When conducting an email interview over an extended period of time, the principal challenge that the online interviewer faces is to preserve the respondent's interest in the research. (p. 44)

Issues associated with asynchronous communications such as delays in response, failure to respond and attrition were also considered when making the decision to use email interviews (Bryman, 2004; Kivits, 2006).

However, for Study 2 of this thesis, it was both realistic and somewhat necessary to use email interviewing. The participants were geographically distributed and, since they needed

to be accessed multiple times over the research period, email was one of the only ways to engage in an ongoing, convenient relationship. Price et al. (2013), who also carried out research with distance learners at the UK's Open University, noted that 'online communication is part of most students' daily interactions with the University' (p. 9). Email interviewing was seen as an expedient way for distance learners to participate in this thesis research because students—particularly distance learners—are accustomed to using online communications.

Chapter 4 discussed 'social desirability' as a potential threat to qualitative research. Joinson (2006) suggested that online research methods could reduce this threat:

By reducing the presence of the other—either by replacing them with a computer, or by increasing the distance—we should simultaneously reduce self-protection motivation, and increase candour. (p. 34)

It was hoped that by using email interviewing this research would benefit from fuller disclosure from its participants.

5.6.3 Self-completed questionnaires

Although the interview is the standard and possibly the 'richest source of data', it is a common fallacy that phenomenographic research is always based on this method of data collection (Åkerlind, 2005b, p. 67). Sapsford (2007) listed a set of factors for deciding whether a self-completed questionnaire could be used instead of an interviewer.

You may need an interviewer if:

- The questions are complex and/or difficult to understand
- If you want to ask questions in an indirect way
- If you want to follow-up on some attitude or behaviour without alerting the informant to your interest in them
- If they are very young or frail
- If they are illiterate or do not have as first language the language in which the questionnaire is written, or if it is important that there be no bias in responses due to working-class people's lower fluency in writing (p. 109)

Sapsford also noted that benefits to using self-completed questionnaires include a cost saving in terms of the researcher's time. While the use of self-completed questionnaires may offer a cost-savings in this respect, the absence of the interviewer means there is a loss of control over the 'amount of quality of attention that the respondent will give it' (p. 122).

Self-completed questionnaires were used in Studies 1 and 3 of this thesis. Not only were the benefits outlined above seen as factors for choosing this method, but also questionnaires offered a standardised data collection instrument. This meant that the questions were asked in the same way and in the same order to each participant (Sapsford, 2007). The responses, as a result, were focused and manageable to work with, a feature of questionnaire data that was helpful to a new researcher.

Using written comments enabled me to come to terms with the aims and processes of phenomenographic research without simultaneously having to come to terms with the sheer amount of data involved in analysing interviews. It is a method I recommend to novice researchers. (Åkerlind, 2005b, p. 67)

The questionnaires used in these studies were distributed by post and online. In Study 1, the questionnaire was disseminated by way of post. While most distance learners are accustomed to using online communications and are therefore able to cope with an online questionnaire, the random sampling of Study 1 (any student enrolled on any module) offered the possibility of capturing students who were novices to distance learning. And, since some of the University's level 1 modules do not require online communications (rather communication is done by way of post), it was seen as a mistake to assume all members of the sample would be able to complete an online questionnaire. Indeed, familiarity with computers and the internet is an important factor in deciding whether to administer a paper-based or web-based questionnaire (Brennan & Williams, 2004).

In deciding to use postal questionnaires, there was a loss of control in the order the questions were completed (Frey & Oishi, 1995). An online questionnaire, for example, can present one question at a time.

The questions can also be programmed so that only one question ever appears on the screen or so that the respondent can scroll down and look at all the question in advance. (Bryman, 2004, p. 481)

Thomas (2004) suggested that paper-based questionnaires take longer to send, receive and collate than do online questionnaires. However, for Study 1, the disadvantages of postal questionnaires did not outweigh the risk that some participants would not have access to or knowledge of the internet (Bryman, 2004; Couper, 2008).

Study 3 presented a different scenario. In this study, all of the participants were enrolled on a particular online module. The researcher assumed, in this case, that the participants would be able to access and complete an online questionnaire. The difference between an online questionnaire and an email interview is explained by Thomas (2004).

Email questionnaires are contained within an email. Email invitations link to a URL (or Web address). Questionnaires invite the participant to respond to the questionnaire by either clicking on an embedded URL or copying and pasting the URL into their Web browser. The participant responds to the questionnaire on the Web. (Thomas, 2004, p. 15)

Although online questionnaires are considered an 'expanding technology' (Sapsford, 2007, p. 111) and offer 'the promise of faster and cheaper data collection' (Couper, 2008, p. 1), there are still a number of disadvantages to consider. Apart from the aforementioned problem that not everyone has access to the internet, online questionnaires can be treated as

junk mail by potential participants, can raise issues of confidentiality and can fail to appeal visually to the recipient (Bryman, 2004).

Internet access was not considered to be a problem because most Open University students are expected to have access to the internet for their studies (as discussed previously). However, it was necessary for the researcher to counteract the risks associated with participants dismissing the questionnaire as junk mail or worrying about how the data would be used. First, the participants were contacted in advance with an email invitation letter. The letter explained the research project and offered reasons why their input would be valuable to the project. Issues surrounding data protection, confidentiality and other ethical concerns were addressed in this email and in the online consent form (see Brennan & Williams, 2004, p. 40).

Although the researcher was a fellow University student, she was still a stranger to the students sampled for these studies. Therefore, the email invitation letter also included a letter of support from her lead research supervisor to add further credibility to the project (see Frey & Oishi, 1995, p. 52). Bryman (2004) suggested that one of the main problems of online questionnaires is that the 'researcher will either have to be highly sophisticated in the use of HTML' or will need access to a specially designed software package (p. 481). In fact, neither of these was necessary as the researcher was able to enlist support from the University's Survey Office to design and administer the online questionnaire.

In summary, this section discussed the other methods of data collection, apart from interviewing, that were used in this thesis research. Each method offered advantages while, at the same time, brought possible disadvantages to the project. Careful consideration was required when making the decision to use these particular methods for data collection. On reflection, these methods were good choices for the studies contained in this thesis, although as discussed later in the thesis (Chapter 9), there were probably ways to maximise the power of some of these techniques. Nonetheless, this combination of methods provided a rich source of data from the participants in these studies. The next section of this chapter outlines some of the guiding principles that were used in interpreting these data.

5.7 Data analysis

Each of the studies is described in depth in the next three chapters of this thesis. The approach to analysis is outlined in each chapter, as are the findings. However, there are some practical points offered in the literature that are relevant to discuss in the present chapter.

Wiersma and Jurs (2005) described data analysis in qualitative research as a 'process of categorisation, descriptions and synthesis' (p. 207). In phenomenography, the data analysis stage is summarised by Åkerlind (2005c) as starting with a 'search for meaning or variation in meaning' (p. 324). Woolgar (1996) suggested that the 'process of discovery' in qualitative research is not as straightforward as describing an 'object with a pre-existing character' (p. 18). This is also true when discovering meaning through phenomenographic

analysis. The aim of analysis in phenomenographic research is to reduce the data so that it can adequately describe the phenomenon under study (Wiersma & Jurs, 2005). Therefore, it is not enough to rely on participants' utterances. Rather, the job of the phenomenographic researcher is to uncover meaning through careful and iterative analysis of—and across—the data.

Practically speaking, this is done by looking for themes, grouping ideas, and highlighting similarities and differences across a corpus of interview transcripts (and, in the case of this thesis, across written responses to questionnaires and emails). As the categories of description start to emerge, the researcher needs to look for a 'structural relationship between the meanings' (Åkerlind, 2005c, p. 324).

Analogous to Åkerlind's explanation, grounded theory also works to identify emergent 'conceptual categories' or 'conceptual properties of the categories' (Glaser & Strauss, 1967, p. 23). For this thesis, the written data were analysed in the spirit of grounded theory in as much as there were no themes or categories imposed on the data. However, claiming the use of grounded theory in a study such as this one is contentious since the initial study uses Säljö's (1979a, 1979b) research design as a model. This would imply a set of presuppositions on the data and on the resultant theory.

Perhaps a more accurate way of describing the analysis for this thesis is as 'inductive thematic analysis', which Braun and Clarke (2006) noted is a 'process of coding the data

without trying to fit it into a pre-existing coding frame, or the researcher's analytic preconceptions' (p. 83). It seems that this approach to analysis is in keeping with the aims of phenomenography.

Bowden (2005) noted that data analysis in phenomenographic studies needed to be regulated so that the process remains faithful to the tradition of phenomenography and to the representation of data in the most accurate way. He suggested that certain 'controls' be put into place during analysis. In the analysis stage, the controls involve:

1. the use of no other evidence except the interview transcripts
2. the bracketing of the researcher's own relation to the phenomenon
3. the use of group analysis in order to ensure the first two controls are effective
4. the analysis of the structural relation between the categories of description being postponed until after the categories have been finalised. (Bowden, 2005, p. 15)

The practical aspects of analysis for this thesis were similar to the points raised in this section. Depending on the method of data collection, transcriptions took the form of transcribed interviews, responses to email interviews, or written responses to questionnaires. However, as mentioned earlier in this chapter, the researcher had taken some field notes during the interviews, which she also referred to during the analysis. These data were studied in an iterative manner, as the researcher tried to identify any similarities, differences, themes, and ultimately a finite set of conceptions. The transcripts were considered individually and collectively. In contrast to Bowden's advice, the analysis of

data for this thesis research did not involve 'group analysis' for reasons discussed in Chapter 4. The categories of description, once outlined, were investigated in a deeper way so that the structure of the conceptions (and the landscape of the outcome space) could be established.

This chapter introduced and discussed methods of data collection for the studies herein. It also provided an overview of the analysis used in this thesis research. Several issues were raised about the use of human participants as sources of research data. The penultimate section outlines the ethical considerations that were taken into account for this research.

5.8 Ethical considerations

The researcher consulted guidance for carrying out ethical research from the British Psychological Society (2009) and the British Educational Research Association (BERA) (2004, 2011). Additional guidance was sought from the Human Participants and Material Ethics Committee (2006) of the researcher's university. Ultimately, the decision was made to adopt the framework for ethical research provided by BERA. Firstly, the researcher was already familiar with this particular set of guidance and secondly, it offered a synthesis of the other resources that had been consulted for this thesis. Therefore, it was felt that by complying with the BERA guidelines for ethical researchers, this thesis would also be adhering to the guidelines set out by these other organisations.

BERA (2004) guides researchers by offering advice toward achieving four different areas of responsibility.

1. Responsibilities to participants
 2. Responsibilities to sponsors of research
 3. Responsibilities to the community of educational researchers
 4. Responsibilities to educational professionals, policy makers and the general public
- (p. 5)

It was important to give due consideration to each of these areas of responsibility. However, for the purposes of this chapter, the following section describes the steps that were taken to ensure that the first responsibility—to participants—was achieved. Also, the researcher felt she had certain ethical responsibilities to herself as a researcher, which are discussed below.

5.8.1 Responsibilities to participants

Approval from institutional review boards is standard ethical practice when carrying out educational research (Christians, 2005, pp. 145-147). For this thesis, guidance and/or permission was sought from the University's Human Participants and Materials Ethics Committee (recently renamed as Human Research Ethics Committee) and its Student Research Projects Panel prior to carrying out each of the three studies contained in this thesis. Furthermore, the University's Data Protection Liaison was consulted for advice on how to process, store and destroy data in compliance with the Data Protection Act (1998).

Letters of invitation were sent to all members of the sample for each of the studies. These letters were written in a spirit of 'openness' and provided disclosure of the projects' aims (BERA, 2011, p. 6). Participants were asked to read and sign consent forms, thereby providing 'voluntary informed consent' to be interviewed or surveyed (p. 5). The consent forms included information regarding their right to withdraw from the study at any time, details about how the data collected during the study would be stored and a section outlining the steps that would be taken to ensure confidentiality in the study (Creswell, 1998, pp. 115-116). For example, this thesis used pseudonyms in place of actual names (p. 132); each pseudonym reflected the participant's gender.

There were other ethical considerations to be made during data collection and analysis. For example, even though the participants in these studies were not vulnerable in the sense they were young, disabled or in other ways disadvantaged (BERA, 2011), the act of interviewing can bring about vulnerable situations.

Interviewing within an alternative or post-structuralist paradigm can situate both the interviewer and the interviewee in vulnerable positions. Even when they are given clearly presented guidelines, it is unlikely that interviewees will have been in a similar situation before, one in which the focus is almost exclusively on them for a considerable period of time, with the expectation that they should 'tell their story' in depth. (King, 1996, p. 177)

Åkerlind (2005a) remarked that phenomenographic interviews are possibly 'uncomfortable' for the participants because they are asked to 'reflect deeply and attempt to integrate issues' that they may not have considered or tried to do before (p. 115). Mason (2002) suggested that researchers should question the power relations of the interview situation and King (1996) noted that building trust and appearing trustworthy were key factors in interviewing.

Only one of the studies in this thesis used interviews as a method of data collection. And, some of the interviewing for this particular study was done though email. The researcher tried to establish trust from the outset by disclosing information about the study and how the participants' input would offer valuable information to the investigation. Throughout the data collection period, the researcher worked to maintain a relatively low level of intrusion by scheduling interviews in advance and by sending emails rather than calling. When interview situations became 'highly personal', the researcher attempted to be a good listener and to remain sensitive to the issues that were raised (King, 1996, p. 179). In this way, the researcher tried to minimise the power distance within the interaction and to help the participant feel safe in expressing his or her views and experiences.

5.8.2 Researcher's responsibilities to herself

As discussed previously in this chapter, in phenomenographic research, the researcher has a relationship with the participant and with the phenomenon under investigation. While this relatedness offers a certain perspective, it carries with it a particular sense of responsibility. First, the vulnerability that might be induced in an interview setting may affect the

researcher. While King's ideas of being a good listener and being sensitive to the interviewee is seemingly sound advice, it also implies that good phenomenographic researchers require effective counselling skills. It also means that, when listening to participants' accounts of their experiences, the researcher may be affected by uncomfortable or unresolved recollections of her own. Acknowledging the reflexivity of an interview situation offers some ethical considerations.

Second, the researcher's relationship with the phenomenon can be affected by the ideas and accounts of others. While this can be a valuable exercise in shaping and sharpening one's thinking about a phenomenon, there is an ethical implication of whether this can be taken too far. It was important for the researcher to remain aware of the context in which meaning making was happening. Contextual awareness is representative of the researcher's own epistemological position and was therefore natural to use as a guidepost.

5.9 Chapter conclusions

This chapter presented and discussed the specific methods of data collection used in each of the three studies of this thesis. Interviews were discussed as the primary method of data collection in phenomenographic studies. Other methods were presented and the ways in which these were employed in the present research were addressed. A broad overview of phenomenographic analysis was provided as a preface to the more detailed accounts offered in later chapters. Finally, some of the the researcher's ethical responsibilities were outlined

and addressed. The following points regarding methods of data collection and analysis were useful to take forward into the three main studies of this thesis.

1. It is crucial for the interviewer to bracket her own ideas regarding the phenomenon under study (reflection), her ideas about the participants and her assumptions about the participants' relationship with the phenomenon during all stages of the research process.
2. Phenomenographic interviews involve certain approaches to questioning. Therefore, it is important to design the interview protocol and questionnaires in an intentional and careful way.
3. It is important for the researcher to remain aware of potential limitations of various research methods.
4. Taking an ethically responsible approach to working with the participants in these studies fosters positive experiences, elicits richer data and safeguards the individuals and their data.
5. A structured and systematic approach to data analysis for all three studies aims to offer more robust findings and consistency in rigour.

Chapter 6: Study 1—Distance learners’ conceptions of reflection in higher education

6.1 Introduction

The literature review chapters (2 and 3) offered a rationale for investigating distance learners’ conceptions of reflection in higher education by locating this line of inquiry within existing research. The methodology chapters (4 and 5) discussed reasons for adopting a particular approach to this thesis research. Chapters 6, 7 and 8 report the three studies, which address the research questions, respectively.

1. What are distance learners’ conceptions of reflection? (Study 1, Chapter 6)
2. Do distance learners’ conceptions of reflection change through their higher education experience? (Study 2, Chapter 7)
3. Do distance learners with more experience of higher education hold different conceptions of reflection from those who have less experience of higher education? (Study 3, Chapter 8)

This chapter presents the first study, which focused on investigating distance learners’ conceptions of reflection in higher education.

6.2 Overview

A better understanding of the ways in which learners think about reflection in learning contexts will have implications for practitioners and for curriculum design. However, the aim of this study was not to illuminate strategies for promoting deep level learning or even

to promote reflection in learning (e.g. Clare, 2007; Davys & Beddoe, 2009). Rather, this study sought to learn more about the conceptions that distance learners have of reflection in higher education and the conceptions they have of themselves as reflective learners.

6.3 Method

An open-ended postal questionnaire was used to collect data from a sample of 400 distance learners at the UK's Open University. This method was employed because it could include participants located across a relatively large geographical spread in an efficient and economical way. It was assumed that members of the sample would be able to express their ideas in writing and that, as distance learners, they would be equipped to engage in a written postal mode of correspondence.

Other similar studies have used written responses from participants as data for phenomenographic studies. For example, written responses were collected through the use of open-ended questionnaires in all of van Rossum's research. Van Rossum and Schenk's (1984) study administered two written 'tests' with open-ended questions, and a written questionnaire to 69 first year university students to investigate the relationships between conceptions of learning and good teaching (pp. 75-76). (See also: van Rossum et al., 1985; van Rossum & Taylor, 1987).

The questionnaire for the present study was constructed in way that was analogous to Säljö's (1979a, 1979b) study, which investigated students' conceptions of learning. The

first set of questions had to do with students' experiences with reflection. These questions asked participants to report on how they went about reflecting on their own learning and what they found to be difficult and easy about this process. The second set of questions dealt with reflection more broadly. These questions probed participants' thoughts about why some students were more reflective than others and whether being reflective was important in higher education. A final question asked the participants: 'What do you actually mean by reflection?' Just as Säljö's study attempted to elicit personal definitions of learning Study 1 of this thesis wanted to know the participants' own mental frameworks for considering reflection in higher education. Appendix 1 shows the open-ended postal questionnaire used in this study.

6.3.1 Pilot study

A pilot study was carried out with 11 Open University postgraduate students and staff members during a study group meeting. This particular group had been meeting on a regular basis to discuss progress toward research dissertations and theses. The pilot study was administered in a face-to-face situation whereby the researcher distributed paper questionnaires and asked the participants to provide written responses to the questions. For the pilot study, neither the content of the responses (i.e. the participants' conceptions of reflection) nor the findings of the questionnaire were under scrutiny. This process merely tested the wording and order of the questions to determine the questionnaires' ability to elicit rich responses in a clear way. Appendix 2 shows an example of a completed questionnaire used in the pilot study.

The pilot sample comprised learners on high-level courses and academic members of staff. Therefore, this group did not mirror the intended random sample for the actual study. This aspect of the pilot study was initially considered problematic by the researcher. However, this particular pilot group was able to offer full, thoughtful answers that responded to the questions and that critiqued the questions themselves. Responses from the pilot study included notes in the margin such as 'not sure what you mean here' and 'I'm not sure what reflection means!'. This input gave the researcher an idea as to the clarity of the questionnaire before it was distributed to the actual sample.

6.4 Participants and permissions

The researcher was required to submit an application to The Open University's Student Research Project Panel (SRPP) to request approval for this particular study to be carried out. This is standard practice for The Open University for:

all projects which involve the collection of information from students, graduates or alumni. (Open University, 2012b)

The SRPP application for this study outlined the rationale for the research and offered ways in which the research findings would contribute to existing knowledge. The application also specified the variables that were required for this particular sample, including any demographic details. For this study, the application asked for a random sample of 400 students enrolled on any distance learning module with The Open University. There were no restrictions on the level of module or on the geographical location of the learner. However, the application did specify that the sample should comprise students who were

available to be surveyed (e.g. a prisoner-learner cannot be surveyed; a student who has recently been surveyed cannot be surveyed for another study; a student cannot be surveyed immediately before or after an examination or other end-of-module assessment). See Appendix 3 for a copy of the SRPP application and Appendix 4 for a copy of the approval letter from the SRPP.

The researcher was obliged to liaise with the Data Protection Office to identify any issues about collecting, storing and destroying data. It was necessary that the data were stored on a secure password protected server within the University's system. Also, the Human Participants and Material Ethics Committee (HPMEC) needed to be aware of the research and any risks it presented to the stakeholders concerned. The HPMEC was particularly interested in minimizing hazardous situations, in not asking leading questions, and in being transparent with the aims of the research project. (See Appendices 5 and 6 for the application to and approval letter from Data Protection and Appendix 7 for the application to HPMEC.) As noted in Chapter 5, at the time of writing this thesis, the HPMEC had been recently renamed as the Human Research Ethics Committee.

The actual questionnaire was distributed and collected by The Open University's Survey Office. This ensured that students' personal information was not passed to the researcher (a fellow student) without the participants' consent. Informed consent was implied with the receipt of a completed questionnaire and the data was then passed onto the researcher.

Responses were received from 50 distance learners, which represented a response rate of 12.5%. Table 6.1 shows a demographic profile of these participants. The educational background of this group varied from those with few, if any, qualifications to those with postgraduate qualifications. However, nearly half of the participants ($n=22$) were recorded on the University's database as having a higher education qualification.

Table 6.1: Demographic profile of participants in Study 1

Gender	
Male participants	17 (34%)
Female participants	33 (66%)
Age	
Range	18 to 74 years
Mean	43 years
Median	45 years
Mode	45 years
Prior qualifications (before enrolment)	
Postgraduate qualification	5 participants
HE qualification	22 participants
Two or more A-Levels	9 participants
Less than two A-Levels	9 participants
Education not known	5 participants

The proportion of male and female participants was fairly consistent with the gender statistics for the entire student population of this university. According to 2010/11 student enrolment statistics, 42% of the students registered to start a module were male and 58% were female. The ages of the participants in this study were also in line with the age

distribution of all Open University students. For example, 53% of students registered to start a module in 2010/11 were between the ages of 30 and 50 years old.

The response rate for this study was poor in comparison to other studies involving Open University students. Nonrespondents, in the case of this study, were difficult to investigate because the researcher was not privy to their personal or demographic information. Despite literature suggesting it is important to record reasons for nonparticipation (Thomas, 2004), it was ultimately decided that this information was not essential to this study. Goyder (1987) suggested that nonparticipation could be a result of several factors, including the individual's interest in the topic, the individual's involvement with the organisation and even the individual's ideas about the 'merits and demerits of surveys in general' (p. 187). It is plausible that these factors may have had implications for the sample in Study 1.

6.5 Data analysis

The following questions were included on the questionnaire:

1. How do you reflect?
2. What do you find difficult about reflection?
3. When is it easy to reflect?
4. Why are some students more reflective than others?
5. To what extent is reflection important in higher education?
6. What do you actually mean by reflection?

As explained previously, the questionnaire data for the present study was passed to the researcher from the Survey Office once the completed questionnaires had been received. The data, including responses to the questionnaire and the participants' demographic information, were organised in an Excel file and each participant was allocated a unique reference number (URN), which appeared instead of their actual name. Gender-specific pseudonyms are used in this report in place of the URN.

6.5.1 Analysis phase 1

The first phase of analysis involved several scans of the data. During this phase, the researcher took notes that helped to summarise some of the participants' ideas and to capture key terms or phrases used in their written responses. Some of these notes included jottings such as 'requires thinking', 'needs action', 'can become habitual'. These notes helped to gain an understanding of what was included in the corpus so a frame could begin to take shape. Figure 6.1 shows a representative example of this phase of analysis.

reflection is triggered naturally.
 when it is required in writing or part of a TMA, it is prompted by reading etc.
 More important @ higher levels.
 integration of new info w/ existing knowledge.

URN0154 As I work through course materials I related what I am learning for knowledge I already have from previous learning and experience. I also find triggers for reflection when watching TV, listening to radio or reading other materials.	I do not use a learning journal as I feel this would be artificial. It is not always obvious straight away what one has learnt.	The requirement in some courses to add some "reflection" comments to TMA's pointless. It is easy to invent something that the tutor will expect. A minor point but it is irritating.	When I comes naturally, prompted by reading etc.	People have different ways of learning things. Also some people need to revise and review several times to retain new information while others take it in at first go. There may be differences arising from the degree of prior knowledge of the topic, or depending on whether the student wants to retain the knowledge long-term or just long enough to pass the course.	Probably depends on the nature of the course being studied but reflections seems necessary to understand. It is probably more important at level 3 than level 1. Personally I find it hard to see how it would be possible not to reflect at all.	Thinking about the course materials and integrating them with what I already know.
URN0160 Usually I think through the learning activity to ensure I have made sense of it, but the real reflection comes when I am in a position to experience/do/see the learnt theory in action.	Witnessing or experiencing the said activity then allows me to reflect. I may also reflect through writing issues down to make sense of ideas.	Areas connect to issues I have no experience of, or am unlikely to witness. This makes it difficult for me to put ideas into real context.	When I can see the relationship between the theory or issue I have learnt about and actual situations. I tend to reflect by absorbing visual and physical experience.	I am supposing it depends on the learning preference of the student. If the student does not need visual or physical experience to learn, then they will be better suited to quiet self reflection. However I do not believe this is necessarily better or "more reflective" as there is a big difference between reading and understanding and actually "doing".	It is necessary as higher education and professional development is not simply about learning masses of facts. It is about absorbing and truly understanding the issues you have studied, and this absorption does require reflection.	Reflection for me is the process by which learning, be it theories or methods of teaching for example, is considered and adopted by a learner so as to affect and hopefully improve their own practice. It is the process of assimilating learning.

via experience of theory in action
 prompted by experience writing helps to make sense of it.
 a diff between experiential reflection and quiet self reflection
 reflection is understanding required for and absorption.

Figure 6.1: Example of analysis phase 1

6.5.2 Analysis phase 2

The second phase of analysis involved several iterations of list-making. This stage resulted in a long list of how the participants in this study conceptualised reflection. The list of notions included any possibilities that seemed to emerge from the first and second phases of analysis. Even if a conception was quite similar to existing ideas on the list, the researcher included it as a separate item. Table 6.2 shows a few of the ideas that were recorded in this phase of analysis. In total, there were approximately 90 ideas listed in the full set of notes.

Table 6.2: Extract from analysis phase 2: “Reflection is...”

thinking about what works and what doesn't

sometimes discursive

taking time to think about in the most objective way

self-awareness

a step that follows a problem

looking at things from another's perspective

sometimes dialogical

about questioning/challenging oneself

introspection

facilitates deeper thinking

a mental procedure to be carried out

identifying strengths and weaknesses (self-assessment)

about reinforcing learning

a trait of a more serious/conscientious student

about improvement

6.5.3 Analysis phase 3

Categories began to take shape in the third stage of analysis. This required the researcher to group the notions together, determining if any were overlapping or similar in their meanings. Table 6.3 shows the 10 rough conceptualisations of reflection that came to light in this stage of analysis.

Table 6.3: Rough conceptualisations of reflection

-
1. an activity
 2. a human trait
 3. thinking
 4. evaluation
 5. problem solving
 6. a trained device
 7. developmental in nature
 8. a learning tool
 9. emotional
 10. experiential
-

Each of the categories of description seemed to capture all of the points made throughout the data (and that were analysed in the previous stages of analysis). Table 6.4 is an example of one of these categories ('evaluation') and the points contained in the description.

Table 6.4: Example of rough category and corresponding data

Rough category	Corresponding data
Reflection is evaluation	'Thinking about what works and what doesn't' 'Identifying strengths and weaknesses' 'Reassessment' 'Looking back' 'Happens after an event (but before action)' 'Has to do with feedback/marks' 'Self-evaluative' 'A way to check progress' 'Part of monitoring and evaluation' 'Looking at what one has achieved or could have achieved' 'Having independent thought and judgement' 'Helps define personal worth'

6.5.4 Analysis phase 4

The fourth stage of analysis led to the development of a firmer set of conceptions. This was a complex process, involving the output from the previous stages of analysis. Not only did the data suggest that students held a finite set of conceptions of reflection but also, there seemed to be different perspectives on the phenomenon and different ways of talking about these ideas. The next section discusses these findings in more depth.

6.6 Findings

As noted in Chapter 5, the written data for this thesis were analysed in the spirit of grounded theory in as much as there were no themes or categories imposed on the data. However, because this study used Säljö's (1979a, 1979b) research design as a model, claiming the use of grounded theory is contentious. Instead, the researcher employed 'inductive thematic analysis' to identify emerging categories (Braun & Clarke, 2006, p. 83).

In any case, the data from the present study suggest that the participants' conceptions of reflection seemed to be based on three different perceptions of themselves, or what this thesis refers to as *reflective dimensions*.

- Self
- Self in higher education
- Self in society

6.6.1 *The dimension of self*

The participants who answered the questions from this perspective, seemed to talk about reflection in terms of their own lives, with little or no reference to their experiences in higher education or society.

[Reflection is] making real in my mind that which I have just read, seen or experienced. (Robert, 59 years old)

[Reflection is] looking back on the past to see what you did and how you did it.

(William, 26 years old)

6.6.2 The dimension of self in higher education

The participants who responded to the questionnaire from the position of a university student, often talked about reflection in terms of feedback from the tutor and in achieving the aims of the course.

I mean [by reflection] sitting back and looking at marks and course progress and evaluating if everything is going to plan. (Maria, 22 years old)

[Reflection is] thinking about what the course guide says I should be aiming for and what that has meant in practice. (David, 61 years old)

6.6.3 The dimension of self in society

Participants who expressed their ideas from the perspective of a social member, related their notions of reflection to a broader world-view and in terms of human behaviour.

[Reflection means to me] consideration, in hindsight, of what has gone before, and aligning my conclusions alongside my world-view in a pragmatic way.
(Betty, 66 years old)

[Reflection is to ask] what would I have done differently if I had known this before? What effect does knowing/not knowing this have on the way people act?
(John, 52 years old)

I've found the easiest way to apply it [reflection] is to real life situations, articles in the newspaper and television. (Keith, 27 years old)

Within each dimension, or perhaps what Glaser and Strauss (1967) may have referred to as 'formal theory', there seemed to emerge at least two conceptions of reflection, or 'substantive theory' (p. 42). In other words, depending on the lens through which the participants conceptualised reflection, there existed multiple notions of the phenomenon. Table 6.5 outlines these conceptions.

Table 6.5: Conceptions of reflection by reflective dimension

Reflective dimension	Conception
Self	Reflection is a human trait. Reflection is a thinking process.
Self in higher education	Reflection is self-evaluation. Reflection is a learning tool. Reflection is for personal development.
Self in society	Reflection is used to experience the world. Reflection is transformation.

6.6.4 Conceptions of reflection

A set of seven conceptions of reflection emerged from the four-stage analysis that was carried out for this study. Each of these conceptions is discussed and evidenced below as separate categories of description.

Category of description 1—Reflection is a human trait.

The participants who held a view of reflection as a human trait thought of reflection as an ability that belonged to some people but not others.

Some people are naturally more introspective than others. I am not studying psychology, but I feel sure that more extrovert [sic] people will tend to take things at face value and swiftly move on. (Mark, 37 years old)

I've always assumed it [being reflective] must have something to do with how an individual's brain is 'wired'. I believe that some people are more suited to it than others. (Keith, 27 years old)

[Reflection is] Introspective? Neurotic? Open? Conscientious? Self-aware?
(Brian, 58 years old)

I'm sorry, but surely this [reflection] is simply human nature. (Sue, 60 years old)

Category of description 2—Reflection is a thinking process.

In Chapter 2, several definitions of reflection were discussed, some of which considered reflection as an introspective activity. Participants who held the notion of reflection as a thinking process, would probably agree with such definitions.

[Reflection happens] when I am relaxed, maybe because I have time to let my mind/thoughts wander. (James, 54 years old)

For me, 'reflection' is the act of reflecting which means to think seriously.
(Louise, 40 years old)

I find reflection is an ongoing mental process. (Carl, 49 years old)

Category of description 3—Reflection is self-evaluation.

Participants who held a conception of reflection as self-evaluation talked about reflection as a way to assess personal performance or their experience of an event.

[Reflection is] looking back on what I did or learnt...what went well and what didn't. (Nancy, 18 years old)

[Reflection is] looking back at what I've learned, why I have learned it and how I feel about it. (Michael, 29 years old)

Category of description 4—Reflection is a learning tool.

Like the participants who conceptualised reflection as self-evaluation, the participants who talked about reflection as a learning tool also thought of reflection in terms of assessing

personal performance. However, those with a conception of reflection as a learning tool, expressed their ideas of using reflection to improve their performance in the future. Typically, those who held this conception related their ideas to a finite learning event or experience (e.g. a particular assignment or a specific module). There were some who talked about how reflection was helpful in problem solving. Many of the participants with this conception, indicated the usefulness of feedback from another person (usually a tutor).

I think that people will be more or less reflective because of their reasons for studying the course...Those with lower confidence might reflect more.

(Annie, 23 years old)

I find reflection to be useful as an aid to learning the subject(s) I am studying.

(Rhonda, 47 years old)

I am a practising engineer. I look for ways to apply new knowledge and methods to problem solving. (John, 52 years old)

Category of description 5—Reflection is for personal development.

The participants who held a conception of reflection as personal development tended to talk about proactive approaches to self-evaluation and the use of feedback for ongoing development of one's self. Their notions seemed to relate to a slightly broader context than those who held a conception of reflection as a learning tool.

To me, reflection is a type of evaluation where you consider every aspect of the work and then see what went well and what was not as successful, what could be or should be changed so that there is a higher rate of success in the work. (Tamsin, 19 years old)

[Reflection] is essential. There is no point in doing something without checking how well you are succeeding. Only then can you correct weaknesses. (Phil, 74 years old)

Category of description 6—Reflection is a way to experience the world.

Participants who held a conception of reflection as a way to experience the world were able to talk about self-evaluation and learning but also, they expressed ideas on how these activities offered a deeper engagement with or understanding of the world. The difference between those who held a conception of reflection as personal development and those who saw reflection as a way to experience the world were subtle. Personal development was still a central theme, but here it had more to do with developing one's self in the context of society.

The real reflection comes when I am in a position to experience/do/see the learnt theory in action. (Amy, 43 years old)

[Reflection is] consideration, in hindsight, of what has gone before, and aligning my conclusions alongside my world-view in a pragmatic way. (Betty, 66 years old)

Reflection, to me, means consideration of acquired information, making links, growing (not just intellectually) mentally from what you have learnt and applying the information to myself and the world around me. (Mark, 37 years old)

Category of description 7—Reflection is transformation.

Participants who held a view of reflection as transformation talked about reflection as providing a new way of seeing the world. However, unlike those who held a conception of reflection as a way to experience the world, these participants explained how the process of reflection is essential in changing social action or behaviour.

[Reflection is] very important and it can change your life. It is what you learn in higher education and reflect upon that and recall information and change your thoughts and actions. (Amanda, 34 years old)

[Reflecting involves] my application of the newly-acquired knowledge to my life and surroundings. (Jacob, 43 years old)

6.6.5 Variation and outcome space

As explained in Chapter 5, phenomenography focuses on ‘the variation in the ways a phenomenon is experienced’ and requires the ‘articulation of the internal relations between the different ways of experiencing a phenomenon’ (Trigwell, 2000, p. 79). The findings of this study offered a finite set of seven conceptions of reflection that can be described as separate categories of description. The relationship between these categories is subtle, yet

noticeable enough to differentiate between them. Figure 6.2 depicts the variation between these categories of description.

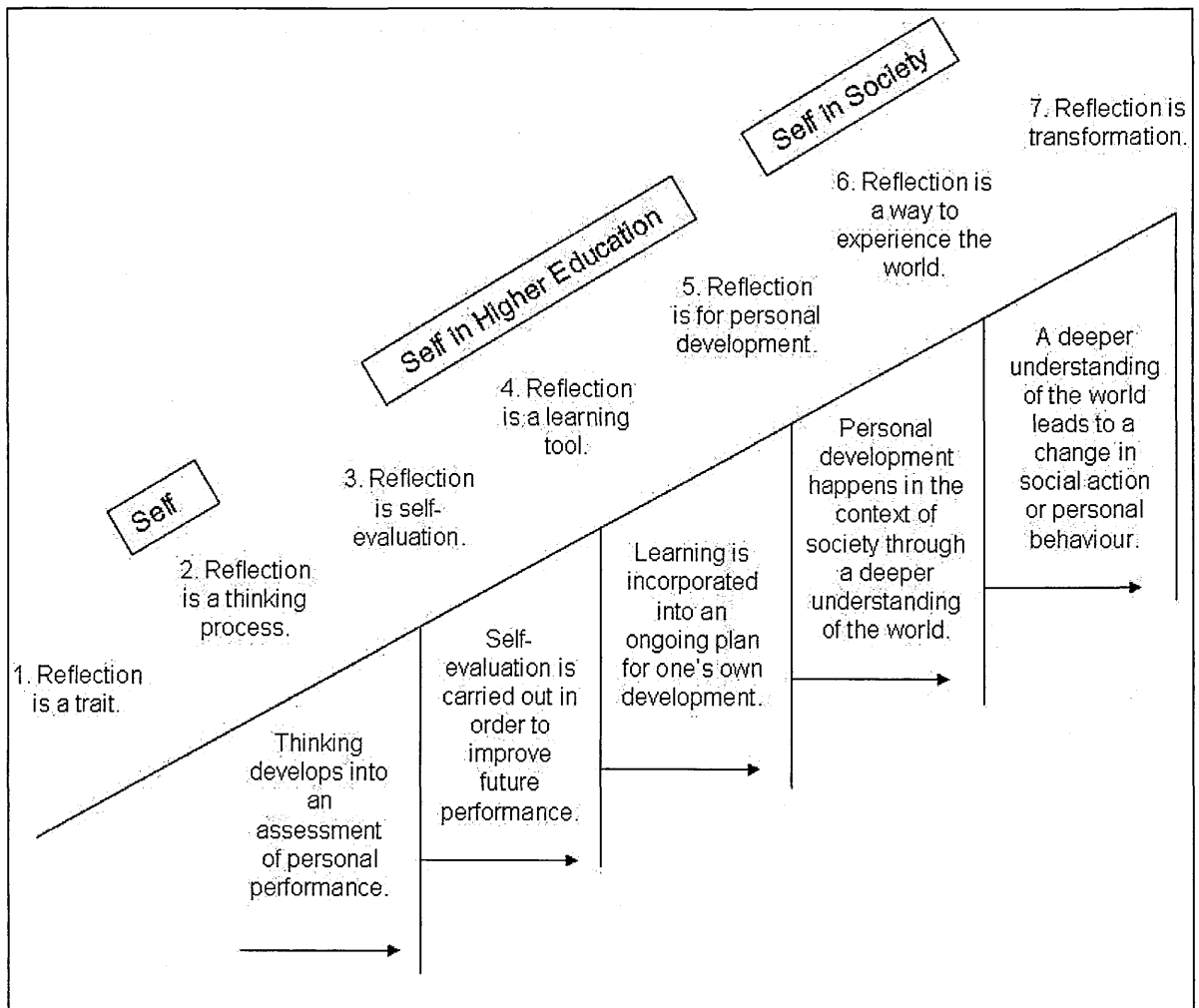


Figure 6.2: Variation between categories of description

The variation between the categories of description shows a possible hierarchy of conceptions of reflection. Each category of description implies the previous category(ies). For example, the category of reflection as a learning tool implies that reflection is also used

for thinking and self-evaluation. Karen (46 years old), for example, seems to hold a conception of reflection as a learning tool. Her response to the question: What do you find difficult about reflection? offers evidence of this hierarchy.

I can find it difficult to always know where I went wrong and what I could do to improve my learning. (Karen)

When asked: To what extent is reflection important in higher education?, Karen wrote:

To ensure that a student is able to understand fully their subject matter, and their own personal strengths and weaknesses.

When asked what reflection meant to her, Karen responded as follows.

Consideration of what methods best suit my personal learning—what styles are most effective.

It is clear that Karen already views reflection as a thinking process and does see that it plays a role in understanding strengths and weaknesses (self-evaluation).

The category of reflection as transformation requires the learner to hold the conceptions of reflection before it. Mark (37 years old) appears to hold a conception of reflection as transformation. When asked what reflection meant to him, he wrote:

Reflection, to me, means consideration of acquired information, making links, growing (not just intellectually) mentally from what you have learnt and applying the information to myself and the world around me. (Mark)

This response also suggests that Mark believes that reflection affects personal development (i.e. 'growing'). Mark's other responses indicate that he sees the role of reflection as 'an asset to study and life in general', suggesting he believes reflection is a learning tool and a way to experience the world.

In terms of these findings, the category of reflection as a trait is problematic. It does not seem to lead to the next category, nor is it required for the other categories. Actually, it contradicts the notion that reflection can be a learning tool, since this implies that reflection can be developed as a skill, rather than it simply being an innate personality trait. Indeed, there is an abundance of evidence from these data to suggest that reflection is a skill that can be learned, developed and therefore, taught.

Possibly some students are more reflective due to personality but I think reflection can be taught. If the concept is explained in ways that different personalities can understand. (Margaret, 50 years old)

Reflective practice does not come naturally but is a learned act. This only becomes easier and routine with regular practice. (Rhonda, 47 years old)

It [reflection] is a useful learning tool as it can help identify how questions need/should be answered in exams. (Karina, 40 years old)

One consideration is whether the notion of reflection as a trait is better placed as a nondevelopmental category. This would imply that learners who hold this conception of

reflection would be constrained in their development of reflective skills. Figure 6.3 depicts an outcome space that includes reflection as a trait as an outlying category.

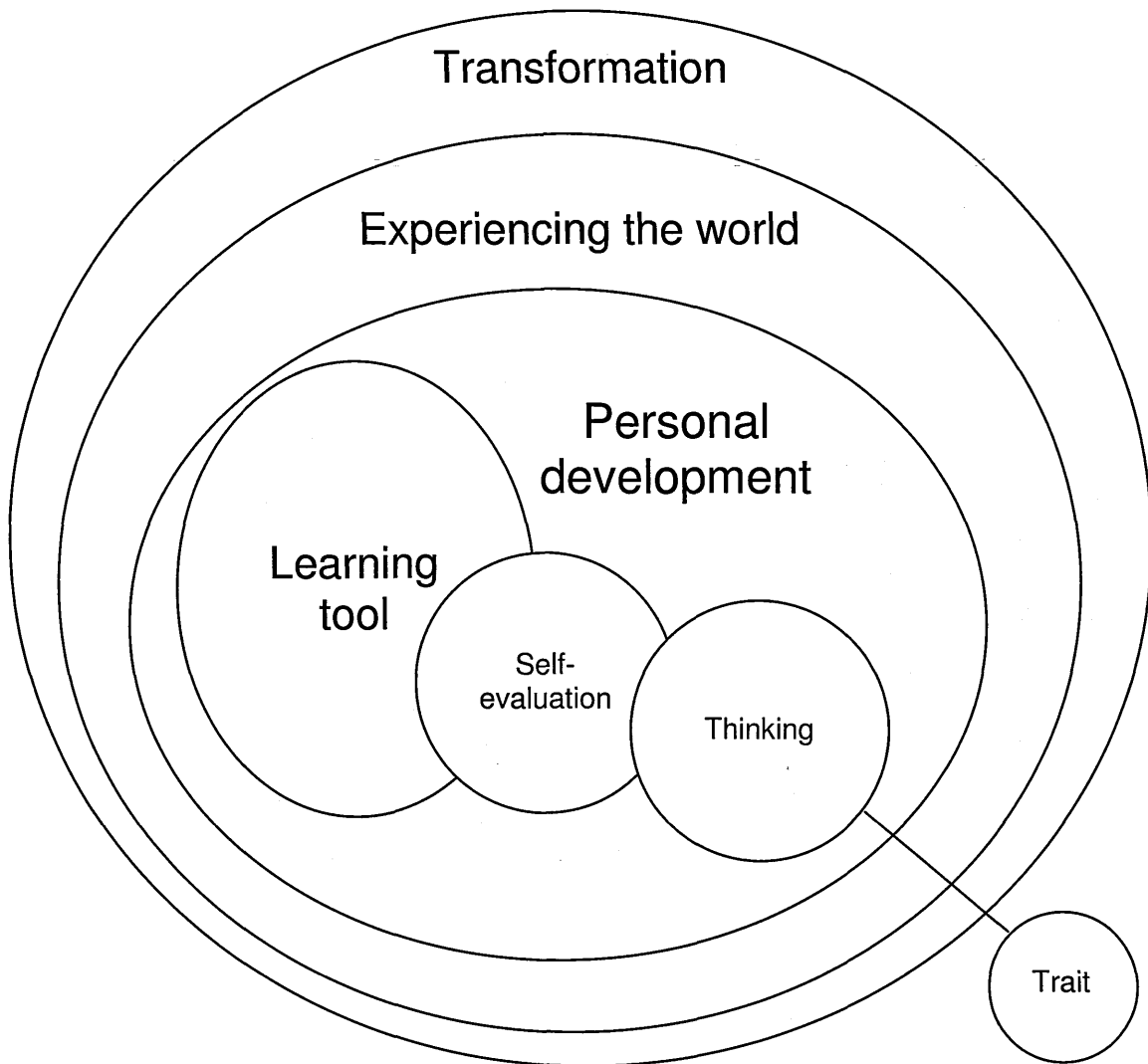


Figure 6.3: Outcome space for distance learners' conceptions of reflection in higher education

Reflection as thinking, self-evaluation and a learning tool are conceptual categories that can lead to personal development, social experience and transformation. The conception of reflection as a personality trait is isolated from the other domains to indicate that, while an innate 'reflective personality' may contribute to one's own thinking, it may not lead directly to evaluating or developing one's self.

6.7 Discussion

Indeed, there may be several constraints in the application of a hierarchical framework for understanding distance learners' conceptions of reflection. The data suggested there were several specific factors limiting the opportunity for reflection in distance higher education.

6.7.1 Having the time to reflect

A frequently occurring theme in the data was that some students are less reflective because they do not have time to reflect.

[Reflection is easiest] when there's more time to gather thoughts, material, etc. and form some kind of plan for assignments or exams. (Lorna, 45 years old)

Some [people] have more time and personal, psychological space to work in. Some have more varied interests/backgrounds/corrections to help them weave a richer tapestry and draw conclusions. (Sarah, 56 years old)

[Reflection is easiest] when I am not under time pressure. (Mona, 56 years old)

Perhaps some students have more free time to look back and reflect whereas others, myself included, find it hard to find the time. (William, 26 years old)

Some people think more deeply than others so it [the ability to reflect] depends on the nature of the person along with pressures of time and other commitments. (Lorna, 45 years old)

A contrary perspective was offered that suggested reflection is *more* important for busier people.

Apart from age/maturity, I think its when there are many things to juggle, e.g. health/work/children, etc. which makes reflection essential for progress.

(Violet, 52 years old)

6.7.2 Age and experience

Some of the participants thought that younger students and those with less life experience were not as reflective as older learners who were more experienced in life.

Many young people are going through higher education before they have chosen their vocation, so focusing on application is hard, and with less experience it's harder to contrast and compare. A mature student probably has his career well under way. So naturally will reflect on this. However, because of this, real open-minded horizon scanning is harder for oldies. (John, 52 years old)

Personality type, age and time factors all impinge on the priority of reflection. (Betty 66 years old)

Also, if you are young you will not have yet been exposed to much experience. If older you can reflect on how the same problem has been described and addressed before. (John, 52 years old)

6.7.3 Prior experience with reflection

Some of the data suggested that reflection is difficult for those with less exposure to reflective activities.

[Some students are more reflective] because they have engaged in reflection before...I think some students may at first view reflection as introspective waffle. (Margaret, 50 years old)

6.7.4 Catalysts for developing conceptions of reflection

Earlier in this chapter, the dimensions of self, self in higher education and self in society were applied to a proposed hierarchical framework of conceptions of reflection. This representation places self in higher education between self and self in society, which implies that higher education is perhaps the catalyst in becoming a reflective social participant. The following evidence supports this notion.

Higher education for me is about knowledge and developing ideas and problem solving. It is not rote learning of facts. To develop ideas, you need time to think and reflect on them—higher education places the emphasis on thinking. (Rebecca, 45 years old)

One of the purposes of higher education is self-development through the acquisition of knowledge, which then prepares one for higher responsibility. Reflection, therefore, helps a student to re-evaluate his/her worth, redefine his/her position in the society and ultimately put to test what he/she has learnt in whatever form allowable and applicable. (Jacob, 43 years old)

Factors constraining the opportunity to reflect such as conceptualising reflection as a trait, not having enough time, not having enough life experience or not having prior experience with reflective tasks can all affect a learner's positioning within this framework. These constraints can also present several implications for higher education institutions, course designers, teaching practitioners and students.

6.7.5 Implications

The purpose of this study was to gather data on distance learners' ideas of reflection in learning; this was made clear to the participants prior to the study. Also, the wording of the questions implied that reflection is an important part of higher education, at least one that was worthy of being studied. It is not unusual, then, that these participants frequently offered descriptions of their ideas based on their experiences as university students. Perhaps they inferred that the aim of this study was to support the importance of reflection in higher education. Although this is only a speculation, it is one explanation for the central role that higher education purportedly plays in creating a reflective society.

If higher education is a catalyst in developing a reflective society, then it would be important for higher education institutions, course designers and teaching practitioners to consider the ways in which students are being asked to reflect. The data from this study suggested that reflection happens in different ways. Some talked about reflection as happening through discourse or dialogue.

Discussions with my partner often challenge my thoughts and oblige me to review my 'schemata'. (Brian, 58 years old)

I like to answer written questions and have a discussion about my answers.
(Karen, 46 years old)

[Reflection is easiest] at night and when walking, which is quite often. (Robert, 59 years old)

Although reflection may occur latently, in higher education reflection is often assessed in written form. This is particularly true in distance learning contexts, where face-to-face contact is limited. Written forms of reflection may prove challenging for different students.

I find written reflection difficult, it can be difficult to put into words and sometimes uncomfortable to write about your own learning. (Annie, 23 years old)

Sometimes the language is a bit of a barrier when expressing abstract ideas.

I'm not a native English speaker. (Marco, 45 years old)

Another consideration is how reflection is encouraged. The data suggested that compulsory reflection may be undesirable to some students for a variety of reasons.

When asked to sit down and reflect. I don't like the rigidity of thinking 'right now I need to reflect on my work.'...[it is easiest] when it is organic and unplanned. (Michael, 29 years old)

However, I think it needs to mostly be unprompted self-reflection as at this age/stage of life the desire to reflect and improve must be inherent and not forced. (Annie, 23 years old)

However, being too reflective can detract from the main thrust of the work. (Steve, 29 years old)

Additionally, if reflection can be taught, do higher education institutions need a common approach to reflection in learning?

We have been given several frameworks to use for reflecting, but I find it difficult to stick to them. (Alice, 29 years old)

6.8 Chapter conclusions

This study set out to address the first research question: How do distance learners conceptualise reflection in higher education? The findings from this study offered a finite set of conceptions of reflection held by a group of distance learners studying on Open University modules. The variation between these conceptions suggested a possible hierarchy along which distance learners' notions of reflection could progress toward a transformative conceptualisation of reflective practice. In this way, the study achieved its aims of addressing this particular research question.

The findings from this study are used as part of a longitudinal study of distance learners in the next phase of research. Study 2 involved Open University students on three different modules. These students were interviewed throughout their learning experiences not only to test the conceptions of reflection model shown in this chapter but also to investigate conceptual change. The aim was to learn more about the role of higher education in harnessing and promoting reflective thinking.

Chapter 7: Study 2—A longitudinal perspective on distance learners’ conceptions of reflection

7.1 Introduction

The findings from Study 1 proposed an outcome space with seven different categories of description, or conceptions, of reflection held by distance learners in higher education (see Table 7.1).

Table 7.1: Distance learners’ conception of reflection in higher education

1. Reflection is a human trait.
 2. Reflection is a thinking process.
 3. Reflection is self-evaluation.
 4. Reflection is a learning tool.
 5. Reflection is for personal development
 6. Reflection is a way to experience the world.
 7. Reflection is transformation.
-

Chapter 7 reports on the research processes and findings from Study 2. Study 2 sought to address research question 2: To what extent do distance learners’ conceptions of reflection change during their higher education experience? Study 2 was also designed to confirm whether the findings from Study 1 could be replicated. This part of the research explored

Open University students' conceptions of reflection during their experience on a level 1 undergraduate module to see whether there was any evidence of conceptual change.

The findings from Study 1 intimated that higher education may be a catalyst for creating a more reflective society. Evidence from Study 1 suggested that higher education plays a role in developing reflective skills and also that reflection is important in understanding the world and in participating in society. This prompted an investigation into whether distance learners' notions of reflection changed during their higher education experience. Hence, Study 2 sought to gain a better understanding of the effect of higher education on distance learners' conceptions of reflection and on their conceptions of themselves as reflective learners.

7.2 Design and method

This longitudinal study was designed to collect data at four key points during the length of a level 1 undergraduate module. Table 7.2 outlines the rationale for choosing these 'milestones'. Appendix 8 provides a more detailed plan for data collection, including objectives and interview protocol for each milestone.

Table 7.2: Data collection milestones for longitudinal study

Label	Timeframe	Rationale
Milestone 1 <i>Start of module</i>	Within the first two weeks of module	To collect responses to a similar set of questions as used in Study 1; this helped to test the framework proposed in Chapter 6 and to locate the participants in the outcome space
Milestone 2 <i>3 months into module</i>	After feedback from two assessments (or in the case of one particular module, after the only assessment)	To understand the participants' views of the reflective activities in the assessments
Milestone 3 <i>End of module</i>	Around 2 weeks before the final assessment was due	To explore participants' thoughts about the feedback and the role of other students in their learning experience
Milestone 4 <i>After module</i>	Approximately one week after the final assessment had been submitted	This gave the students some time to gain closure and collect their thoughts about their module experience.

Participants were given the option of a face-to-face or telephone interview for milestone 1. These two options offered the participants and the researcher an opportunity to build a verbal rapport at the first point of contact. Also, since a face-to-face interview was only practical for those participants who lived in the vicinity of the University campus,

telephone interviews offered an opportunity for geographically distributed participants to take part in the study. Only four participants opted for a face-to-face interview.

Email interviews were used for milestones 2, 3 and 4. This method was chosen based on the advantages of email interviewing discussed in Chapter 5. Furthermore, when participants were asked at milestone 1 whether they were happy to use email interviews for subsequent conversations, all of the participants agreed that it would be a convenient way for them to engage in this research. The distance learners in this study were accustomed to using email technology and were required to have internet access for the modules in which they were enrolled. Therefore, this particular method of data collection was both familiar and accessible to them.

No pilot study was carried out for this study. Rather, the questions used at milestones 1 and 4 were almost identical to the questions used in Study 1. For this reason, it was felt that the interview protocol for milestone 1 had been trialled already. The questions used at milestones 2 and 3 worked to identify learners' perspectives on and experiences during the module. While these questions could have been isolated from the entire study and posed to a pilot group, the researcher did not feel this was necessary. First, the questions at milestones 2 and 3 were exploratory in nature and did not specifically intend to uncover the participants' conceptions of reflection (as was the case at milestones 1 and 4). Second, the questions were designed as part of a fluid, ongoing inquiry in which a relationship had

developed between the researcher and the participant. It was felt that this rapport would assuage any issues that might arise from using this interview protocol.

7.3 Participants and permissions

As explained in Chapter 6, the researcher used The Open University as the data collection site for this research. Also discussed in Chapter 6 were the University's policies for carrying out research that involves its students. As was the case with Study 1, the researcher was required to submit an application to The Open University's Student Research and Project Panel (SRPP) for Study 2. Appendix 9 is the SRPP application submitted for Study 2 and Appendix 10 is the approval notification from the SRPP.

Initially, a sample of 180 students across three different level 1 modules (see Table 7.3) were invited to participate in this study. It was requested that these participants lived in certain catchment areas so the opportunity for face-to-face interviews was greater. However, it came to light that this parameter was too restrictive in garnering a large enough sample. As a result, the sample was drawn from the total population of students enrolled on these three modules, including those living outside the UK. After a few weeks, it became clear that the requested sample size was too small to elicit a large enough sample. A further 300 students from the most popular module (Introduction to Social Sciences) were sampled in an attempt to achieve a larger group of participants. Variables such as age, gender and previous educational qualifications were also requested from the SRPP.

A letter of invitation and consent form were drafted by the researcher and final drafts were produced and distributed by the University's Survey Office. Appendices 11 and 12 show a draft of this letter and the consent form used in this study. The Survey Office was able to release participants' data to the researcher on receipt of a signed consent form. At this stage, the researcher contacted the students by telephone to arrange milestone 1 interviews.

An application was made to the Human Participants and Materials Ethics Committee (HPMEC), as was done for Study 1. Appendices 13 to 15 show the application, conditional approval and final approval from HPMEC. Data protection issues were discussed with the Data Protection Liaison Officer and it was agreed verbally that correct procedures for the safe handling of data were in place.

Consent forms were received from 57 students, which represented a response rate of 12.4%. All of these students were contacted and milestone 1 interviews were carried out with 33 participants. This represented 7.2% of the total number sampled and 58% of those who provided informed consent. Table 7.3 presents a demographic profile of the original 33 participants for this study.

Table 7.3: Demographic profile of participants in Study 2

Gender

Male participants 14 (44%)

Female participants 19 (56%)

Age

Age Range 20 to 66 years

Age Mean 44 years

Age Median 44 years

Prior qualifications

Postgraduate qualification 1 participant

HE qualification 1 participant

BTEC or NVQ 8 participants

Two or more A-Levels 9 participants

Less than two A-Levels 9 participants

Education not known 5 participants

All of the participants lived in the United Kingdom with the exception of one participant who lived in Luxembourg.

7.4 Sampling and attrition

As mentioned in the previous section, the sample for this study was drawn from students enrolled on three different level 1 undergraduate modules. The particular level 1 modules were chosen based on the researcher's familiarity with these modules and on factors related to popularity and curricula. Table 7.4 outlines the main reasons for choosing each of the modules and shows the full name of each module. To enhance the readability of this thesis

and to avoid institutional jargon, the modules have been coded using a similar format to their actual code (i.e. a combination of letters and numbers) but altered slightly so that the code represents the module subject. For example, the actual code for Introduction to Social Sciences is DD101 but for this thesis, it is referred to as SS101.

Table 7.4: Descriptions of the three modules used in Study 2 and the rationale for choosing them

<i>Module</i>	<i>Credits*</i>	<i>Assessment scheme</i>	<i>Nature of reflective task(s)</i>	<i>Tutorial support</i>	<i>Rationale for choosing this module</i>
SS101 Introduction to Social Sciences	60	7 tutor marked assignments	Formative, unmarked 'self-reflection' questions at the end of each tutor marked assignment. Students lose 5 marks on the assignment if they do not attempt these questions.	Tutor support on online forum and in regular face-to-face tutorials	This module is the most popular level 1 module at The Open University and is offered by the Faculty of Social Sciences. It serves as a foundation module for several degree pathways. The Module Team has recently (within the last 2 years of this report) built in several reflective activities.
BS121 Managing in the Workplace	30	1 tutor marked assignment (portfolio) 1 end of module assessment	Reflection is embedded in several activities for the formative portfolio assessment. The portfolio also includes a 1500 word reflective essay. The end of module summative assessment has reflective aspects as well.	Tutor support on online forum and in regular face-to-face tutorials	This module is offered by the Faculty of Business and Law. The learning outcomes for this module are underpinned by Kolb's (1984) 'Learning Cycle', which proposed reflection as a critical stage in one's own development. The primary assessment includes a 1,500 word reflective essay and reflection is promoted throughout the module.
CPD122 Make Your Experience Count	30	3 tutor marked assignments 1 end of module assessment	All assessments are reflective accounts of students' learning and development.	Online support only	This module is offered by the Faculty of Maths, Computing and Technology. It is primarily designed to help students develop a personal development plan. The main thrust of the assessed work and other activities is active reflection.

*Where 120 credits equals full-time study

As noted in Chapter 5, sample attrition occurs when members of the sample decide not to participate in the study (Sapsford, 2007). There may also be instances where it is not possible to use input from a participant, such as an unintelligible interview recording. In studies that are carried out in waves, people may 'lose patience with the survey' and drop out (p. 93). Study 2 involved longitudinal panel data, meaning it measured the same sample 'two or more times'. Although this method is helpful in determining net change and in investigating the source of change, these studies typically suffer from attrition (Wiersma & Jurs, 2005, p. 161).

Although 33 students participated in milestone 1 interviews, data from 31 students were used for the purposes of this study. There was one instance where a recording was garbled and not usable for analysis. Although the researcher attempted to schedule a second interview with this participant, she did not respond. Another participant decided to use the interview sessions as a platform to heavily criticise the module and its tutor. Their interview data was not deemed suitable for inclusion in the study because it did not contain any meaningful statements about reflection. Therefore, $N=31$ at milestone 1.

Subsequently, various others dropped out of the study at different points. Thomas (2004) suggested that it is a good idea to keep a record of those who choose not to take part in the study. However, only two participants offered reasons for leaving the study. Both of these withdrew from the module because of personal commitments. Table 7.5 shows the sample

attrition for Study 2 over milestones 2, 3 and 4, based on the sample interviewed at milestone 1.

Table 7.5: Rates of attrition in longitudinal panel study

<i>Data collection points</i>	<i>Attrition (n)</i>	<i>Cumulative attrition (%)</i>
Milestone 1	0	0
Milestone 2	10	30
Milestone 3	4	42
Milestone 4	7	64
Total	21	64

Only 12 (36%) of the original participants participated in all four interviews. Table 7.6 shows a demographic profile comparing the students at milestone 1 with those retained at milestone 4. The proportion of men participating in all four interviews was higher than of women. Also, the mean and median ages were slightly higher in the retained group of participants. However, as mentioned previously, data collected from one of these participants was later omitted because of his vehement dissatisfaction with the module and its tutor. For this reason, $n=11$ at milestone 4.

Table 7.6: Comparison profiles of participants at milestone 1 (N=31) and those retained at milestone 4 (n=11)

	<i>Milestone 1</i>	<i>Milestone 4</i>
Female participants	18 (58%)	5 (45%)
Male participants	13 (42%)	6 (55%)
Age Range	20 to 66 years	28 to 66 years
Mean age	44 years	47 years
Median age	44 years	50 years
SS101 students	20 (65%)	6 (55%)
BS121 students	4 (13%)	2 (18%)
CPD122 students	7 (22%)	3 (27%)

7.5 Data analysis

The data were analysed in 7 phases:

1. Test the generalisability of the framework developed in Study 1 by applying it to participants at milestone 1 of this study.
2. Repeat the process using data from milestone 4 questions.
3. Of the participants who responded at milestone 4, determine whether there has been a change in conceptions between milestone 1 and milestone 4.
4. Discuss unusual cases and instances of no change
5. Outline factors for change.
6. Identify other key points that have emerged from the data.
7. Look for inter-module differences.

The rest of this section looks at the findings of each phase of data analysis. The data have been anonymised and gender-specific pseudonyms have been used in place of real names.

7.5.1 Analysis phase 1—conceptions of reflection at milestone 1

Data from 31 participants were interpreted to identify individuals' conceptions of reflection at the start of the study. The analysis for this phase involved similar processes to the analysis of data in Study 1. However, this time, rather than using participants' written responses as data, transcripts of the recorded face-to-face interviews and hardcopies of email interviews were used for analysis (See Appendices 16 and 17 for examples of these types of transcripts.).

The framework proposed in Study 1 was relatively easy to apply to this group of learners. Table 7.7 presents the frequency distribution of conceptions using the seven categories of description identified in Study 1.

Table 7.7: Conceptions of reflection at milestone 1

<i>Categories of description</i>	<i>Frequency (N=31)</i>	<i>Frequency (%)</i>
Reflection is a human trait.	0	0
Reflection is a thinking process.	3	9
Reflection is self-evaluation.	5	16
Reflection is a learning tool.	11	34
Reflection is personal development.	6	19
Reflection is a way to experience the world.	4	13
Reflection is transformation.	3	9

None of the participants held a conception of reflection as a trait. As mentioned in Chapter 6, this category of description was problematic when viewed as part of a logical hierarchy. The notion of reflection as a personal attribute conflicts with the idea that reflection is a skill that can be taught and developed. Evidence from Study 2 may shed light on whether or not this conception of reflection is actually a conception or merely a perceived factor in

being able to reflect. More research needs to be done to sharpen (or dissolve) this category of description.

Participants who held a conception of reflection as a thinking process typically talked about reflection in terms of thinking back on something. Arguably, this might imply that the act of *thinking back* was meant to evaluate an event or instigate change. However, in the cases of these three participants, reflection was never discussed in these ways. At times, the decision to assign this conception was difficult because the interpretation could have been broadened to consider the implications of particular phrases. Extract 1 is from the researcher's own notes. This is an example of where a choice was made not to 'see' more than what was there, even though the participant was *using* reflection in a way that was different from the way she conceptualised reflection.

Extract 1

Alice does not think of herself as a reflective person but does think that reflection can be taught. She thinks that reflection means thinking about how things went or what's happened, which is starting to border on a conception of 'reflection as self-evaluation'. However, since she doesn't speak of it in these terms, I don't feel her conceptions of reflection would fully match that category. Here is an interesting phenomenon where someone who doesn't believe they are reflective is speaking in a reflective manner. At the end of the interview, the participant is reflecting on her progress over the last year. She remarks that her confidence is much higher and before she would have never participated in this interview. She says that she made a personal decision to try new things and build her confidence and she is pleased with the results! So, although she may conceptualise reflection as a thinking process, she is using reflection for self-evaluation and, in some ways, personal development.

Participants who held a conception of reflection as self-evaluation were able to articulate their ideas about using reflection to consider positive and/or negative aspects of an experience. Extracts 2 and 3 are examples from the researcher's notes that indicated an evaluative conception.

Extract 2

Kate sees herself as being a naturally reflective person because she's 'very critical' of herself. She has encountered reflective tasks on previous OU courses but only recently. She thinks they are helpful to 'take on board maybe things you haven't done well in'.

Extract 3

In talking about reflection, Patricia never offers ideas regarding society or personal development planning. It hasn't changed her life or her view on the world. However, she sees the value in thinking about when went well and not so well on her assignments.

Those who held a conception of reflection as a learning tool were able to link the activity of self-evaluation to improving their performance. Extracts 4 and 5 are from the researcher's notes and offer examples of these notions.

Extract 4

Sarah is able to talk about reflection as a way of improving her performance on something. She doesn't really explain this in terms of personal development (e.g. creating a personal development plan, reaching personal goals, etc). She mostly uses it in terms of feedback, learning and performance. She has some experience of reflection on a previous module and she thinks reflection is valuable in learning contexts (to help improve). 'I think it helps you improve and look at things from a different perspective and if you don't look back and reflect on what you've done, you're not really learning anything.'

Extract 5

Peter sees the value of reflection in learning contexts and in life (society) but he doesn't have time to reflect very much because his own life is quite busy 'I don't really think I have time. It's a bit too manic.'. He does use reflection for his assignments and sees that it helps reinforce his learning.

The conception of reflection as personal development was expressed by those who spoke about reflection in terms of taking action. Sharon, for example, talked about reflection as a necessary part of planning her future.

I need to think about where I'm going next and the way I decide on where I'm going next is to look back at the learning I'm going through at the moment and pick out the parts that I've found most stimulating, most endurable, maybe the most challenging and it could be by reflecting on what I would do, what I would make my decision on where to go next. (Sharon, 55 years old, SS101, milestone 1)

The participants who held a conception of reflection as a way to experience the world were usually able to talk about seeing things from different perspectives. Many of these participants used the phrase 'black or white' to explain a non-reflective perspective of the world.

It's important that some people are being reflective because it's, that's I would I was going to say, that's the bridge between the people that are happy to look at different ways of doing things and people that aren't. (Ellie, 44 years old, SS101, milestone1)

This group of students seemed to consider reflective members of society as ones who questioned authority.

I think from a societal point of view, we need to be reflective on the things that we see around us because there is so much pressure to consume the messages that we receive from authority. It seems to me, I mean Hilary Clinton, for instance, she talks about opinion makers quite frequently, so there are authorities in society that make decisions about how we should think or frame issues, which is not necessarily a healthy thing for society. And by being reflective and by thinking about the things we are told from authority and from power, then we can start to unravel the truth from things. (Simon, 55 years old, SS101, milestone 1)

Lastly, the three students who conceptualised reflection as transformation talked about how reflection had changed their lives or had impacted certain ways of doing things. Students who held this conception were able to articulate their ideas on reflection very clearly with a good level of confidence. In one interview, a participant cited an example of how her own reflective practices had helped her leave her partner. In another interview, one of the participants recalled using reflection in her decision to end an abusive relationship. All participants holding this conception were female.

It changed my life. I got a divorce and everything. (Nancy, 55 years old, SS101, milestone 1)

Typically speaking, the students in this category talked about reflection as a way to take control of your life.

Anyone can be anything they want to be within reason. Life is about choices and choosing to make the right ones. (Stephanie, 33 years old, SS101, milestone 1)

When reflection results in the taking by that person of informed positive action to change, it shows its importance both in terms of personal growth and, potentially, social or economic development. (Andrea, 33 years old, BS121, milestone 1)

7.5.2 Analysis phase 2—conceptions of reflection at milestone 4

The frequency distribution of conceptions held by the 11 participants at milestone 4 are presented in Table 7.8.

Table 7.8: Conceptions of reflection at milestone 4

<i>Categories of description</i>	<i>Frequency (n=11)</i>	<i>Frequency (%)</i>
Reflection is a human trait.	0	0
Reflection is a thinking process.	0	0
Reflection is self-evaluation.	0	0
Reflection is a learning tool.	2	18
Reflection is personal development.	3	27
Reflection is a way to experience the world.	2	18
Reflection as transformation	4	36
Total	11	100

Many of the themes that emerged from milestone 1 data were also present in milestone 4 data. For example, those who conceptualised reflection as a learning tool spoke about reflection as a way to improve performance.

To me reflection is learning about how I learn, what works for me and what does not. I think I'm getting there, albeit a bit slower than I anticipated. (Charles, 54 years old, SS101, milestone 4)

Those who held a conception of reflection as personal development at milestone 4, were able to talk about achievement and taking action, similar to those at milestone 1.

It helps me to clarify my thoughts and I've found it beneficial to review my entries at a later date and see how my learning has progressed and think about whether any further action is necessary. (Maria, 52 years old, CPD122, milestone 4)

Of the two students who held a conception of reflection as a way to experience the world at milestone 4, both expressed their ideas about reflection in terms of questioning and learning through experience.

I view it as ability to take a deeper approach towards particular subject. Learning from experience, questioning of new concepts. (Michael, 39 years old, BS121, milestone 4)

To internalise experiences and consider the implications and possible outcomes of situations in a pros and cons sort of way to clarify understanding. (George, 58 years old, BS121, milestone 4)

At milestone 4, the largest percentage ($n=4$, 36%) of students held a conception of reflection as transformation. Themes among this group included the notion of wisdom, empowerment and lifelong learning.

Reflection is the key to a more empowered future where we positively can improve ourselves and, hopefully, the lives of those around us—like I said, reflection is a crucial life skill! (Simon, 55 years old, SS101, milestone 4)

Reflection means that I have moved on and been able to learn from my mistakes and become a better, wiser person. (Stephanie, 33 years old, SS101, milestone 4)

Reflection for this group offered a particular way of working, that, as one participant noted, was often reassuring.

I did think it was very strange when I first began this course as I had never had to do it before but now I can't imagine not 'working' in this way. (Susan, 38 years old, SS101, milestone 4)

I find it a useful tool in letting go as well, reflecting on difficult issues and thinking if things could have been done better or not, if the answer to that is not really then I know I did my best and it kind of puts the matter to bed without going over and over it which never does any good. If the answer is yes I have then made the first step in doing things better the next time. (Ellie, 44 years old, SS101, milestone 4)

7.5.3 Analysis phase 3—net change of each participant retained at milestone 4

Of the 11 participants whose data was used at milestone 4, all but two of them experienced a change in the conceptions they held at milestone 1. Viewing the conceptions as an outcome space, the seven categories of description can be organised in a linear way (see Chapter 6, Figure 6.2). In this phase of analysis, the researcher visualised the conceptions

along a spectrum. Figure 7.1 is an example of how this was considered. Each of the points on the spectrum represent one step.

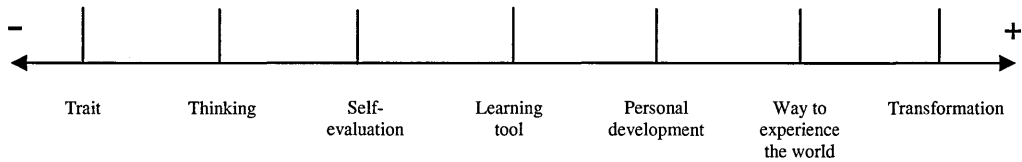


Figure 7.1: Spectrum of conceptions of reflection

Table 7.9 summarises the change from milestone 1 conceptions to milestone 4 conceptions in terms of steps. The biggest change was experienced by Susan who changed 3 steps.

Table 7.9: Conceptual change by steps of those who completed the study

<i>Participant</i>	<i>Milestone 1 conception</i>	<i>Milestone 4 conception</i>	<i>Change</i>
Ellie	as a way to experience the world	as transformation	1
Charles	as self evaluation	as a learning tool	1
Susan	as a learning tool	as transformation	3
Simon	as a way to experience the world	as transformation	1
Jason	as a way to experience the world	as a learning tool	-2
Stephanie	as transformation	as transformation	0
George	as a learning tool	as a way to experience the world	2
Michael	as a learning tool	as a way to experience the world	2
Maria	as a learning tool	as personal development	1
Robert	as self evaluation	as personal development	2
Corrine	as personal development	as personal development	0

Represented as a line chart (Figure 7.2), the net change between milestone 1 and milestone 4 conceptions was toward the positive end of the spectrum.

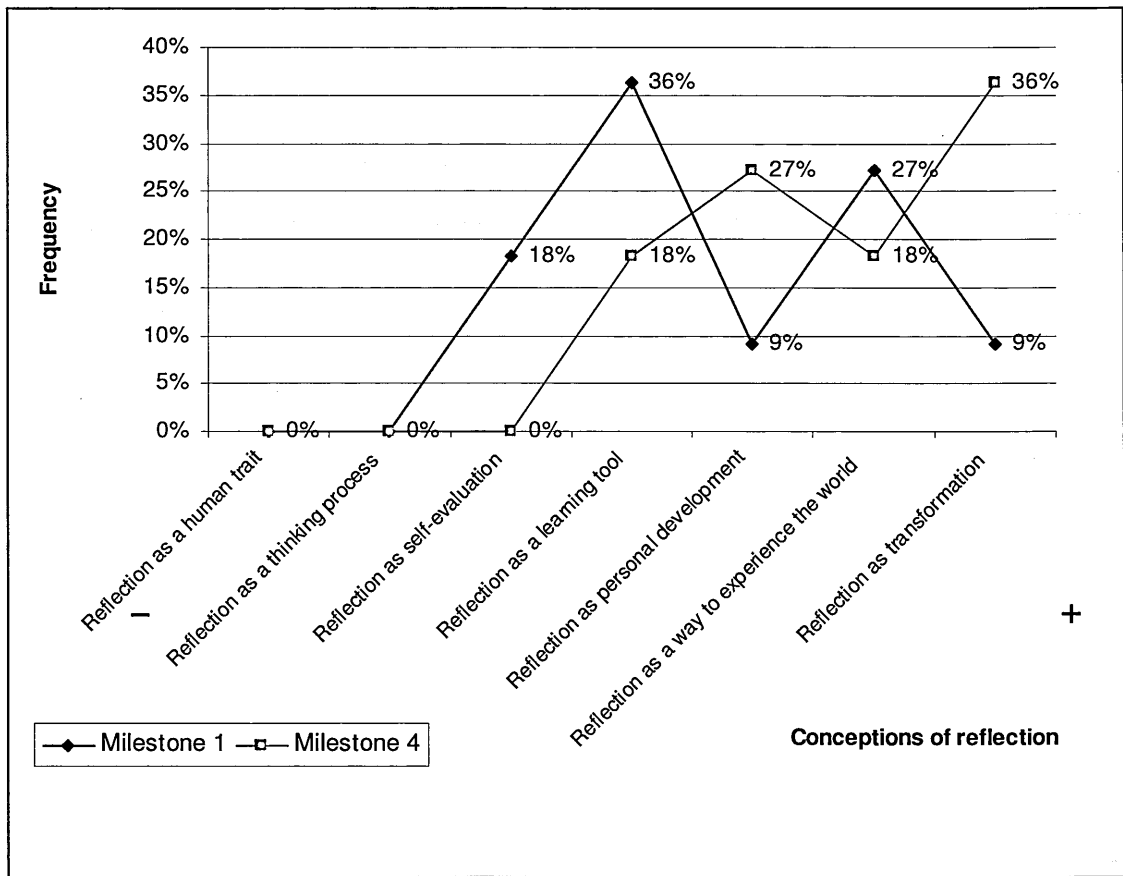


Figure 7.2: Conceptual change from milestone 1 to milestone 4 in those who completed the study ($n=11$)

A Wilcoxon signed ranked test was used to determine whether the change in conceptions experienced by this group was statistically significant. However, the test statistic ($Z = -1.93$) just fell outside the rejection regions ($Z < -1.96$ and $Z > 1.96$) (Siegel & Castellan, Jr., 1988, p. 140). Therefore, the change in conceptions experienced by this group is not statistically significant. This outcome may be due to the small sample size.

A Mann-Whitney test was carried out to test whether the conceptions held between those who completed the study and those who did not were statistically different. The mean ranks suggest a trend of completers holding more sophisticated conceptions of reflection as compared to noncompleters (see Table 7.10).

Table 7.10: Mean ranks of conceptions of reflection held by those who completed the study compared to those who did not (SPSS output from Mann-Whitney test)

Group	<i>N</i>	Mean Rank
Completers	11	17.91
Noncompleters	20	14.95

The test statistic $Z = -.89$ did not fall into the rejection region ($Z < -1.96$ and $Z > 1.96$) and, as such, shows that the difference between these two groups is not statistically significant.

7.5.4 Analysis phase 4—unusual cases and instances of no change

The only case that may be regarded as unusual would be the movement to the left of the spectrum by Jason (66 years old, SS101). Milestone 1 data suggested that Jason held a conception of reflection as a way to experience the world. Extract 6 presents the researcher's note regarding her milestone 1 interview with Jason.

Extract 6

Jason has used reflection in splitting up with his girlfriend and taking control of his life. Previously, he had used reflection when dealing with his wife's terminal cancer and could talk about his experiences with that. He feels that people with more life experience can be more reflective and that through experience, people can learn to be more reflective.

At milestone 4, Jason did not mention reflection in social or personal terms as he did in milestone 1. Instead, he focused on reflection in terms of his relationship with his tutor.

I have found the reflection process to be good for clearing my thoughts and also for expressing my thoughts as an individual directly to the tutor.

When considered holistically, this does not appear to be that unusual after all. The interviews at milestone 1 and at milestone 4 shared a very similar interview protocol. The major difference then, would be the learners' own experiences. At milestone 1, Jason's experiences with reflection were quite personal: coping with his wife's terminal illness and later, making a decision to split from another partner. However, at milestone 4, Jason's perspective on the questions had changed to that of a learner in higher education. Jason articulated his ideas about reflection in terms of how he had used it on the module. Perhaps this was a case of 'reactivity', the phenomenon whereby a participant provides responses they think the researcher wants to hear (Hammersley & Atkinson, 2007, p. 101). By talking about reflection in terms of his learning experience, Jason may have felt he was pleasing the researcher. Or, maybe it was possible that he had positioned himself as a tertiary learner

and was framing his conceptions from this perspective. Indeed, this was seen in other examples where change had occurred in a positive manner along the spectrum. These are discussed later in this chapter.

There were 2 cases of no change. Stephanie (33 years old, SS101) maintained her conception of reflection as transformation from milestone 1 to milestone 4. Stephanie championed reflection from the beginning of the study. Her responses at milestone 1 showed that she held a sophisticated view of reflection.

I think with any new skill reflecting on what went wrong and what went right can only lead to natural progression; which effectively is what HE [higher education] is all about.

SS101 was Stephanie's first experience on a university module. She worked as a medical receptionist and was surrounded by 'patient death and serious illness'. She commented in her milestone 1 interview that 'it makes you realise just how lucky you are and that life is too short to surround yourself with people who don't value you.' She also shared an experience of being assaulted by her 'best friend's partner'. Stephanie explained that the use of reflection helped her realise that:

I had been pushing away the people who really valued me and devoting far too much time to those who didn't. My divorce a few years back also made me reflect on the negative choices I have made with my life in the past.

Stephanie's position as a reflective individual could have been formed through her life experience and then reaffirmed in her experience as a university student to become a 'better, wiser person' (milestone 4).

Corrine (48 years old, CPD122) held the same conception of reflection as personal development throughout the module experience. Her work experience dealt with helping others prepare personal development plans and for that reason she felt (at milestone 1) that reflection, for her, was done 'as a matter of course'. At milestone 4, Corrine talked about reflection in terms of her own achievements.

I actually enjoy reflecting on what I have or have not experienced, learnt and achieved. However, at times it can be uncomfortable to learn things about myself, but I know that this is part of the learning process and I value that greatly.

In Corrine's case, it could be that her previous experience of helping others use reflection to prepare personal development plans had so heavily shaped her conception of reflection that she did not consider reflection in other ways. It could also be, as suggested for Stephanie, that her university experience reaffirmed Corrine's previously held views on reflection.

7.5.5 Analysis phase 5—factors for change

Two themes emerged during the data analysis that are presented here as factors for changing conceptions: repositioning and the influence of other people. The implication is not that they are independent factors for change. Rather, it could be possible that a student experiences both of these factors to varying degrees. And, it is plausible that a hybrid of these factors could instigate a different conception of reflection.

Repositioning

In the previous section it was suggested that Jason's changing conceptions were due to his changing perspective on reflection. It was proposed that Jason's experiences in the module helped him to consider reflection in terms of a learning context and of himself as a reflective learner. This notion of repositioning oneself from one perspective to another could help to explain some of the changes from milestone 1 to milestone 4 in the other participants' conceptions. And, these 'new' conceptions could be based on the content or thrust of the particular module in which these students were enrolled.

For example, both George and Michael changed their conceptions of reflection from a learning tool (milestone 1) to a way to experience the world (milestone 4). They were both students on Module B, which happened to be underpinned by Kolb's (1984) Learning Cycle (see Chapter 2). The module promoted the use of reflection in making sense of experiences by theorising on new ideas and testing out different ways of doing things. In

that respect, it was not unusual for George and Michael to express their ideas on reflection in an experiential way.

Maria and Robert both held conceptions of reflection as personal development at milestone 4 and were both enrolled on module CPD122. This particular module helped students to prepare a personal development plan, by sharing experiences, setting personal goals and learning to carrying out action planning.

To me reflection means to be able to look at a situation and go through it step by step braking [sic] it down to be able to go forward and achieve personal goals.

(Robert, 28 years old, CPD122, milestone 4)

This is another example of where the content of the module could have offered the students a different perspective from which to view reflection.

The influence of other people

Data from milestone 4 suggested that other people, such as the module tutor and other students, had an impact on the participants' conceptions of reflection.

I have found it particularly helpful when reflection is part of a shared activity for instance in an online forum or tutorial. (Maria, 52 years old, CPD122, milestone 4)

In my reflection I referred to this difficulty and elicited a meaningful response from the tutor. This was helpful and perhaps more instructional than previously where I had been getting higher marks and therefore paying less attention to the tutor's critique. (Jason, 66 years old, SS101, milestone 4)

Another participant noted that reflection was more important for distance learners than for conventional university students.

I think it's important at all levels, but at the OU where you don't have face to face contact with other students, it is important to reflect. As you only have yourself to test you, rather than a classmate at school. (Charles, 54 years old, SS101, milestone 4)

Whether present or absent, the influence of other people seemed to play a role in the experiences of and perspectives on reflection. Interviews in milestones 2 and 3 tried to elicit ideas about the role of the tutor and of other students in their module experience. Findings from these interviews are discussed later in the chapter.

7.5.6 Analysis phase 6—other key points

Several key points were raised during the interviews, two of which occurred frequently. First, reflection takes time and is therefore more easily achieved by people with more time available for reflection.

I don't really think I have time [to reflect]. It's a bit too manic. (Paul, 30 years old, SS101, milestone 1)

I suppose, practically, some students are under a lot of pressure. I would find it more difficult to reflect if I was working full time...I probably have more time to be thinking about the whole package. (Grant, 63 years old, SS101, milestone 1)

I spend a lot of time of my own so you do a lot of reflecting... (Nancy, 36 years old, SS101, milestone 1)

Second, reflection comes with age and/or experience.

I think reflection is a useful tool in higher education as it encourages you to be more open minded and less judgemental, although study has no age limits I think as younger people we can be adamant that we think in a particular way or view life in a particular way and this can change with life experiences and being exposed to different things, whether that be subjects, different lifestyles, cultures, etc. (Ellie, 44 years old, SS101, milestone 4)

I suppose as people are older, I suppose things happen in life so I suppose you reflect on things more than what you used to. (Amy, 40 years old, SS101, milestone 1)

The more experience you have, the more reflective you're likely to be. If I'm saying some students are more reflective than others, I think the more experience you've got, the more likely you are to be reflective than I guess uh, lots of younger people I'm sure some have uh some fairly strong experiences that might make them as reflective as anybody else. (Jason, 66 years old, SS101, milestone 1)

However, two participants suggested that it was their older age that restricted them from being reflective people. Louise commented:

I don't know whether it is an age thing to be accustomed to it [reflection].
Um, I don't find it easy to sort of tease out how I feel about things. I'm bit of a black and white person I suppose. (Louise, 66 years old, SS101, milestone 1)

7.5.7 Analysis phase 7—inter-module differences

At Milestone 4, all participants on module BS121 ($n=2$) held a conception of reflection as a way to experience the world. All participants on module CPD122 ($n=4$) held a conception of reflection as personal development. As explained earlier, these conceptions were in line with the overarching aims of the respective modules (i.e. BS121 promotes reflection as part of experiential learning and CPD122 explores reflection as part of personal development planning). One issue is whether these participants really held these conceptions or whether

they thought—when participating in the study—they were being tested on the content of their modules and just regurgitating what they thought they should say.

In module SS101, the participants at milestone 4 either held conceptions of reflection as a learning tool ($n=2$) or as transformation ($n=4$). Short reflective tasks are built into SS101 to encourage students to think about their own progress on the course. This, along with the previous suggestion of ‘repositioning’, could explain why some students on SS101 were able to talk about reflection as a way to help them learn. The content of SS101 deals with social concepts and issues. This sociological focus on the learners’ own thinking and writing could influence their perspectives on reflection as a contributing activity for a dynamic society, therefore shaping an understanding of reflection as transformation.

7.6 Findings from milestones 2 and 3

Interviews at milestones 2 and 3 did not try to specifically elicit participants’ conceptions of reflection. As mentioned earlier in the chapter, the reasons for collecting data at these points had to do with understanding the participants’ thoughts about the reflective activities on the modules and exploring what they thought about the feedback they received. These interviews also probed the participants’ ideas about whether (and how) the other students on the modules contributed to their experience.

7.6.1 Reflective activities

Reflective activities are often embedded in module assignments, usually as a short set of questions at the end of an assignment. In SS101, for example, the questions ask the students what they found easy and difficult about preparing the assignment. Another question asks how they could make a difficult area easier in the future. For many of the students these activities seemed superfluous at the beginning of the module. However, over time, the students seemed to value these reflective tasks.

In the beginning I found it a very strange thing to be asked to do, but it is not difficult and my opinion has changed. (Georgina, 46 years old, SS101)

Initially I didn't understand the purpose of the self-reflection bit, but as the course is progressing, it is useful to look at past self reflections with the tutor feedback on them and it then becomes clear how progress in terms of confidence/skills have been made or if there has possibly been some areas that continue to be a personal challenge (Patrick, 41 years old, SS101)

One participant referred to the reflective tasks as having 'meagre' word limits (Louise, 66 years old, SS101). Several others commented on how the low word limit was a barrier to expressing their reflections.

I understand the limitation of 50 words but could be short to fully convey thoughts. Having said that, yes, it is very useful...and positive feedback does return from the tutor. It is useful to be able to give reflection at the time of assignment and not wait for the next tutorial. (Grant, 63 years old, SS101)

I feel that it [the reflective activity] should be there at the end of the TMAs [tutor marked assignments] but 50 words is often inadequate to summarise the difficulties encountered AND express what was enjoyable. While I'm quite happy to do this after the TMA I'm frustrated that I can't express what I feel I need to in 50 words. (Simon, 55 years old, SS101)

Useful but word limit was restrictive. (Ellie, 44 years old, SS101)

Perhaps I am missing something vital here, but I would have thought asking some different questions and allowing more scope for expression would have been better. (Louise, 66 years old, SS101)

There was evidence that some participants really embraced these reflective tasks.

I think this is a good idea because my tutor can help me with any problems I might have. (Alice, 20 years old, SS101)

The reflection on bits I found difficult about this assignment part was the most influential. I took an A4 sheet of paper, put my self-reflection on it and put it on the wall. So as to make sure I would act on it. (Charles, 54 years old, SS101)

Still, others found the reflective tasks at the end of each assignment a chore.

Self reflection is a pain and I don't see the benefit of writing it down. (Sarah, 55 years old, SS101)

7.6.2 Feedback

Broadly speaking, the participants valued the feedback they received from their tutors. It was rare for the participants to comment negatively about the feedback. In most cases, they praised their tutors' efforts.

The feedback on my TMAs [tutor marked assignments] have always been positive even when I have done something badly and this has helped me progress with my academic writing. (Corrine, 48 years old, CPD122)

The feedback has been constructive, motivational and I find it the most vital part of monitoring my personal progress throughout my learning. (Catherine, 56 years old, CPD122)

To be honest, the greatest asset on the course has been to have a committed, motivated and highly enthusiastic tutor. (Simon, 55 years old, SS101)

7.6.3 Other students

All of the modules sampled in this study are designed to be facilitated using blended teaching methods. This meant the study materials are available both online and in print version. The 'classroom' is an asynchronous forum, referred to at The Open University as a tutor group forum. SS101 and BS121 also offer several face-to-face tutorials throughout the term.

When asked about their experiences of working with the other students, the participants had mostly positive things to report. Some of the participants really valued the role of the other students in their learning experience.

I have been very motivated by meeting other students at tutorials who are working very hard and have clear goals to complete a degree and start new careers. When you are the only person among your friends, family and community who has decided to volunteer for studying not even connected to work, it is very encouraging to meet other people doing the same and makes you feel part of an OU community. I have good support and encouragement at home but meeting other students has helped a lot. (Georgina, 46 years old, SS101)

There were a few who did not like using the asynchronous forums, preferring the face-to-face tutorials instead.

Tutorials are a great way of learning from other students, but the forums are not for me. Very hit and miss. (Sarah, 55 years old, SS101)

I've not participated in the forums as I'm not used to conversing with people using this medium. I think I will need to try and participate before the end of the course as this seems to be used a lot. (Charles, 54 years old, SS101)

Others remarked at how useful the forums were to their learning. One participant explained that she subscribed to a social networking page that was set up by the other students on her module.

I have found that using forums and Facebook has helped with other people's opinions and what they have learned. (Alice, 20 years old, SS101)

It's great being able to discuss something and not get a 'blank stare' effect. Discussing problems or simply having a natter about the subject matter of the week really boosts my morale and keeps me focused. (Susan, 38 years old, SS101)

Despite a few opposing viewpoints and outliers, the participants in this study found the reflective activities at the end of each assignment to be useful in monitoring their own development and in eliciting support from the tutor. The formal written feedback from the tutor supported this development by being 'constructive' and 'motivational' (Catherine). The other students played an important role in motivating the participants and in learning through others. This bundle of resources, activities and community seemed to work well in supporting the learning experience.

There were a few points raised in this section of the study that may have implications for the University and for module staff. For example, the purpose of the reflective activities appeared to be ambiguous at the beginning of the module. The word limit seemed to restrict reflective expression. The forums were not being used unanimously.

7.7 Chapter conclusions

The analysis of data from this Study offered the following findings and key points.

1. Six of the seven conceptions of reflection identified in Study 1 were also identified in Study 2.
2. There is evidence that distance learners' conceptions of reflection can change during their level 1 undergraduate module experience.
3. Students' conceptions of reflection may be influenced by the design and content of particular modules they have taken.
4. Commonly held notions that reflection takes time and comes with age/experience can shape the ways in which distance learners conceptualise reflection.

This chapter reported on a longitudinal study of distance learners' conceptions of reflection. Evidence from this study suggests that conceptual change regarding reflection can occur during distance learners' level 1 undergraduate experience. Considered alongside Figure 6.2: *Variation between categories of description*, it is plausible to assume that higher education may play a role in distance learners' developing conceptions of reflection. Logically speaking, this would imply that students at higher levels of study hold more sophisticated conceptions of reflection than students at lower levels. The next chapter reports on Study 3, which investigated distance learners' conceptions of reflection at postgraduate level. Study 3 aimed to determine whether students enrolled in higher levels of study held higher order notions of reflection.

Chapter 8: Study 3—Distance learners’ conceptions of reflection in postgraduate study

8.1 Introduction

Study 2 investigated the extent to which distance learners’ conceptions of reflection changed over a level 1 undergraduate module. The findings suggested that distance learners’ conceptions of reflection can change during their level 1 module experience. Two factors were proposed that influenced this change.

1. the students’ re-positioning from being nonstudents to being university students
2. the design and content of particular modules

Contextual factors that influenced a student’s opportunity to reflect included having time to reflect and having life experiences on which to reflect.

Chapter 8 reports on the research processes and findings from Study 3. Study 3 addressed research question 3: To what extent do distance learners with more experience of higher education hold different conceptions of reflection from distance learners who have less experience of higher education.

8.2 Overview

The findings from Study 2 suggested that, during their level 1 undergraduate experience, distance learners develop more sophisticated ways of understanding reflection.

It could be postulated that distance learners on higher level modules may hold higher order notions of reflection. First, it is likely that distance learners on higher level modules have completed a programme of study prior to their current level of study. Postgraduate students at The Open University are typically expected to hold an undergraduate degree.

For most of our postgraduate qualifications or standalone courses you will need to have an undergraduate degree or equivalent before starting, though you can gain access to some if you have sufficient professional expertise.

(Open University, 2012)

Therefore, it would be logical to assume that postgraduate learners have had more experience of higher education than level 1 undergraduate students.

Second, the differences between undergraduate and postgraduate study indicate that postgraduate learners would have more experience in using reflection for study. Table 8.1 is a summary of the Quality Assurance Agency's (QAA) (2008) descriptors for level 1 undergraduate study and for postgraduate study.

Table 8.1: Summary of descriptors for level 1 undergraduate study and for postgraduate study

Level 1 undergraduate	Postgraduate
Knowledge of concepts and principles	Systematic understanding of knowledge
Ability to evaluate and interpret ideas	Critical awareness of current problems/insights
Ability to present, evaluate and interpret quantitative and qualitative data	Comprehensive understanding of techniques
Ability to develop arguments and make sound judgements in accordance with relevant theories	Originality in the application of knowledge
Ability to evaluate the appropriateness of different approaches	Conceptual understanding that leads to critical evaluation
Ability to communicate the results of their study/work	Ability to evaluate methodologies and to propose new hypotheses
Skills to undertake further training	Ability to deal with complex issues
Ability to exercise some personal responsibility in the workplace	Ability to be self-directed, original and autonomous in planning and carrying out their work
	Ability to continue their own development and to actively take personal responsibility in the workplace

(adapted from QAA, 2008, pp. 15-23)

This summary shows a considerable difference in learning outcomes for these levels of study. Key differences for postgraduate learners include: the magnification of critical

thinking, the increased complexity of problem solving and the greater onus on personal development. Although reflection is not expressly included in these learning outcomes, there is literature to confirm the role of reflection in all of these areas.

As explained in Chapters 2 and 3, critical thinking models include reflection as a stage in the thinking process (cf. Brookfield, 1987). Problem solving requires reflection in order to 'hypothesise', 'synthesise' and 'integrate' ideas (Hershkowitz & Schwarz, 1999, pp. 67-69). Reflection is purported to be an activity required for 'perspective shifts' when carrying out collaborative problem solving activities (Shirouzu et al., 2002, pp. 491-492). And, in terms of personal development, reflection is central to development planning and employability (cf. Ramsey, 2006; Watts & Butcher, 2008). Postgraduate learning, therefore, is a locus for reflective activity.

Study 3 investigated postgraduate distance learners' conceptions of reflection. These learners' previous experiences in higher education may mean that the effect of re-positioning from a nonstudent to a university student is not a factor in how they conceptualise reflection, as it was for the Study 2 cohort. Also, as already suggested, the learning outcomes for postgraduate study create opportunities for a range of reflective activity. The expectations held by learners entering postgraduate study may already include reflection. It is plausible to conclude that these learners will hold more highly-developed notions of reflection than students entering level 1 undergraduate study. Study 3 illuminated this research question.

8.3 Design and method

This study was designed to collect data at two key points during a module block of The Open University's Postgraduate Certificate in Academic Practice. This online module is designed for tertiary teacher-practitioners to reflect on and to validate their own teaching practice. Table 8.2 outlines the rationale for choosing the 'milestones' for this study. Appendix 18 shows the draft questionnaires for each milestone (before they were developed into online questionnaires).

Table 8.2: Data collection points for Study 3

<i>Label</i>	<i>Timeframe</i>	<i>Rationale</i>
Milestone 1	Within the first two weeks of the module	To collect responses to a similar set of questions used in Study 1. This will help to test the framework proposed in Chapter 6 and to locate the participants in the proposed outcome space.
Milestone 2	After submitting the first tutor marked assignment	To understand the participants' views of the reflective components of the task. To explore the participants' thoughts about the feedback and the role of other students in their learning experience.

Data were collected using open-ended online questionnaires. Links to the online questionnaires were sent to the participants at each milestone. The questions corresponded with the rationale for each point of data collection, meaning the questions at milestone 1 were different from those at milestone 2.

As outlined in Chapter 5, online questionnaires offer certain advantages in terms of time, cost and geographical reach. For this study, online questionnaires were chosen because this method provided a means to access all of the students on a particular postgraduate module regardless of where they were located. Additionally, it was felt that an online method was appropriate because of the online nature of the module on which these students were enrolled. The students, it was assumed, would have the skills and resources to use this type of data collection instrument. In terms of analysis, the responses to the online questionnaires were collated into an Excel file, which provided a relatively clear way of viewing and organising the data.

No pilot study was carried out for this study. As was the case for Study 2, many of the same questions had been used in previous questionnaires and interviews for this thesis research. Therefore, it was felt that the wording and ordering of the questions had been trialled already. Also, the researcher felt that the general activity underpinning Study 3 was one of comparison. For this reason, it seemed pertinent to maintain similar questioning for this study than was used in the previous studies.

8.4 Participants and permissions

Similar to the previous two studies, the researcher used the UK's Open University as the site for data collection. As with Studies 1 and 2, the researcher was required to seek relevant permissions to carry out Study 3. Appendix 19 is the researcher's application to The Open University's Student Research and Project Panel (SRPP) and Appendix 20 is the

email approval letter from the SRPP. Appendices 21 and 22 show the application and respective approval letter to/from the Data Protection Office. In consultation with the supervisors of this thesis, it was decided that approval from the University's ethics committee was not necessary for this study since it did not pose any significant risks to the participants or to the researcher.

For this study, the researcher requested a sample of all students currently enrolled on the Postgraduate Certificate in Academic Practice module with The Open University, as already discussed in this chapter. Variables such as age, gender and previous educational qualifications were also requested from the SRPP. A letter of invitation, a consent form and a letter of support from the researcher's primary supervisor were sent out to this sample (see Appendices 23-25). The University's Survey Office collated the responses from the sample and sent the final data in password protected files to the researcher.

The sample comprised 22 students enrolled on a particular intake of module named previously. This module was delivered by an academic team within the researcher's own research department. This meant that the researcher had convenient access to the Module Team Chair and to the module resources, which helped to gain endorsement for the research and to provide support. For these reasons, this module was selected for Study 3 over any other postgraduate module.

Completed surveys were received by 12 participants at milestone 1. This represented a response rate of 55%. Of those who responded, 10 participants also responded to the survey at milestone 2. Therefore, 45% of the original number of students sampled participated in the full study. Table 8.3 shows a demographic profile of all 12 participants. Gender-specific pseudonyms have been used in place of the participants' real names.

Table 8.3: Demographic profile of participants in Study 3

<i>Participant</i>	<i>Age</i>	<i>Gender</i>	<i>Educational background (self-reported)</i>
1. Jason	50	Male	MSc and BA (Hons) History and Politics
2. John	59	Male	Postgraduate Diploma in Haematology and BA Politics
3. Beth	48	Female	Experience at undergraduate level
4. Alison	46	Female	Postgraduate Diploma in Social Work, BA Community Education, Certificate in Child Protection
5. Susan	45	Female	6 postgraduate modules and a BSc (Hons)
6. Sarah	57	Female	Currently enrolled on a PhD, MSc (Distinction), BEd
7. Mary	57	Female	3 professional qualifications (Teaching), MSc, 2 undergraduate degrees
8. Ron	60	Male	Enrolled on an MSc in Social Research, postgraduate qualification in Social Work, Postgraduate Certificate in Professional Management, 2 undergraduate degrees (Classics and Social Science)
9. Margaret	46	Female	PhD Early Childhood Education, Master of Early Childhood Education, undergraduate degree in Psychology
10. Brenda	63	Female	1 postgraduate module in teaching, graduate trainee (Secondary Schools), undergraduate experience (Maths and Computing), Certificate in Christian Studies
11. Zebi	55	Female	Maths education (level not reported)
12. Carl	42	Male	PhD in Computer Science, MBA, Certificate in Spanish, Certificate in Social Care, Diploma in Management, MSc in Computing, BSc (Hons) Computer Science

Of these 12 participants, 4 (33%) were male and 8 (67%) were female. Their ages ranged from 42 years to 63 years, with a mean age of 52 years and a median age of 55 years.

In comparison to the participants in Study 2, who were distance learners enrolled on level 1 undergraduate modules, the participants in Study 3 had a smaller age range (approximately 20 years less) and a higher mean age (approximately 8 years more). The demographic profile of participants in Study 3 was similar to the profile of the whole student population at The Open University in terms of proportion of male to female and mean age. However, these participants represented a group of older students with considerable educational backgrounds.

8.5 Data analysis

The data were analysed in four phases:

1. Test the generalisability of the framework developed in Study 1 by applying it to participants at milestone 1 of this study.
2. Identify any unusual cases.
3. Investigate any differences between distance learners' conceptions at level 1 (Study 2) and at postgraduate study.
4. Explore key themes and factors for variation.

The rest of this section looks at the findings of each phase of data analysis. The data have been anonymised, using pseudonyms in place of real names.

8.5.1 Analysis phase 1—conceptions of reflection at milestone 1

Data from 12 participants were interpreted to identify individuals' conceptions of reflection at the start of the postgraduate module. Similar to how data in Study 2 were analysed, the researcher performed an iterative technique to categorise each of the participants into a particular category of description. During this process, the researcher maintained field notes to explain the reasons for each categorisation. Table 8.4 is an example of how this was done.

Table 8.4: Extract from researcher’s field notes

Conceptions at milestone 1 (pre-module)		
<i>Alias</i>	<i>Category of description</i>	<i>Field notes</i>
Carl	Reflection as self-evaluation	‘Oh yes! I had a telephone interview for another OU module a couple of weeks ago and, as I have another tomorrow, I’ve been reviewing aspects of that first performance in my mind ever since.’ Carl shows signs of conceptualising reflection as personal development but doesn't appear to use reflection for personal development in practice. He seems to consider reflection as a way of thinking about how he performed or about what went well, etc. Another quote is: ‘I continually think about the things I’ve done during a day and how I could improve.’
Susan	Reflection as personal development	‘It [reflection] enables me to effectively explore the efficacy of my work and hopefully work on improving my practice.’ Susan also feels that reflection may help us form better relationships between parents and children and, for this reason, is an important part of social development.
Alison	Reflection as a way to understand the world	‘If we are skilled at reflection it can enhance our relationships and personal lives as well as deepening our own understanding of how we react in situations.’ Alison also talked about reflection as a way to understand the learner's context so they can maximize their learning potential: ‘I think that it is vital, as I believe that education is about making a change and having an impact on the learner as a teacher. However the learner needs support to reflect on their own context of learning in order that they can adapt or retain elements to increase their learning.’

Table 8.5 represents the frequency distribution of conceptions using the seven categories of description identified in Study 1.

Table 8.5: Postgraduate learners' conceptions of reflection at milestone 1

<i>Categories of description</i>	<i>Frequency (N=12)</i>	<i>Frequency (%)</i>
Reflection as a human trait	0	0
Reflection as a thinking process	0	0
Reflection as self-evaluation	2	17
Reflection as a learning tool	2	17
Reflection as personal development	2	17
Reflection as a way to experience the world	6	50
Reflection as transformation	0	0
Total	12	100

Participants who held a conception of reflection as self-evaluation talked about reflection as a way to think about their performance.

Oh yes! I had a telephone interview for another OU module a couple of weeks ago and, as I have another tomorrow, I've been reviewing aspects of that first performance in my mind ever since. (Carl, 42 years old)

Those who conceptualised reflection as a learning tool either expressed their ideas about reflection as having a necessary role in learning and in being necessary to learn from mistakes.

No reflection, no learning. (Jason, 50 years old)

If you do not reflect on your responses to situations you are likely to make the same mistakes, over and over again. Equally you are less likely to be able to repeat a good response. (Brenda, 63 years old)

Both of the participants who held a conception of reflection as personal development talked about reflection as a way to improve oneself, usually in a professional way.

It [reflection] enables me to effectively explore the efficacy of my work and hopefully work on improving my practice. (Susan, 45 years old)

It [reflection] helps to improve things either in our own life or work. (Zebi, 55 years old)

Half of the participants in this study held a conception of reflection as a way to experience the world. Largely speaking, all of these participants talked about reflection as a necessary tool for social behaviour and responsibility.

It is something that we all do to some extent in our everyday life—the need to modify our behaviour, what we say, and how we do things according to what is happening around us. Carrying out basic everyday tasks often involves an element of reflection, such as, when crossing the road—should I go now, if I do will I be safe, will I have to run, will I make it, do I need to hurry, if I wait will it be less stressful and less risky. (Beth, 48 years old)

What people do for themselves is up to them. But we are all citizens of a society, and thus have responsibilities in our decision making. And we live in what people call a 'risk society' in which ordinary people need expert guidance about technical issues beyond their understanding: but we still have to make decisions - voting decisions, health and lifestyle decisions, and we have to have the equipment to make those decisions as well as we can. (Ron, 60 years old)

To some extent, as humans we are curious, but benefit from the social context we create. Encouraging people to inhabit an environment which promotes thinking and reflection can achieve this. But it requires commitment and hard work, at least for me. (John, 59 years old)

8.5.2 Analysis phase 2—unusual cases

In this study, there did not appear to be any unusual cases in terms of the questionnaire responses. One participant's responses at milestone 2 indicated that he was annoyed at the questions he was being asked to answer and, as a result, his answers were curt and cynical. However, the researcher valued his responses overall and decided to include this data in the study.

None of the participants in this study held a conception of reflection as transformation. In contrast to Study 2, no one in Study 3 seemed to be passionate when speaking about reflection and they didn't share any experiences of how reflection had changed their lives. This phenomenon is discussed as a key theme later in the chapter.

8.5.3 Analysis phase 3—differences between distance learners' conceptions at level 1 (Study 2, milestone 1) and at postgraduate study

Table 8.6 shows the frequency distribution of conceptions for level 1 undergraduate participants and for postgraduate participants.

Table 8.6: Frequency distribution of participants' conceptions of reflection at level 1 undergraduate study and at postgraduate study

<i>Categories of description</i>	Level 1 participants (at milestone 1)		Postgraduate participants (at milestone 1)	
	<i>Frequency (N=31)</i>	<i>Frequency (%)</i>	<i>Frequency (N=12)</i>	<i>Frequency (%)</i>
Reflection as a human trait	0	0	0	0
Reflection as a thinking process	3	9	0	0
Reflection as self-evaluation	5	16	2	17
Reflection as a learning tool	11	34	2	17
Reflection as personal development	6	19	2	17
Reflection as a way to experience the world	4	13	6	50
Reflection as transformation	3	9	0	0
Total	31	100	12	100

The postgraduate participants' conceptions are distributed across fewer categories of description than those held by level 1 participants. Additionally, there is an obvious peak in the distribution of postgraduate conceptions, which relates to the conception of reflection as a way to experience the world. Figure 8.1 displays these data as a line chart.

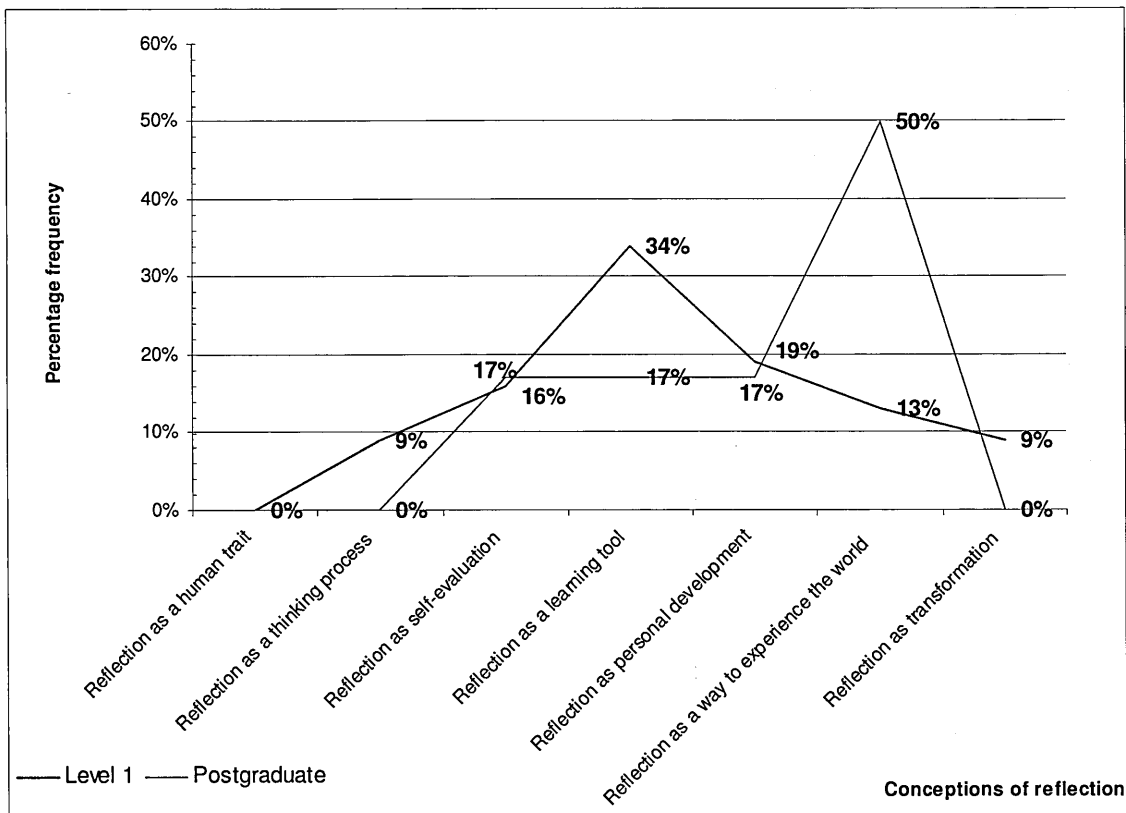


Figure 8.1: Frequency distribution of participants' conceptions of reflection at level 1 undergraduate study (at milestone 1) and at postgraduate study

Visually, there appears to be a trend toward postgraduate participants holding more sophisticated conceptions of reflection. And, using statistical analysis, the mean ranks of each group indicate a possible trend toward higher order conceptions in the postgraduate group (see Table 8.7).

Since the observations are being treated as being measured on an ordinal scale, the appropriate statistical test to compare the two groups is the Mann-Whitney test, which ranks the observations from lowest to highest and compares the mean ranks.

Table 8.7: Mean ranks for level 1 undergraduate and postgraduate participants' conceptions of reflection (SPSS output from Mann-Whitney Test)

Group	<i>N</i>	Mean Rank
Level 1	31	20.42
Postgraduate	12	26.08

The test statistic ($Z = -1.358$) does not fall within the rejection regions ($Z < -1.96$ and $Z > 1.96$) (Siegel & Castellan, Jr., 1988, p. 140). Therefore, the difference between the conceptions held by these two groups is not statistically significant. This outcome might be due to the size of the sample, especially in the case of the postgraduate students. However, it might also be the result of there being no genuine difference.

Phenomenographically speaking, the difference between the conceptions held by these two groups may be more obvious in the patterns of variation between the categories of description. Notable differences are the frequencies of participants holding a conception of

reflection as a way to experience the world and of reflection as transformation. Each of these is discussed in the fourth phase of analysis.

8.5.4 Analysis phase 4—key themes and factors for variation

The data from Study 3 suggested that half of the participants on this particular postgraduate module considered reflection to be very important as a way to experience—or live in—the world. This is depicted as the high purple peak in Figure 8.1. Many of the participants in this study were experienced professionals who had been exposed to reflection in learning contexts previously. The exception to this was one participant who had worked as a mathematician. She remarked that she found the reflective parts of the first assignment challenging. The following extract is from the researcher's field notes.

Extract 1:

As a mathematician, Brenda struggled slightly with the idea of writing an essay (she wasn't used to this way of doing things). She appreciated the humour on the forums but was surprised that she was the only one not from a social sciences background. The reflective aspects weren't difficult for her but she found it challenging to reflect on the linking of theory to practice.

The different backgrounds and experiences of this group have probably informed their conceptions of reflection. So, it is not surprising that the group held fairly high order conceptions of reflection. Yet, Brenda, who is mentioned in Extract 1, held a conception of reflection as a learning tool. In comparison to the conceptions held by others in the group,

this may seem a naïve notion. Yet, in light of her limited experience with reflection, it made sense.

Interestingly, none of the participants in Study 3 held a conception of reflection as transformation. Several factors may have influenced this phenomenon. First, there was some evidence that the participants' views of reflection were based on their roles as teachers, or in this case, as facilitators of reflection. Their responses showed empathy with their own students. Extracts 2 and 3 are from the researcher's field notes:

Extract 2:

She [Mary] took a very systematic approach to writing the essay, despite having only one day to do it (in the end). She realised she should take the advice she gives her own students and now realises that it can be quite difficult being a distance learner.

Extract 3:

Zebi was not pleased with her performance on the TMA so her responses reflected that. She wished she'd had more time to work on the TMA and felt she was now more aware of some of the pressures her own students must face in trying to complete an assignment and reflect on their progress.

This notion is indicative of the findings of Study 2, where the participants were considering reflection from particular positions. The participants in Study 3 were enrolled on a

postgraduate module that worked to reflect on and validate their own teaching practice. It is not unusual that the participants would position themselves as teachers when addressing these questions. Indeed, this finding partially corroborates two of the findings from Study 2:

1. Distance learners' conceptions of reflection may be based on their own positioning.
2. Distance learners' conceptions of reflection may be influenced by the design and content of particular modules.

However, it is not clear how far this particular finding may go toward explaining the absence of transformative conceptions of reflection in the postgraduate group. In Study 2, the participants who held a conception of reflection as transformation talked about reflection as being life-changing or about reflection as a tool for taking control of your life. In Study 3, the participants were able to conceptualise reflection as being important for society but they did not seem to articulate any views on how reflection had impacted their own lives, at least not to the extent that was evidenced in Study 2.

There were examples where the participants in Study 3 explained reflection in transformative terms.

No reflection, no learning. No learning, no change. (Jason, 50 years old)

However, responses to the rest of Jason's survey questions did not seem to indicate that he actually held a conception of reflection as transformation even though he may recognise this potential. In fact, Jason was a tutor on a reflective learning module and said he had

'experience and interest' in reflective practice. He saw reflection as 'pretty darned important' and felt that students can learn to be more reflective, since his own students benefited from the module he taught. In the second questionnaire, when given an opportunity to talk about how reflection may or may not have helped him as a student, Jason responded in curt sentences:

It was okay.

I felt comfortable doing this.

If you want a fuller answer, you can read the TMA [the assignment].

There were other instances where participants in Study 3 offered short responses when asked about their own experiences in writing the reflective essay for the first assignment.

No big deal. Done it before. (Ron, 60 years old)

This is what I expected from this module. (Mary, 57 years old)

I found this a bit challenging and somewhat indulgent. (Susan, 45 years old)

Participants in Study 2 who held a transformative conception of reflection were passionate and almost evangelical about the power of reflection in their own lives. This stands in contrast to the responses from most of the postgraduate students in Study 3. It seems plausible, then, to consider reflection as something that can become so ingrained in our thoughts and behaviour that the novelty of its supposed inherent personal power can fade. Rather than talking about reflection as transformation, in Study 3, participants who

considered themselves as 'fairly experienced reflector[s]' (e.g. Ron), appeared to have defaulted to an enlightened social view of reflection.

It is important to reflect and discuss the challenges that face society at any given time. (Margaret, 46 years old)

I see that it [reflection] as a form of self-actualisation and enables you to see the bigger picture, understand it, anticipate situations/ outcomes and move (i.e. improve) in the next instance. Gives a more rounded view on the world.

(Sarah, 57 years old)

Finally, the percentage frequency of conceptions in the data from milestone 1 and milestone 4 in Study 2 showed a relatively wide span as compared to the percentage frequency distribution of conceptions from Study 3. This could be explained, perhaps, by the range of experiences—education, workplace, life—of the participants. For example, as stated earlier in this discussion, most of the participants in Study 3 had a strong background in reflective practice, or at least in *teaching* reflective practice. Seemingly, it is through this lens that these participants conceptualised reflection. However, for participants on Study 2, the experiences with active reflection in various parts of their biographies is limited. Their understanding of reflection and of themselves of reflective learners may be realised more fully as they position themselves as university students, where they are being asked to reflect on their progress or to write a reflective essay, for example. This could explain the range of conceptions held by this group and could work toward understanding the

realisation of the transformative power of reflection as they relate to their new perspective as a university student.

8.6 Limitations of Study 3

The data in this study was limited to distance learners on a particular postgraduate module. While this sample was chosen for clear reasons, as described at the beginning of this chapter, the findings may not be representative of all distance learners in postgraduate study. Participants in this study were teacher-practitioners who were Associate Lecturers for The Open University. This module was designed for these practitioners to reflect on and to validate their own teaching practice. So, not only would the findings not necessarily represent the wider population of postgraduate distance learners, but they might only represent the perceptions and experiences of a quite narrow group of learners. Chapter 9 discusses the limitations of this thesis research in greater breadth and depth. However, it is pertinent to acknowledge that Study 3 would benefit from corroborative studies of a range of distance learners on a range of postgraduate modules.

8.7 Chapter conclusions

The analysis of data from this study offered the following findings and key points.

1. Distance learners on this particular postgraduate module did not necessarily hold more sophisticated conceptions of reflection than distance learners on level 1 undergraduate modules.
2. Unlike distance learners on level 1 modules, distance learners on this postgraduate module did not conceptualise reflection as transformation.
3. Half of the distance learners on this particular module conceptualised reflection as a way to experience the world.
4. Reflection as a way to experience the world may be a default, yet enlightened, notion of reflection among this particular group of participants.
5. The personal transformative power of reflection may be something that, once ingrained in one's thinking and doing, may be difficult to articulate.
6. As with Study 2, the participants' perspectives of themselves influenced their conceptions of reflection.
7. Also as with Study 2, the participants' conceptions of reflection may be influenced by the design and content of particular modules they have taken.

Chapter 9: Discussion of findings and conclusions

9.1 Introduction

The previous section of this thesis reported on Studies 1, 2 and 3. These studies addressed research questions 1, 2 and 3 respectively. Chapter 9 recapitulates and discusses the findings from each study. This chapter also reflects on the thesis in a holistic way, drawing together some of the key themes from the research, looking at the limitations of each study and offering a set of conclusions. Some ideas for further research are outlined in this chapter. Chapter 9 concludes by reflecting on the research journey.

9.2 Findings from Study 1

The purpose of Study 1 was to address research question 1: What are distance learners' conceptions of reflection?

Findings from this study offered seven qualitatively different ways in which tertiary distance learners conceptualise reflection. Table 9.1 repeats distance learners' conceptions of reflection from Chapter 7.

Table 9.1: Distance learners' conceptions of reflection in higher education (repeated from Chapter 7)

-
1. Reflection is a human trait.
 2. Reflection is a thinking process.
 3. Reflection is self-evaluation.
 4. Reflection is a learning tool.
 5. Reflection is for personal development
 6. Reflection is a way to experience the world.
 7. Reflection is transformation.
-

These seven conceptions formed a logical hierarchy, where the higher conceptions subsumed the lower conceptions. This hierarchy was depicted as Figure 6.2 previously in this thesis but is included again here for convenient reference (see Figure 9.1). As this was a phenomenographic study, the focus was on discerning between the conceptions. This was achieved by investigating the variance between each category of description.

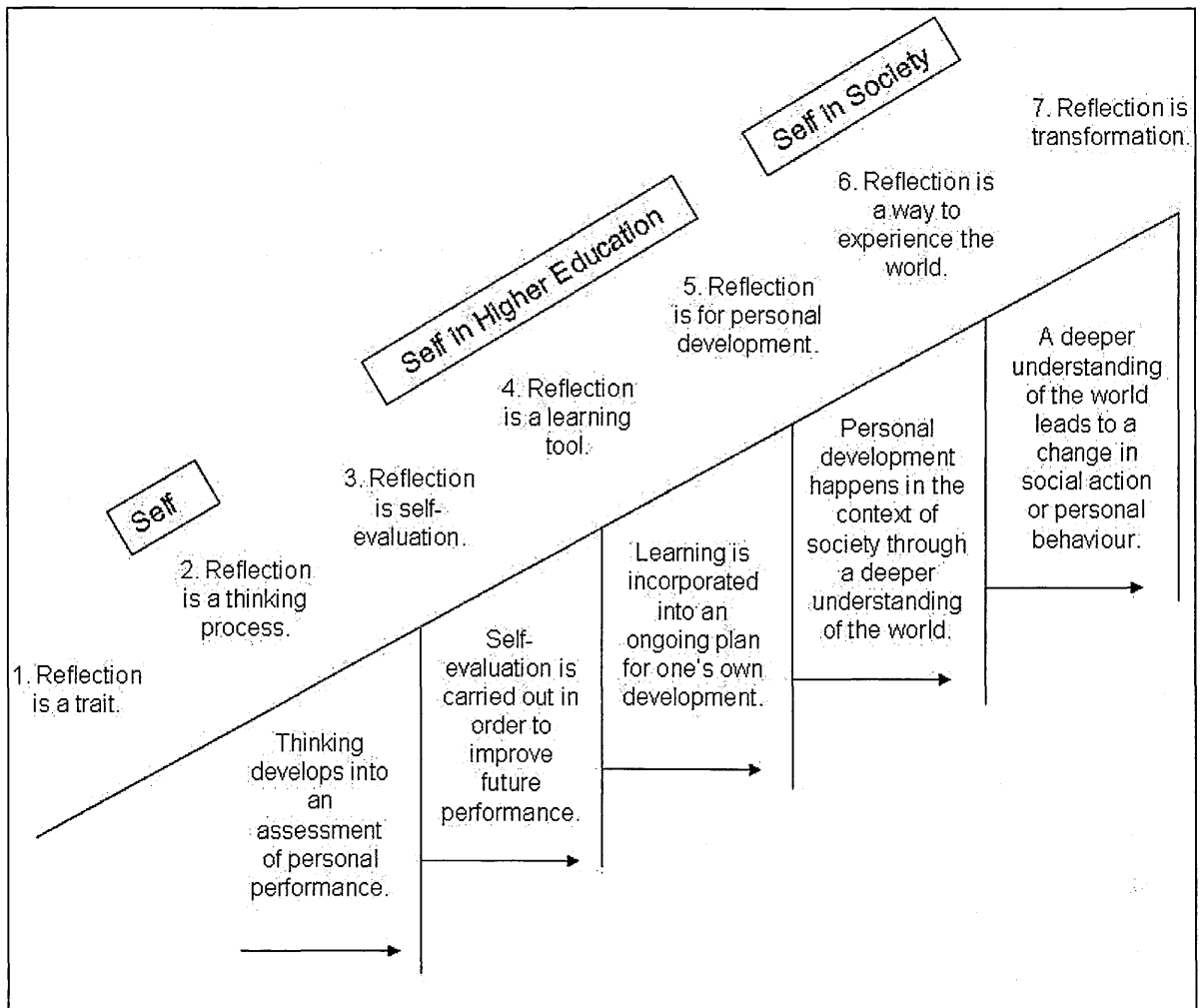


Figure 9.1: Variation between categories of description (repeated from Chapter 6)

Participants perceived there to be certain factors which influenced a student's opportunities to reflect. Several participants expressed their belief that people with more time on their hands had more time to reflect. Some participants remarked that they believed older people or people with more life experience were more reflective individuals. Others offered their belief that people who have more experience of reflection, either in work or learning, are more reflective.

9.3 Discussion of findings from Study 1

The set of seven conceptions of reflection offers a clear response to research question 1. These conceptions represent the ways this particular group of participants expressed their ideas about reflection for this study. If this study were carried out with students from campus-based institutions, would these seven conceptions emerge from the findings? It is reasonable to assume that some of these conceptions would emerge if the study were replicated using other groups of students. And, as noted later in this chapter, further testing of this framework would benefit the findings of this thesis.

Chapter 2 presented studies that tested and built on the findings from Säljö's (1979b) set of five conceptions of learning. For example, van Rossum and Schenk (1984) were able to use Säljö's framework to classify the students in their study as holding one of five conceptions. Also, Martin and Ramsden's (1987) study used Säljö's five conceptions to determine whether there was a relationship between conceptions of learning and academic performance. However, Marton et al. (1993) proposed a sixth conception of learning as personal growth. And, van Rossum and Hamer (2010) reported a sixth conception of learning as 'growing self awareness' (p. 25).

Further testing of the seven conceptions of reflection found in Study 1 would help to confirm the usefulness of this framework in understanding tertiary distance learners. Similar, subsequent studies may discover additional conceptions, as in the case of Marton

et al. Most certainly, further testing will help to delineate even more clearly the differences between these seven conceptions of reflection.

As noted in Chapter 6, the conception of reflection as a trait (conception 1) is problematic. Theoretically, these conceptions are separate categories albeit they contain the features of the previous categories. This would mean that the conception of reflection as a learning tool (conception 4) includes the notion that reflection is a human trait (conception 1). This is contradictory: the notion that reflection is only possible for those who are naturally reflective conflicts with the notion that reflection is a skill that can be taught.

Figure 9.1 explains the differences between each conception but without longitudinal data, it cannot reflect a developmental scheme. So, it is only when considering the potential for this framework to be developmental that the conception of reflection as a trait becomes problematic. One consideration is whether the notion of reflection as a trait is better placed as a nondevelopmental category. This would imply that learners who hold this conception of reflection are constrained in their development of reflective skills.

Finally, it was interesting to find that the participants in Study 1 perceived there to be certain factors that aid reflection: time to reflect, life experience on which to reflect and exposure to reflective tasks. Walker (1985), when reflecting on the time that students put into building reflective portfolios, remarked that students often overlook how important the 'time' factor really is. Thorpe (1993) referred to the need for teachers to give time and

space to their students for reflection. Barnett (1994) also noted that reflection requires time to think.

Moon's (1999) conditions for reflection, as outlined in Chapter 2, included the need for time and space to reflect. Moon's other conditions for reflection included 'quality of task', which noted the importance of well-structured reflective tasks and the need for reflection on previous learning. Arguably the latter could also be linked to life experience. Merriam, Caffarella and Baumgartner (2007) suggested that reflectivity is age-related and that adult learners look to higher education as a way to reflect on life experiences.

9.4 Findings from Study 2

The purpose of Study 2 was to address research question 2: To what extent do distance learners' conceptions of reflection change during their higher education experience? This study also tested the conceptions of reflection framework from Study 1 in as much as it was possible to assign each of the participants to a pre-established category of description.

The findings from Study 2 showed that distance learners' conceptions of reflection can change during their level 1 undergraduate experience. Most of the participants held a different conception of reflection at the end of their level 1 module than they held at the beginning of the module. In most of these cases, the shift was toward a higher conception of reflection, although whether the movement was a result of genuine development is unclear. Some of these issues are discussed in this section.

Data from Study 2 suggested that one of the factors for changing conceptions was the students' repositioning from a nonstudent to a university student. Another factor for changing conceptions seemed to be based on the design and content of the particular modules on which they were enrolled.

Study 2 findings showed that the participants perceived time and age as important conditions for reflection. The findings also intimated the importance of the reflective task, the tutor's feedback and the role of other students in facilitating reflection.

9.5 Discussion of findings from Study 2

It was interesting to see that most of the participants' conceptions of reflection developed during their level 1 undergraduate experience. This finding provides an answer to research question 2 and suggests that higher education plays a role in developing reflective thinkers.

Study 2 helped to test the findings from Study 1 in as much as the participants' conceptions in Study 2 were assigned to one of the seven conceptions of reflection already proposed. Interestingly, in Study 2, no one held a conception of reflection as a trait. The idea expressed earlier in this chapter—that this conception may not actually be a conception but rather a constraining factor in development—may be plausible. Further testing of the model may offer an answer.

At the beginning of the module, the conception of reflection as a learning tool was the most commonly held notion. At the end of the module, the conception of reflection as transformation was most common. In fact, the passion behind some of these participants' views on reflection at the end of the module was remarkable. However, this raises the question of: If distance learners' conceptions of reflection have developed to the highest order notion after their level 1 module, where is there room to develop further?

Cleave-Hogg's (1996) study may shed light on this question. As explained in Chapter 3, Cleave-Hogg's study aimed to understand how older students approached and dealt with formal learning. Using Perry's scheme for intellectual and ethical development (see Chapter 2), Cleave-Hogg showed the differences and similarities in how older students related to each of Perry's positions. The data suggested there were three additional 'Commitments' among older students that were not evident in Perry's original work. These positions included a commitment to personal learning, a commitment based on life experience and a commitment to social values.

Indeed, there is research to support the notion that mature learners may have personal reasons for participating in higher education. In their study of undergraduate Social Science students, Morgan, Gibbs and Taylor (1981) proposed two intrinsic orientations among new Open University students. Those with an 'academic intrinsic' orientation focused on learning as a way of understanding the subject matter whereas those with a 'personal intrinsic' orientation to learning focused on 'changing as a person' (p. 13). Although

Morgan et al. did not quantify their participants according to these orientations, a more recent report showed that 29% of undergraduate students at The Open University cited personal development as their main motivation for studying (Nathan & Young, 2013). That said, students may have a difficult time rationalising their motivation for attending university depending on their conception of personal development and on their expectations of higher education. Ashby, Richardson and Woodley (2011) reported findings that indicated Open University students, when evaluating their course experience, do not necessarily produce valid data. When presented with questions about personal development (i.e. confidence, communication and problem solving), some students responded 'Neither agree nor disagree'. However, during the follow-up interviews with these participants, it became clearer that these particular students did not rank these aspects of university study very highly (if at all) and therefore, should have responded 'Not applicable'. Ashby et al. suggested that the reasoning behind Open University students' responses to such survey questions may be related to a 'complex and varied background' (p. 20).

On the other hand, many students felt that personal development was not the aim of their courses, either because, as adults, they had already experienced personal development or because it was not appropriate for them to expect to develop as people through distance education. (Ashby et al., 2011, p. 21)

It is relevant to consider distance learners' conceptions of personal development and their expectations of higher education in influencing their growth. Further work in this area may offer important insight into Cleave-Hogg's framework and may enhance the model of reflection proposed in this thesis.

Cleave-Hogg's study, however, is an example of where, through further research, a more detailed understanding of a particular developmental position was achieved. With these findings in mind, it may be possible that the conceptual category of reflection as transformation may, within itself, offer room to move. In other words, are there varying conceptual levels of reflection as transformation?

Another way to consider the room-to-move question is this: Do these conceptions of reflection represent thresholds that, once crossed, cannot be revisited? Indeed holding a higher order conception of reflection implies that one also understands the lower ways of considering reflection. However, can holding a higher order conception restrict a learner from orientating to a more basic reflective approach, when it is more appropriate to do so? Answers to these sorts of questions may be interesting foci for further research.

Findings from Study 1 showed that a student's new position may be an influencing factor in their conceptual development. One way to consider repositioning is in terms of discourse. 'To speak at all is to speak from a position' (Wetherell, 2007, p. 23). A new identity of being a university student and the rhetoric around reflection surely offers students a new position from which to speak. In Chapter 4, Marton's (1986) notion of a 'relevance structure' was discussed. Participants choose the 'dimensions of the question' they want to answer and doing so exposes their own sense of what is relevant for a particular context (p. 42).

Another way to consider repositioning is as 'self-authorship', the ability to develop one's own beliefs (Baxter Magolda, 1998, p. 41). Self-authorship requires a sense of identity that, in the case of these participants, may come from their involvement in higher education. Baxter Magolda explained that self-authorship is a way to make meaning of one's experiences through questioning assumptions and through relationships with other people.

In terms of epistemological repositioning, van Rossum and Hamer (2010) found that a more student-centred curriculum promoted epistemological development among the learners. Pedagogically speaking, one concern is that students and teachers will hold different epistemological positions. This may lead to 'destructive friction' (Vermunt & Verloop, 1999, p. 270), where students are not able to assimilate the strategies proffered by the teacher. Van Rossum and Hamer argued that, while it is important to promote reflective thinking in higher education, it is also important that teachers hold sophisticated epistemological positions.

Findings from Study 2 showed that students perceive time and life experience to be important factors in aiding reflection. Such findings corroborate key themes from Study 1. Study 2 also found that students perceived the task, the tutor's feedback and input from other students as contributing factors to their own reflection. As noted earlier in this chapter, Moon (1999) included several conditions for reflection regarding the 'quality of task'. Literature strongly suggests that the role of the tutor is an important feature of reflection and development (e.g. Brockbank & McGill, 1998). Schön's (1987) ladder of

reflection, for example, proposes a dialogue between a student and a coach. Findings from Thorpe's (2000) study called for a clearly communicated rationale for reflection and for teaching staff to have expertise in providing effective feedback in order for students to engage with reflective activities. Studies on conceptual change reviewed in the first section of Chapter 3 highlighted the impact of other students in eliciting reflective thinking. Hershkowitz and Schwartz (1999) found that a small group's reflections on a problem can help to formulate alternative hypotheses.

9.6 Findings from Study 3

The purpose of Study 3 was to address research question 3: To what extent do distance learners with more experience of higher education hold different conceptions of reflection from distance learners with less experience of higher education? Again, Study 3 offered an opportunity to use the seven conceptions of reflection as found in Study 1. It was possible to apply the categories of description delineated in Study 1 to the participants in Study 3.

Findings from Study 3 suggest that the participants in this study (postgraduates) held different conceptions of reflection than the participants in Study 2 (level 1 undergraduate). However, the conceptions held by the postgraduates were not necessarily more sophisticated, at least not in terms of the framework being used. This finding provides an answer to research question 3, albeit not a conclusive one.

There was evidence from Study 3 to suggest that the student's position influences their conception of reflection. Also, like Study 2, data suggested that the design and content of the module can effect a student's conception of reflection.

9.7 Discussion of findings from Study 3

The frequency distribution of conceptions of reflection was noticeably different between the postgraduate group (Study 3) and the undergraduate group (Study 2). None of the participants in the postgraduate group held a conception of reflection as a trait or as a thinking process. As these are proposed as the most basic conceptions, it may seem—at a glance—that the postgraduate group held a more sophisticated set of conceptions than the undergraduate group. However, the problem with this conclusion is that none of the participants in the postgraduate group held a conception of reflection as transformation.

The most common conception of reflection was as a way to experience the world. Interestingly, Cleave-Hogg's highest commitment among older students was toward social values. But, considering the passion with which level 1 undergraduates spoke of the transformative power of reflection, the findings from Study 3 raise the question: Is the conception of reflection as transformation really the highest notion of the phenomenon? Or, is the conception of reflection as a way to experience the world the most developed view?

The variation between these two conceptions, as outlined in the findings from Study 1, may be interesting to re-investigate. Perhaps there are clues in the data that point to a decoy

within the upper echelons of the hierarchy. Maybe a social view really is the ultimate conception. Certainly, there is literature to suggest that students with more experience in education will have more sophisticated epistemological beliefs (Schommer, 1990) and will be more reflective (Kember et al., 2000). So, maybe the answer lies elsewhere.

One answer may lie in Wellington and Austin's (1996) work on orientations to reflective practice, as explained in Chapter 2. Wellington and Austin claimed that 'for many practitioners reflection is tacit' (p. 313). Tacit knowledge is so ingrained within us that it is difficult to share (Polanyi, 1966; Argyris, 1990).

Personal knowledge is so thoroughly grounded in experience that it cannot be expressed in its fullness. (Hovarth, 1999, p. ix)

Participants in Study 3 were more experienced tertiary learners. They were also students on a particular module relating to professional practice. The notion of tacit knowledge may offer insight into why the findings did not show this group as having transformative conceptions of reflection. It is likely that this group held quite sophisticated notions of reflection, owing to their professional status and their experience of higher education. Yet, their ways of knowing 'reflection' may have become tacit over time. In contrast, participants in Study 2, who have recently come to know the power of reflection, cannot contain their enthusiasm.

9.8 Limitations of each study

Schön's (1983) work on *The Reflective Practitioner* has been criticised for being unreflective. Usher et al. (1997) argued that Schön did not 'interrogate his own method' and that he failed to reflect on his own text (pp. 149-150). Regardless of whether this is a valid critique of Schön, it seems prudent to take a reflective view of the research and findings of this thesis. The rest of this chapter reflects on the research for this thesis by discussing limitations of each study, conclusions from this thesis, ideas for further research and the researcher's own reflections on her experiences.

9.8.1 Limitations of Study 1

One limitation of Study 1 may be the method of data collection. As explained in Chapter 6, an open-ended postal questionnaire was used to collect data for Study 1. It was reasoned that a postal questionnaire would be able to capture data from a geographical distributed sample. This method was also a more efficient use of resources than, say, travelling to interview 50 participants. Also, the participants' written responses provided an easily accessible corpus for data analysis.

Phenomenographic data collection benefits from methods that elicit descriptive accounts of participants' ideas and experiences. Questions need to probe the individual's understanding (Booth, 1997). And, for some phenomenographic studies, the ordering of the questions is important (e.g. Säljö, 1979a, 1979b).

Using an open-ended postal questionnaire limits the researcher's ability to probe participants' understandings. The researcher cannot control the order in which the participants consider the questions in a postal questionnaire, as would be possible in an online questionnaire or in an interview.

That said, there are examples of phenomenographic studies that did not involve a probing interview protocol. Watkins and Regmi (1992) asked 333 Nepalese students to provide a response (in English) to the open-ended question 'What do you mean by learning?' In their report, Watkins and Regmi do not mention a dialogical approach. They analysed the data based on the participants' response to this single question.

There are examples of phenomenographic studies that collected written responses from participants through the use of open-ended questionnaires. Van Rossum and Taylor's (1987) study used open-ended questionnaires to investigate the relationships between conceptions of learning and good teaching.

Another limitation of Study 1 may be the sample size. This is a possible limitation of all of the studies in this thesis. Chapter 6 reported a relatively low rate of response (12.5%) for the open-ended postal questionnaire. While a larger sample could have offered more data from which to shape and sharpened the categories of description, it is possible to carry out phenomenographic studies with relatively small groups of participants. As noted in Chapter

5, Trigwell and Richardson (2003, p. 41) explained that for phenomenographic research the sample size is typically small (e.g. $N=30$).

9.8.2 Limitations of Study 2

As with Study 1, one limitation of Study 2 may be the sample size. Again the response rate was relatively low (12.4%), with an even lower participation rate (7.2%). However, a low response rate was to be expected considering the participants were asked to commit to a longitudinal study that, in some cases, could require their involvement over a nine month period.

Another limitation of Study 2 may be the relatively small subset of CPD122 and BS121 students compared to the number of SS101 students involved in the study. One of the findings showed that the design and content of a particular module on which a student is enrolled could influence their changing conceptions of reflection. Some examples of this phenomenon were discussed in Chapter 7. Perhaps with additional students from CPD122 and BS121, there would have been additional evidence to support this finding. However, in needing to garner additional participants after an initial phase of recruiting, it was appropriate to sample additional SS101 students as this population is so large.

Various modes of interviewing (i.e. face-to-face, telephone, email) were used to collect data for Study 2. A limitation of Study 2 may be the use of email interviewing as this can seem less dialogical than face-to-face or telephone interviewing. However, this possible

limitation was addressed through a careful approach to probing responses and by maintaining a friendly, approachable rapport with the participants through email correspondence (see Appendix 17).

9.8.3 Limitations of Study 3

Some of the limitations of Study 3 were already discussed in Chapter 8 because it seemed relevant to raise certain points within the immediate context of the report. Another limitation associated with Study 3 may be the size of the sample and the method of data collection. The sample size was smaller than either of the other two studies ($N=12$). Although phenomenographic studies can be carried out with samples of this size, it would be prudent to corroborate the findings from Study 3 by replicating the research with larger cohorts of postgraduate distance learners.

The data were collected through an open-ended online questionnaire. As with Study 2, the limitations of this method of data collection included a loss of control in probing the participants' accounts. However, the questions were worded in a way that encouraged experiences, ideas and explanations. One advantage of an online questionnaire is that it can be designed to preserve the order of the questions. The participants for this study only viewed one question at a time, unlike the postal questionnaire used in Study 1, where there was no control over the order in which the participants considered the questions.

9.8.4 Limitations of cultural scope

This section has raised some possible limitations of each study. From a holistic view, this thesis was limited to students enrolled in a UK university and therefore did not consider the cultural value of reflection. Watkins and Regmi (1992) studied the universality of conceptions of learning using data collected from Nepalese students. Their findings supported the view that one set of conceptions would not necessarily be relevant across cultures. Mugler and Landbeck (1997) researched student learning in the South Pacific. They found that, although similar conceptions of learning are shown across some cultures, there are culturally preferred learning styles and strategies and that these are situated within the institutional culture of a student's schooling. Indeed a socio-cultural view of reflection may be a point for further consideration, both in terms of cross-cultural relevance but also in illuminating the ways in which cultural artefacts are used to mediate the process of reflective learning.

9.9 Implications for practitioners

Findings from the three studies in this thesis offered a set of seven qualitatively different ways that tertiary distance learners conceptualise reflection. During their level 1 undergraduate experience, distance learners' conceptions of reflection can change. Evidence suggested that this change in conceptions is generally toward a more sophisticated way of knowing. Distance learners with more experience of higher education appeared to hold different conceptions from those with less experience of higher education.

However, these findings were not conclusive as to whether these conceptions were more sophisticated.

In addition to the limitations set out in the previous section, it is important to note that the proposed outcome space of seven conceptions of reflection represents a limitation of the research. These seven categories and the proposed relationships between and among them are constructs of the design, method and interpretation of data from Study 1. The participants' responses were most likely shaped by a range of other factors, some of which have been theorised in Chapter 6. The students' own positioning as a tertiary learner, the nature of the reflective tasks and other assessments, the role of other people and the personal learning contexts may well have influenced these conceptions. Furthermore, the notion of reflecting in online social spaces, such as in a virtual learning environment, can present students with a host of problems. Ross (2011), when discussing the pressures of reflecting online, noted that the confessional nature of online blogging, the need to 'prove one's authenticity' and the risk of 'too much disclosure' are necessary aspects for educators to consider.

In particular, online reflection in higher education requires a new orientation towards authenticity that takes account of issues of power, identity and disclosure in the online context. (Ross, 2011, p. 13).

Considering these findings, several conclusions can be proposed. First, understanding the different ways that tertiary distance learners conceptualise reflection offers additional

insight for educators, course designers and higher education institutions. As reflective activities are becoming more prevalent in course designs, learners' conceptions of reflection are important to consider. Literature reviewed in this thesis explained the link between students' conceptions of learning and their approaches to learning. So, it is plausible that students' conceptions of reflection will influence their approaches to reflection and to learning more generally. Thorpe (1995), for example, found that the majority of distance learners in her study were able to see how reflective activities had supported 'new awareness of and approaches to their own learning' (p. 165).

Second, educators and higher education institutions need to understand the learner's perspective in order to shape pedagogical strategies and institutional approaches toward developing reflective learners. Kuhn (1991) argued that the most 'central mission' of education is 'to teach students to think' (p. 5). Schommer (1990) intimated that higher education is influential in developing more sophisticated beliefs about knowledge. Several have suggested that the development of reflective practitioners should be one of the chief aims of higher education (Barnett, 1992; Lucas & Tan, 2013). In light of these views on education as the catalyst for reflective thinking, the framework proposed in Study 1 (Chapter 6) is very relevant.

Barnett (1994) referred to educators in higher education as 'knowledge-mongers', meaning the decision as to what aspects of knowledge to present to their learners and the way these aspects are presented is the responsibility of the university tutor. Barnett claimed that this

responsibility raises the question of whether this knowledge is offered as an absolute way of knowing or whether students are being encouraged to develop their own epistemological positions. These are important considerations for higher education institutions if an aim of higher learning is to develop reflective thinkers.

Baxter Magolda (1999) suggested a 'constructive-developmental pedagogy' that is guided by three principles. First, educators need to validate learners as knowers, recognising their beliefs and supporting their development. Second, learning should be situated in the learners' own experiences. Third, learning happens through active meaning making between students, peers and teachers.

The outcome space of seven conceptions of reflection offers educators a starting point to 'validate learners as knowers', as Baxter Magolda proposed. With such a framework in mind, teachers can work to understand their students' epistemological beliefs, including individuals' conceptions of reflection. Specific learning activities or situations can be constructed to enhance students' understandings of reflection and to encourage students to develop their own belief systems. The framework, as presented in this thesis, proposes a hierarchy that can be used by students and teachers to measure movement toward more sophisticated ways of knowing reflection. The framework also offers an artefact on which tutors, students and other stakeholders can reflect, debate and develop.

Third, higher education institutions can benefit from harnessing the reflectivity of their older students. The findings from Studies 1 and 2 suggested that older students and students with more life experience are more reflective. As the older population increases, and as more educational opportunities are available to this group, it is important for higher education institutions to understand the motivations, perspectives and ways of knowing of older students (Cleave-Hogg, 1996). For example, curricula can be designed around life experiences and older students can act as mentors to students with less life experience in helping them to develop their reflective thinking.

Fourth, in the pursuit of developing reflective thinkers, educators can look at strategies that integrate reflection into life activities. The findings from Studies 1 and 2 suggested that reflection is easier for those who have more time available to reflect. Reflective activities can be designed in ways that support an integrated approach to life, learning and reflection. Chapter 3 of this thesis reported Kuhn's (1991) suggestion that schools and universities should design learning experiences that 'optimize the development of argumentative skills' (p. 291). Kuhn's research dealt with people's thinking about everyday matters. Perhaps, this 'everyday' notion could be considered when building reflection into our busy lives.

Fifth, educators should be interested in unlocking tacitly held knowledge. The findings from Study 3 suggested that none of the postgraduate students who participated in the study held the belief that reflection is transformative. One idea that was proposed when discussing this finding was the notion of tacit knowledge (see Chapter 8). Perhaps students

with more experience of higher education have such an ingrained conception of reflection that it is difficult to articulate their beliefs. Boud et al. (1985) argued that reflection is a subconscious activity and it is not possible to learn from and understand our reflective thinking unless these activities are made explicit. An important question for educators is: How can we help make students' tacitly held beliefs about reflection explicit?

Finally, educators in higher education need to hold sophisticated epistemological beliefs and they need to be sensitive to the demands they place on students with less developed beliefs. Although findings from this study did not specifically suggest this idea, it was discussed earlier in this chapter that a mis-match in epistemological beliefs between teachers and students can constrain a learner's development.

When students perceive that the educational environment does not always support high intellectual endeavours but rather hinders the learning processes, it behooves all members of an institution to address the issue. (Cleave-Hogg, 1996, p. 248)

9.10 Ideas for further research

The findings from this thesis have paved a route toward further testing of the conceptions of reflection framework. More phenomenographic research needs to be done to refine the set of conceptions and to test the framework by applying it to different groups of distance learners. From the conclusions outlined in this chapter, it may be interesting to explore the

differences in conceptions of reflection held by older students and those held by younger learners.

Additional longitudinal research on changing conceptions of reflection in tertiary distance education is needed to determine the potential for the conceptions of reflection framework to work as a developmental scheme. Research that links this development to existing models of epistemological development will strengthen the connection between these two areas of research. This would explore the conclusion made in this chapter that higher education institutions should focus on developing reflective thinkers.

Chapter 3 of this thesis highlighted the pervasiveness of cognitive conflict in models of conceptual change and epistemological development. It was proposed that this thesis should investigate points at which learners experience cognitive conflict. However, the design of the studies was not conducive to examining the data this way. Future research, however, could be designed to pinpoint these occurrences. Isolating these points of conflict could yield interesting insight into what happens at these important points of development.

Using a quantitative approach to investigate distance learners' conceptions of reflection would provide a further way to test the conceptions of reflection framework. It would also allow larger samples to participate in the research. The development of an instrument to measure conceptions of reflection (somewhat like Kember et al.'s 2000 study) would offer an opportunity to carry out a factor analysis. This type of analysis could determine whether

there is in fact a correlation between particular conceptions of reflection and variables such as age, experience in higher education, free time and epistemological beliefs.

The previous section identified the need for educators with sophisticated epistemological beliefs. It would be interesting to compare distance tutors' ways of knowing and their conceptions of reflection to those of their students. Particularly if calling for pedagogical and epistemological change within higher education as Barnett (1994) advised, it would be relevant to investigate the ways in which educators and higher education institutions embed epistemological development—including reflective thinking—into the curriculum. Research evaluating the impact of approaches to teaching such as Baxter Magolda's notion of constructive-developmental pedagogy could confirm the extent to which these practices are effective in distance learning contexts.

9.11 Final thoughts

In researching distance learners' conceptions of reflection, I found myself on a personal reflective journey. As explained in Chapter 1, the research questions for this thesis were born out of a curiosity to learn more about what distance learners think about reflection. Initially, I was interested in these questions from my perspective as a tertiary distance tutor. Then, given the opportunity to carry out a formal investigation—by way of my PhD programme—I was able to reflect on this area of knowledge from a researcher's point of view. Now, after several months of compiling this thesis, it seems I am no longer looking at

this line of inquiry from any particular perspective. Rather, I feel woven into this tapestry of reflecting, knowing, learning.

It is a good place to be. My pedagogy has benefited from this reflective learning experience and, as a result, I hope that my learners' experiences have improved. Chapter 3 of this thesis outlined Baxter Magolda's (1992) measure of epistemological reflection model. Here, she explained that the role of the instructor within the domain of contextual knowing was to encourage application of knowledge to life experiences, to promote evaluation and to foster an environment where students and teachers critique each other. Truly, my teaching practice has flourished by adopting these aims. Ideas for further research, as outlined in this chapter, are taking shape and are quite exciting to consider. Most importantly, perhaps, is a heightened awareness of my self-authorship: my identity as a reflective learner.

It is interesting at the end of this reflective journey to revisit my a priori assumptions (see Chapter 5). What is most surprising is how my 'relationship with the phenomenon' has changed after having had this research experience. Then, I held such varied, yet specific, notions of reflection that now seem almost absolutist. Then, I thought of reflection as a tool that was necessary to achieve something: problem solving, enriching mental models, personal development, improving society. Now, rather than merely a tool, I understand reflection as a way of knowing.

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Appendices

Appendix 1: Open-ended postal questionnaire for Study 1

Please return completed surveys in the pre-addressed envelope. No postage is necessary.

Survey for Open University students

Section A

1. When did you begin studying with the OU?
(Please tick one.)

- Less than 1 year ago
- 1-2 years ago
- 2-3 years ago
- 3-4 years ago
- 4-5 years ago
- More than 5 years ago

2. Would you be willing to participate
in a face-to-face interview for the
same study at a later date?
(Please tick one.)

- Yes
- No

Section B

Please use the boxes to answer each question. If you need extra paper, please attach A4. It is important to answer the questions in the order they are presented. This exercise should take approximately 15-20 minutes.

1. How do you go about reflecting on your own learning (e.g. what procedures or methods do you use)?

2. What areas of reflective work do you find difficult?

3. When is reflection easy for you?

4. Why are some students more reflective than others?

5. To what extent do you feel reflection is necessary in higher education?

6. What do you actually mean by 'reflection'?

Thank you very much for helping me with this research. Please return the completed survey in the envelope provided. Enjoy your OU studies!

Appendix 2: Completed pilot study questionnaire from Study 1

Please consider and provide written responses to the following questions. It might be helpful (for you) to frame the responses in terms of a recently completed course, such as the MRes programme.

1. How do you go about reflecting on your own learning (e.g. what procedures or methods do you use)?

- I journal, write e-mails, talk to colleagues
- use a basic technique that starts with description of event/issue, how I dealt with it and then use a series of questions to help explore alternatives

2. What areas of reflective work do you find difficult?

- dealing with alternative views

3. When is reflection easy for you?

when I have perspective and can actually understand the alternative opinions

4. Why are some students more reflective than others?

- life experience
- being open to engaging in a reflective process
- relevance between reflective areas, what they understand

5. To what extent do you feel reflection is necessary in higher education? What, if any, are the challenges?

It becomes more relevant the higher you get in your qualification levels. It's less relevant/easier with undergraduates. It's being applied to.

6. What do you actually mean by 'reflection'?

when I attempt to unpack in a critical way different opinions and their pros/cons to decisions or viewpoints I've adopted or used in some learning process or event.

Gender (please tick one): Female Male

Age (please tick one): 20-35 _____; 36-50 ; 50+ _____

Highest level of education completed (please tick one): undergraduate _____; master level ; doctoral/PhD _____

Appendix 3: Application to the Student Research Project Panel (SRPP) for Study 1
 [Note: this application originally included inmates as well as other distance learners. Only the data collected from non-inmates were used in Study 1.]

Office Use Only	
Application No:	
Date received:	
Pending:	
Approved/Not approved	



The Open University

Student Research Project Panel Application Form

Please note that:

- An application must be submitted and approved before the start of the proposed research
- The dates of the Working Group meetings and deadlines are available on the SRPP Intranet: <http://iet-intranet.open.ac.uk/research/index.cfm?id=7082>
- Prior consultation with the Student Statistics and Survey Team (SSST) (g.Lelliott.Ciribotis@open.ac.uk) is advised with regard to the sample and any other services (where applicable) before filling in this form and submitting your application.

For submission and further help please contact: IET-SRPP@open.ac.uk

Section One: Applicant Details

1. Applicant Details:

Name:	Bethary Alden	Telephone:	07955352120
Email:	B.A.Alden@open.ac.uk	Faculty/Unit:	IET

2. Research details:

Title of Research:	Inmates' conceptions of reflection
Target Start Date:	01/03/10 (Please estimate date if you do not have a definite date)
Target End Date:	31/10/10

2. Other Research Personnel

Please give details of all other personnel associated with the research – don't forget if you are an AL you will require a sponsor.

Name:	Faculty/Unit/Agency/Sponsor:
Professor John Richardson	IET (Research Supervisor)
Dr. Linda Price	IET (Research Supervisor)

3. Consultation with other OU staff over research.

Please indicate whether the research involves the following and whom you have contacted. If your research involves specific courses we would expect you to have discussed the research with the Course Team.

Unit:	Contact name:
Faculty Associate Dean or Course Team	
Regional Office	
Marketing	
Student Services – Regions	
Student Services – other areas	
IET Student Statistics and Survey Team	Steph Lay, Jane Baines, Jane Wilson
VCE	
Other	National Offender Management Services (NOMS), National Research Committee (NRC)

Section Two: About your research

5a. Brief aims of the research:

1. To identify ways in which prisoners on Open University courses conceptualise reflection (both in general terms and in relation to their own learning and development).
2. To establish categories of description for inmates' ways of thinking about reflection.
3. To compare/contrast these ways of thinking to non-prisoner Open University students' conceptions of reflection so that a case could be made that the reflective nature of prisoner-learners is different than non-prisoners. This argument would underpin further research in this area.

5b. Please give a brief description of your methodology (maximum 250 words):

Distance learning coordinators in UK prisons will be asked (via email) to assist in distributing this survey to the OU students in their respective prisons.

These prisoner-learners will decide individually whether or not to complete the survey and return it to the distance learning coordinator in their prison.

The distance learning coordinator will return the completed surveys to the researcher.

The researcher will monitor the responses from prisoners and will ask the Survey Office to draw another sample (this time of non-prisoners) that 'matches' the respondents. This may not be an exact match but variables such as age, gender, course code and previous courses taken could work to make the second group roughly similar to the first group (in terms of these demographics).

The researcher will distribute the surveys to this sample.

Survey responses from both prisoners and non-prisoners will be anonymous.

6. Will this research be repeated? (Please tick)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
------------------------------	--

If yes, how often?

--

7. Is there any overlap with any previous or current research? (Please tick)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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If yes, please explain.

--

8. Data collection methods - please indicate your proposed research method(s):
(Please tick all that apply)

<input checked="" type="checkbox"/> Paper	<input type="checkbox"/> Focus Group
<input type="checkbox"/> Online	<input type="checkbox"/> Other
<input type="checkbox"/> Telephone	Please specify other:
<input type="checkbox"/> Personal Interview	

9. Please explain how the research will be disseminated internally to OU researchers and staff and detail any plans for external publication/dissemination of your findings:

This study will feed into the PhD thesis, which will be kept on file with the OU Library. Also, theses are available from any UK university through ETHOS.
 Findings from this study may also be included in a journal article.

Section Three: Sample

Samples are usually drawn by the Student Survey and Statistics Team (SSST). Once you have specified the criteria the SSST and SRPP will check that the criteria are within University guidelines. Samples are drawn using information from the CIRCE database. If you want to draw your own sample you **must** send it to the SSST to be checked **before** it is used. If you are an Associate Lecturer proposing to use only your tutor group please send the PI's of those in your tutorial group to the SSST to be checked before you start the project.

If you need advice about specifying the sample please contact us via the IET-SRPP mailbox in the first instance.

To provide you with the most appropriate sample please consider and specify the following:

- For all samples you can ask for the following information:
 - Personal Identifier
 - Contact details – this will vary depending on mode of contact, e.g., post, telephone or email.
- For course specific samples please specify the course, year and presentation codes.
- For general and course specific samples of the OU population these are some of the fields you can specify:

Age Group (either a band or anyone born after...)	Gender
Level of study	Educational qualifications on entry to the OU
Course code/s – specify passed, current etc	Presentation Code/s
Number of credits passed	Credit transfer
Registered to study on a particular course	Award Code/s
Geographical areas, such as Region or postcode	Motivation for study
Disability – contact IET-SRPP for further details	Student Status

For course specific samples please use this box:

Course/s e.g. AA100	Presentation/s e.g. 2009J	Sample Number requested e.g. 300	Aimed for response rate e.g. 150 or 50%
Other specifications e.g. type of contact details; previous educational qualifications.			

For all other samples please complete this box:

Sample specification	Sample number requested e.g. 300	Aimed for 'response rate. e.g. 150 or 50%
<p>1. A random sample including names and current course codes of 400 prisoners studying on any Open University course. Please can the sample include the name of the prison where each learner currently resides?</p>	400	a minimum of 80 or 20%
<p>2. (sample to be drawn after responses have been collected from the first sample) A sample of non-prison OU students that matches the profile of respondents from the first sample, in terms of course code, age, gender and previous courses taken. Sample to include postal address of student.</p> <p>*sample number requested for the second sample may need to be changed depending on the rate of response from the first sample. I would like to get 2 'matches' per prisoner-respondent.</p>	400	80 or 20%*
<p>Other specifications e.g. type of contact details; previous educational qualifications.</p>		

Section Four: Questionnaire design and processing

This section is only necessary if you need the SSST to help administer your survey.

Please see this document for information about services the Survey Office charge for <http://iet.intranet.open.ac.uk/docs/about/docs/surveycostingguidelines.doc>

Survey Type: Postal Online Other (Please explain below)

Postal scanning:

Is this required?

Yes: No:

If yes, how many questions (including sub questions) are to be scanned?

Do you wish the SSST to prepare the Questionnaire?

Yes: No:

If yes, when will the final questions be supplied to the SSST Office?

Survey Mailing:

Target mailing date:

1/3/10 for prisoners

Reminder required:

1/5/10 for non-prisoners

Yes:

No:

Close of Survey date:

1/8/10

Is this date approximate or definite?

Approx: Definite:

Data Processing:

Data from online and paper questionnaires can be returned as SAS, Excel or SPSS files. If you have open comments on a paper questionnaire and you need them to be typed please ask Gary Elliott-Cirigottis if the SSST can help with this.

Please state in the box below if you need any variables on the spreadsheet alongside the data, e.g. demographic information, previous education qualifications, gender, credits awarded etc.

This is an anonymous survey included self-reported demographic data.

Finance:

Please indicate funding arrangements:

Baseline:

Internal:

External:

Baseline = payment will be made in advance of work being carried out

Internal = payment will be made by an OU Department
External = payment will be made by external organisation

Section Five: Supporting Documentation

Documentation

Please do not forget to attach the required supporting documentation with your application. Indicate below which items of supporting documentation you have sent as attachments with this Application:

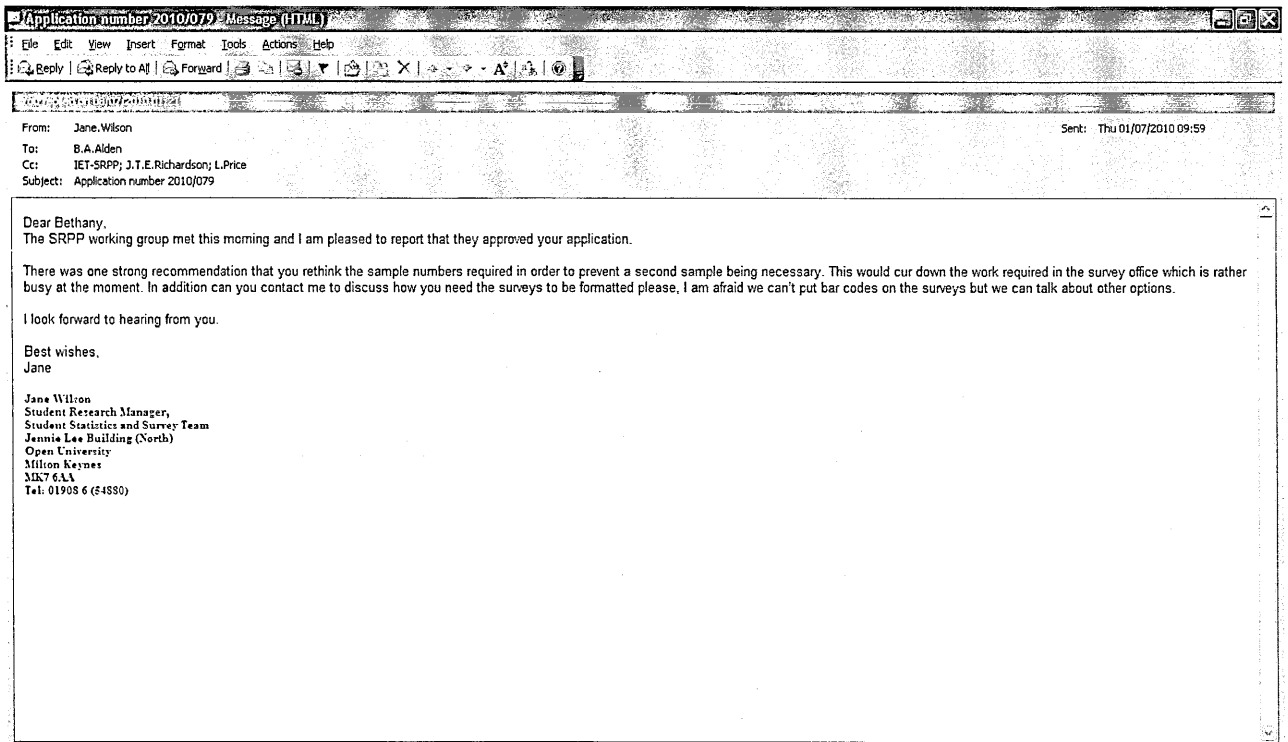
<input checked="" type="checkbox"/> Copy of survey instrument/s (not a link please)	<input type="checkbox"/> Note/email from Sponsor (if applicable)
<input checked="" type="checkbox"/> Copy of covering letter/s or invitation	<input type="checkbox"/> Copy of consent form (if applicable)

<input checked="" type="checkbox"/> I can confirm that a Data Protection Questionnaire has been submitted to the University's Planning Officer (Legislation and Information) – Data-Protection@open.ac.uk

Application date:	29/01/10
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Please submit to: ET-SRPP@open.ac.uk (Please remember to 'save' the form first to attach to email)

Appendix 4: Approval from the SRPP for Study 1



Appendix 5: Application to the Data Protection Office for Study 1 [Note: This application involves research with inmates. However, only data collected from non-inmates were used.]

Data Protection Form

DATA PROTECTION ACT 1998

Data Protection Questionnaire

The Open University is registered with the UK Information Commissioner. We have provided a general description of the processing of personal data being carried out in the University and we must ensure that any new projects or uses of data are covered by our registration.

The purpose of this form is to inform the OU's Data Protection Coordinator about new projects or databases which use or record personal data.

If you are processing any personal data (whether on manual or electronic files not previously registered) please complete all sections of this form and return to the Data Protection Coordinator, Room 002, North Spur, Walton Hall and provide your Unit Data Protection Liaison Officer with a copy.

Definitions

Personal Data - Information relating to identifiable living individuals, including expressions of opinion.

Processing - Any action involving data, including obtaining, recording, analysing and destroying.

Data Subject - An individual about whom information is processed

The Data Protection Act requires that personal data be surrounded by appropriate security. Please refer to page 4 for advice.

1. About You

Name: Bethany Alden
Staff No: A2070800
Job Title: Full Time Research Student
Area/Unit: CREET/IET
Phone No: 01908 332677 or 07955352120
Data Protection Liaison Officer:

2. Please provide us with a brief title of your project/database/data file

Project Title: Inmates' conceptions of reflection in higher education

Database: Random sample of OU non-prison students currently enrolled on any course (x400); random sample of OU prison-students currently enrolled on any course to receive a postal survey.

3. Processing Description

(a) What do you use the data for?

To collect survey data for an initial phase of PhD research.

To study the variation between responses from prisoners and non-prisoners on OU courses.

(b) Is the data (tick as appropriate):

Manual
Electronic

4. About the Categories of Individual

Tick one or more boxes identifying the categories of individuals to whom the data relate:

Students	<input checked="" type="checkbox"/>
Staff (including volunteers, agents, temporary and casual workers)	<input type="checkbox"/>
Advisers, Consultants and other professional experts	<input type="checkbox"/>
Authors, Publishers, Editors, Artists and other creators	<input type="checkbox"/>
Third parties participating in course work (e.g. volunteers, survey respondents)	<input type="checkbox"/>
Subjects of research	<input type="checkbox"/>
Complainants	<input type="checkbox"/>
Correspondents and enquirers	<input type="checkbox"/>
Suppliers	<input type="checkbox"/>
Customers and clients	<input type="checkbox"/>
Financial sponsors	<input type="checkbox"/>
Agents and contractors	<input type="checkbox"/>
Previous and prospective employers of the data subject and other referees	<input type="checkbox"/>
Donors and friends of the University	<input type="checkbox"/>
Persons who may be the subject of enquiry/press release/promotional exercise	<input type="checkbox"/>
Health professionals	<input type="checkbox"/>
Welfare and pastoral professionals and advisers	<input type="checkbox"/>
Business or other contacts	<input type="checkbox"/>
Other - Please specify	<input type="checkbox"/>

Other:

5. Data Subject Details

Please provide more precise information about the individuals if possible, e.g. all students on the current presentation of T171

The sample request to SRPP included PI, age, contact details, number of OU courses previously taken, educational background.

6. About the Data

Tell us what information you collect or hold about individuals e.g. PI, name, TMA scores etc.

The survey office will prepare and distribute the surveys. Until the surveys are returned, I will not know the names/Pis of the respondents. At that time, I will ask SRPP for a profile of respondents, which will include demographic data.

7. About Recipients (to whom data are disclosed)

	Please tick
Authorised employees and agents of the OU only	<input checked="" type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

8. About any Transfers Overseas

If personal data is transferred outside the European Economic Area (European Union member states plus Norway, Liechtenstein and Iceland) please provide details of countries below:

n/a

\\hid\dm\mg\Information services\Information management and compliance\Data protection compliance\Organisational compliance\Notifications\DP registrations in units\DP Questionnaire_Jan07.doc

15 February 2013

Office Use Only

Subject Access	Yes/No
Purpose	

THE OPEN UNIVERSITY
SECURITY OF DATA

Appropriate security measures should be taken against unauthorised or unlawful processing of personal data and against accidental loss or destruction of, or damage to, personal data.

The following principles apply to all personal data processed:

1. Access to the data, both those which are electronically stored and in hardcopy, should be restricted to staff who need those data for their Open University work.
2. Staff should not leave screens that can access personal data unattended when signed on, should use a (short time-out) password-controlled screen saver, and should log-off correctly at the end of a session. Always clear screens showing personal data after use.
3. Staff who process personal data must take care that personal data is kept away from people not entitled to see it (including authorised visitors) and that casual sight of screens or documents is avoided.
4. Passwords should not be easily guessable and should be changed regularly. They should be kept secure and not be disclosed to unauthorised persons.
5. CD's and floppy disc files with personal data must be removed from the PC and stored securely when not in use. When they are no longer required they should be erased and reformatted or securely destroyed.
6. Personal data on workstation fixed hard discs must have adequate protection e.g. password access, to files to prevent unauthorised access. Where personal data is held on a shared area of a server, people with access rights to that area must be strictly limited to those who need to know *all* of it. Access should be reviewed regularly to ensure that it reflects *current* need to know.
7. Print-outs and microfiche containing personal data should be stored securely and disposed of using confidential waste disposal services. It is the University's responsibility to see that external contractors disposing of personal data (or processing it in any other way) on the OU's behalf, comply with the Act.
8. Data no longer required should be destroyed. If a PC is passed to another area, measures must be taken to ensure that personal data files not relevant to the receiving area are destroyed or removed.

DISCLOSURES

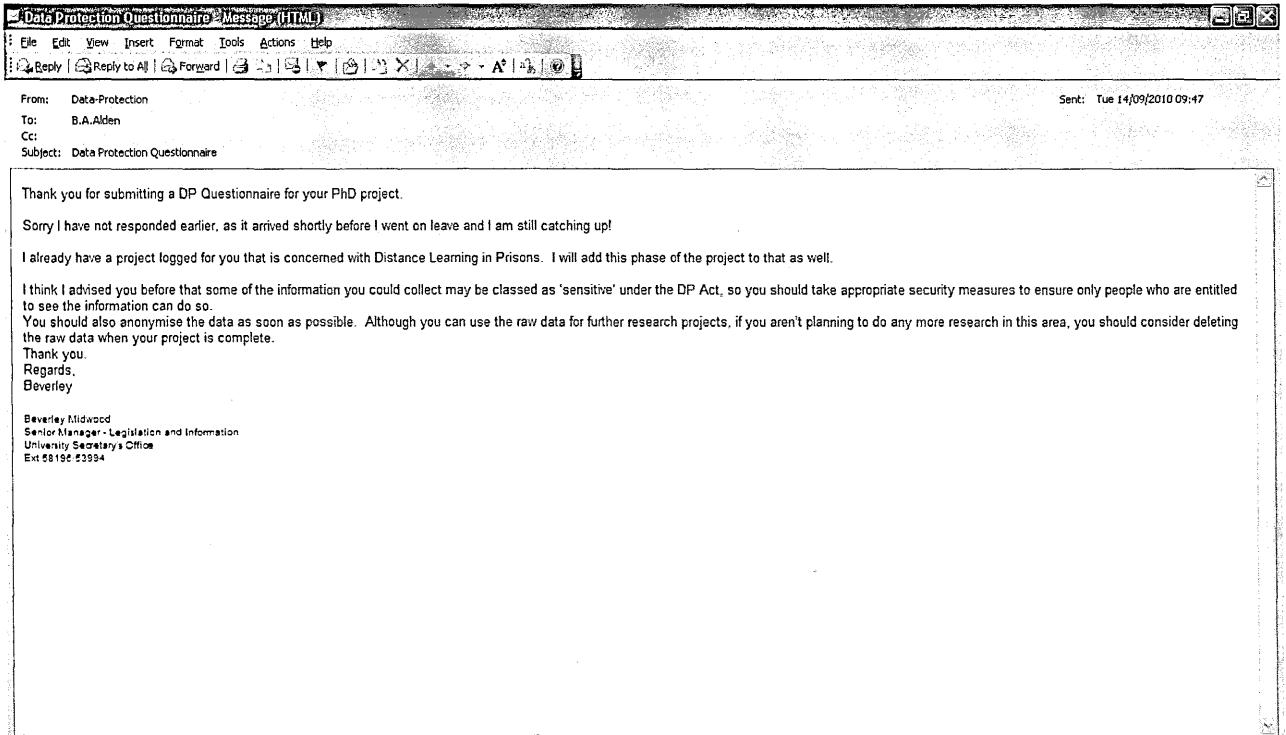
1. There are a limited number of circumstances when personal data can be disclosed outside the University other (although disclosures may always be made with the consent of the data subject). Personal data should not be disclosed over the telephone, except in predefined circumstances and very exceptionally on the authority of a senior officer.
2. Personal data may be disclosed to staff of the University but only if they need to see and handle it as part of their OU work. **Note:** that OUSA, OUSBA, OUSSET, OUW and Mulberry Bear Day Nursery are not part of the OU for Data Protection purposes; therefore, personal information should not be disclosed unless it is covered by the current Data Protection Policy. See link below for further information:
<http://www3.open.ac.uk/our-student-policies/pdf/dataprotection.pdf>

If in doubt, do not disclose and seek further advice from your Data Protection Liaison Officer (DPLO) or the Open University Data Protection Co-ordinator.

3. **Personal Data sent by post should only be sent to validated addresses (eg the student's registered address).**
4. **Accidental disclosures may be made in transmissions using email and conference facilities as these are insecure. Avoid the use of these means therefore if the transmission is of sensitive personal data.**

WhistEdmmsg/information services/information management and compliance/Data protection compliance/Organisational compliance/Notications/DP registrations in units/DP Questionnaire_Jan07.doc

Appendix 6: Response from Data Protection Officer for Study 1



Appendix 7: Application to the Human Participants and Materials Ethics Committee (HPMEC) for Study 1 [Note this application involves using inmates as participants. However, Study 1 only dealt with data from non-prisoner students.]



The Open University

HUMAN PARTICIPANTS AND MATERIALS ETHICS COMMITTEE (HPMEC) PROFORMA

Please complete and send to:

John Oates (J.m.oates@open.ac.uk), Chair,
Human Participants and Materials Ethics Committee (HPMEC)
Centre for Childhood Development and Learning (CHDL),
Briggs, Walton Hall, Milton Keynes
Also send a copy to Research-ethics@open.ac.uk

If you have any queries before you fill in this form please look at the Research Ethics (intranet) web site: <http://intranet.open.ac.uk/research/ethics/>

Title of project

A short, descriptive title.

Inmates' conceptions of reflection

Schedule

Time frame for the research and its data collection phase(s).

Postal survey to be distributed to UK prisons in April 2010.
Responses from prisoners to be received by May 2010.
Postal survey to be distributed to non-prisoners in June 2010.
Responses from non-prisoners to be received by July 2010.
Data analysis to be carried out May-September 2010.
Report to be written October 2010.

Abstract

A summary of the main points of the research, written in terms easily understandable by a non-specialist and containing no technical terms.

This initial study of conceptions of reflection will set the stage for a longitudinal study, which will form the major research component of the PhD. This study, however, will aim to identify ways in which inmates who are enrolled in Open University courses conceptualise reflection (both in general terms and in relation to their distance learning programme). These conceptions will be compared and contrasted to responses from Open University students who are not in prison in order to establish that prisoners hold a unique set of conceptions related to reflection, both in general terms and in the way the

use reflection in their own learning and development.

Source(s) of funding

Details of the external or internal funding body (e.g. ESRC, MRC).

The PhD is funded by the ESRC. A research training grant is available for up to £1000 per year.

CONFIDENTIAL

Justification for research

What contribution to knowledge, policy, practice, and people's lives the research will make?

This study will work to justify further research of prisoners as reflective distance learners. Findings from this study will aim to show that the notion of reflection (both in general terms and in relation to learning) is thought of differently by prisoners engaged in Open University study than by non-prisoners that are enrolled in distance learning with the OU.

This argument will justify moving ahead with the rest of the PhD, which looks at how prisoners' conceptions of *reflection* in distance learning programmes changes over time.

Investigators

Give names and units of all persons involved in the collection and handling of individual data. Please name one person as Principal Investigator (PI).

PI: Bethany Alden, IET

Research supervisors: John Richardson and Linda Price

Published ethical guidelines to be followed

For example: BERA, BPS, BSA (see Research Ethics web site for more information).

BERA guidelines will be followed as well as those set out by The British Society of Criminology.

Location(s) of data collection

Give details of where and when data will be collected. If on private, corporate or institutional premises, indicate what approvals are gained/required.

Data will be collected through a postal survey that will target all UK prison establishments. Once these responses have been received, a similar number of responses will be sought from non-prisoner OU students. Surveys would be ideally be distributed in April 2010 to prisoners and then in June 2010 to non-prisoners.

Approval for research in prisons is granted through the National Research Committee (NRC). Forms for this can be found <http://www.hmprisonservice.gov.uk/resourcecentre/research/> and are sent to the NRC at National.Research@noms.gsi.gov.uk. These forms are attached to this application and will be sent to the NRC once HPMEC has approved this study.

An application has been made to SRPP to obtain a sample of non-prisoner students once the prisoner responses have been tallied.

[REDACTED]

Participants

Give details of the population from which you will be sampling and how this sampling will be done.

A distance learning coordinator is normally in place in each UK prison's education department. The OU holds a list of these contact names and email addresses on the OU Offender Learning intranet. At present there are contact details for distance learning coordinators in 180 prisons.

Once HPMEC and NRC approve this research, the researcher will email each of the distance learning coordinators in the prisons and ask them to participate in this study. They will do this by agreeing to distribute surveys to the OU students in their prison.

Prisoners will complete the questionnaire and return it to the distance learning coordinator. This person will send the batch of completed questionnaires to the researcher.

Responses to the prisoners' surveys will be anonymous.

In order to distribute surveys to non-prisoner OU students, a request to SRPP for a list of students and their contact details would be made. This list will be compiled once the responses from the prisoners have been received. The aim is to identify non-prisoner students of the same number by course as the prisoner respondents. For example, if 10 of the prisoners that respond are currently enrolled on DD101, I would aim to find 10 DD101 non-prisoners to participate in the survey too.

Responses to non-prisoner responses will also be anonymous.

Recruitment procedures

How will you identify and approach potential participants?

Potential participants will be approached by the distance learning coordinator in each prison. This person is normally aware of all OU students in their respective establishment and would be the best person to ask for assistance in distributing the surveys.

A list of non-prisoner OU students will be requested from SRPP. This list will be compiled once the responses from the prisoners have been received. The aim is to identify non-prisoner students of the same number by course as the prisoner respondents. For example, if 10 of the prisoners that respond are currently enrolled on DD101, I would aim to find 10 DD101 non-prisoners to participate in the survey too.

Consent

Give details of how informed consent will be gained and attach copies of information sheet(s) and consent form(s). Give details of how participants can withdraw consent and what will happen to their data in such a case (see the Research Ethics web site for an advisory document).

The information sheet and the questionnaire are attached to this survey. It would be stated in the information sheet that the completion and submission of the postal survey would be considered a consensual arrangement.

Methodology

Outline the method(s) that will be employed to collect and analyse data.

Data will be collected by a postal survey. A draft of this is attached (one for the prisoners and a version for non-prisoners).

Content analysis will be done on the written responses and a quantitative analysis will be done on the self-reported demographic data.

Data Protection

Give details of registration of the project under the DP Act and the procedures to be followed re: storage and disposal of data to comply with the Act. Please note OU guidance on the Research Ethics FAQ page - <http://intranet.open.ac.uk/strategy-unit/offices/ethics/faqs.shtml#p8>.

Contact details of prisoners will not be made available since a third party (the distance learning coordinator) will be distributing the surveys and since the surveys will remain anonymous.

Contact details of non-prisoner OU student will be stored by one of the researchers' supervisors in a password protected file and a third party (possibly a member of the survey office) will assist in producing the mailing. Completed surveys will be

anonymous and will therefore not include any sensitive data.

CONFIDENTIAL

Recompense to participants

Normally, recompense is only given for expenses and inconvenience, otherwise it might be seen as coercion/inducement to participate. Give details of any recompense to participants.

It is not intended that participants would be recompensed. However, the information sheet explains how this research may benefit them. (See attached drafts of these information sheets.)

Deception

Give details of the withholding of any information from participants, or misrepresentation of other deception that is an integral part of the research. Any such deception should be fully justified.

Participants are aware of the aims of the research and the role they play in the project. No information about the research will be withheld (except of course the personal details of other participants). Misrepresentation and other forms of deception are not integral to this research.

Risks

Detail any foreseen risks to participants or researchers and, based on a risk assessment, the steps that will be taken to minimise/counter these. If the proposed study involves contact with children or other vulnerable groups, please confirm that an enhanced Criminal Records Bureau (CRB) Disclosure has been obtained for each person involved in these contacts.

There are no foreseen risks in carrying out this survey. This is because it is done through the post and because the responses will be anonymous.

Debriefing

Give details of how information will be given to participants after data collection to inform them of the purpose of their participation and the research more broadly.

Participants are informed of the purpose for their participation prior to completing the survey (see information sheet attached).

Summary information would also be made available to research participants on demand.

The final research thesis will be on file with the University library. There may be opportunities for publication in journals as well.

Declaration

Declare here that the research will conform to the above protocol and that any significant changes or new issues will be raised with the HPMEC before they are implemented.

A **Final Report** form will need to be filled in once the research has ended (you will be contacted by HPMEC on the date for final report below).

Contact details

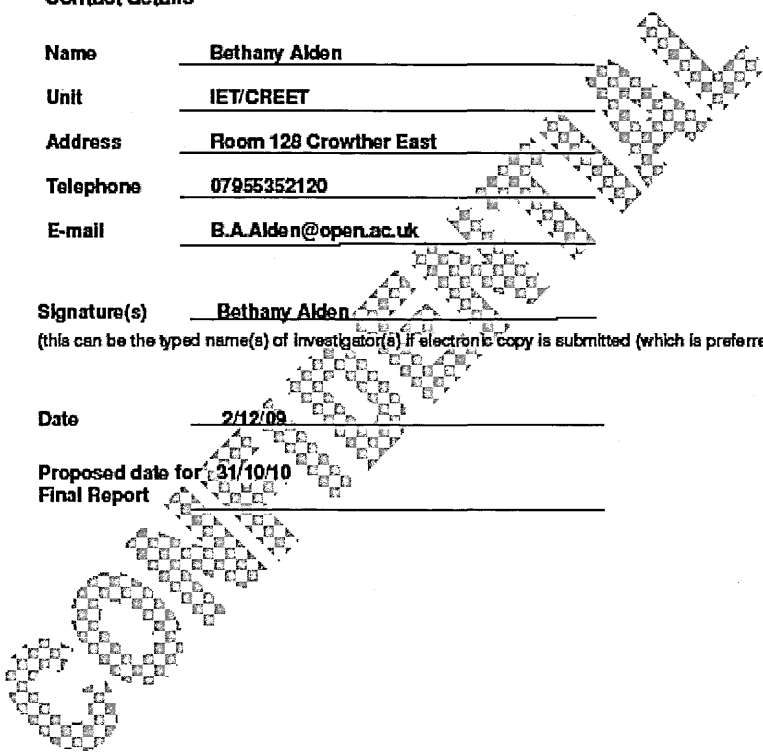
Name Bethany Alden
Unit IET/CREET
Address Room 128 Crowther East
Telephone 07955352120
E-mail B.A.Alden@open.ac.uk

Signature(s) Bethany Alden

(this can be the typed name(s) of investigator(s) if electronic copy is submitted (which is preferred))

Date 2/12/09

Proposed date for Final Report 31/10/10



Appendix 8: Interview protocol and data collection timeline for Study 2

Milestone 1

Method: phone interview; or face-to-face (if possible)

Objective: capturing biographies and conceptions of reflection (self, in HE, in society)

- DD101: 1-5 February 2010
- B121: 1-5 May 2011
- U122: 1-5 May 2011

Biography

- Education: Can you describe your educational experience prior to enrolling on ___?
- Work: Can you talk about your employment background and your current job if you are working?
- Home: Can you describe how you spend your time outside of work/study? (family/social/leisure commitments?)

Course

- What other OU courses have you done (if not included in previous description)?
- What motivated you to enrol on _____?
- What is your next step?

Exposure/experience with reflection

- Have you encountered reflective tasks on other courses? (if relevant)
- Have you encountered reflective tasks in the workplace? (if relevant)

Reflection in terms of self

- Do you think you are a naturally reflective person?
 - Why do you say this?
- Can you recall and describe a situation in which you reflected on something?

Reflection in terms of HE

- To what extent is reflection important in HE?
- Why are some students more reflective than others?
- Can people learn to be more reflective? Explain.

Reflection in terms of society

- Would you say it is important to be a reflective person in general? (why?)

Milestone 2

Method: phone interview or email

Objective: To gather input regarding perceptions of reflective activities experienced thus far in the course; role of tutor feedback; role of dialogue/relationship

- DD101: 22-26 March 2011 (after TMA01 feedback/before TMA02 cut-off)
- B121: 23-27 May 2011 (after activity 2.1 [learning cycle], after tutorial 1)
- U122: 6-10 June 2011 (after TMA01 feedback)

For DD101 and U122

- You recently received feedback on your first TMA. What did you think about this?
- For DD101: What were your thoughts about doing the 'self-reflection' bit at the end of the TMA?
- For U122: What were your thoughts about completing an assignment that had to do with reflecting on your own learning experience?
- For both: What has been helpful in your learning so far on this course?
- For both: Have the other students played a role in your learning experience? In what ways?

For B121:

- You've probably worked through parts 1 and 2 of the Course File. What have you thought of the course so far?
- Did you have a go at activity 2.1 (the learning cycle)? What did you think?
- What about the learning inventory (activity 2.2)? Did you figure out what learning profile you have? What did these findings mean to you?
- To what extent are you being reflective when you work through the TMA activities?
- What are your thoughts about the reflective essay you'll be writing for the TMA?
- What do you get from the others in the group?

Milestone 3

Method: phone interview or email

Objective: To gather developing perceptions of reflective activities embedded in TMA activities and how tutors' feedback is working alongside these. Also this contact will aim to capture thoughts about the reflective components of final TMAs and ECAs.

- DD101: 1-5 August 2011 (after feedback from TMA05 and before cut-off for TMA06)
- B121: 8-12 August 2011 (after feedback from TMA01 and before ECA)
- U122: 15-19 August 2011 (after feedback from TMA03 and before ECA)

Questions for DD101:

You recently submitted TMA06. At the end of this TMA, the self-reflection task asked you to comment on 1) what you found interesting and 2) what you found difficult about this assignment. Can you please discuss/explain (use as many words as you need):

1. How you approached this activity (i.e. what did you consider/think about before writing your responses)?
2. How did you feel about doing this task?
3. To what extent is this type of activity valuable to you (and why)?
4. In what ways have you been able to use the feedback from your TMAs as you work through this module?

Questions for U122:

You are now preparing for the EMA (Unit 6). In this unit, there are several activities designed to help you think about your future plans.

1. How have you approached this unit (i.e. what did you consider/think about before tackling the activities)?
2. How do you record your ideas/output related to this unit?
3. Have you done Activity 6.13 'A moment of reflection'? If so, how did you feel about this task?
4. In what ways have you been able to use the feedback from your TMAs as you work through this module?

Questions for B121:

You are now preparing for the EMA. In this assignment, there are three tasks designed to demonstrate a variety of your skills. Please answer the following questions using as many words as you need:

1. When considering your role and the ways you might need to develop (Task 1.4), how have you approached this activity (e.e. what have you considered/thought about before tackling this section)?
2. To what extent do you feel the EMA is a reflective piece of work (and why)?

3. At this point in the module, where would you position yourself on the Learning Cycle: 1) having a concrete experience; 2) reflecting on the B121 experience; 3) theorising about ways to use your new knowledge; 4) testing your new knowledge in the workplace?
4. In what ways have you been able to use the feedback from your TMAs as you work through this module?

Milestone 4

Method: telephone or email interview

Objective: To identify conceptions of reflection (self, in HE, in society)

- DD101: 10-14 October 2011 (one week after ECA cut-off)
- B121: 26-30 September 2011 (one week after ECA cut-off)
- U122: 12-16 September 2011 (one week after ECA cut-off)

You recently submitted your final TMA for this module. This is the last set of interview questions for my study. I greatly appreciate your email response to the questions. There is no word limit so please write as much as you like. However, the order of the questions is important, so please address them in the sequence they are presented.

1. Can you explain how you go about reflecting on your learning?
2. Can you describe a situation where you used reflection? What was the outcome?
3. To what extent is reflection important in higher education?
4. Why are some students more reflective than others?
5. What does reflection mean to you?

Appendix 9: Application to the SRPP for Study 2

Office Use Only – Ver3 – 15/11/2010	
Application No:	2010/131
Date received:	25/11/2010
Pending:	
Approved/Not approved	



The Open University

Student Research Project Panel Application Form Student Researchers

Please note that:

- An application must be submitted and approved before the start of the proposed research
- The dates of the working group meetings and deadlines for applications are available on the SRPP website <http://iet.intranet.open.ac.uk/research/index.cfm?k=7082>

For submission and further help please contact: JET-SRPP@open.ac.uk

Section One: Applicant Details

1. Applicant Details:

Name:	Bethany Alden		
Email:	B.A.Alden@open.ac.uk	Telephone:	07855352120
Faculty/Unit:	CREET/MET		
Name: OU Academic Supervisor	Professor John Richardson and Dr. Linda Price		
Email: Supervisor	J.T.E.Richardson@open.ac.uk L.Price@open.ac.uk		

2. Research details:

Title of Research:	Distance learners' conceptions of reflection in higher education [phase 2: longitudinal case study]
Target Start Date (survey, focus group, interview):	01/02/2011 (Estimate date if you do not have a definite date)
Target End Date (as above):	31/10/2011

2. Consultation with other OU staff about the research.

Please indicate whether the research involves the following and whom you have contacted. If your research involves specific modules we would expect you to have discussed the research with the module team.

Unit:	Contact name:
Faculty Associate Dean or Module Team	Course team chair for B121: Martin Friel Course team chair for U122: Ian Oldham Course author for U122 and chair for T122: Neil Murray Course team chair for DD101: Georgina Blakeley
Marketing	
Student Services – Regions	
Student Services – other areas	
IET Student Statistics and Survey Team	
Other (please specify)	

Section Two: About your research

4. Brief aims of the research:

1. To test a model, 'distance learners' conceptions of reflection' developed in phase 1 of this research project.
2. To follow distance learners (from three different courses: DD101-11B, U122-11E, B121-11E) throughout their learning experiences.
3. To measure and investigate students' conceptual change regarding reflection and reflective practice during these courses.

5. Please give a brief description of your methodology (maximum 250 words):

Each member of the sample will receive a letter of invitation and a consent form to participate in a case study for the duration of their OU course (attached). These letter would be distributed with the assistance of a third party since the researcher is unable to have access to student details without prior consent.

Once informed consent has been obtained, the participant would receive an electronic letter to pass onto their course tutor. This letter would introduce the research project to the respective AL to avoid any confusion that may arise later (e.g. if the student mentioned the research in a tutorial).

Each participant will be contacted on four occasions during the case studies. The objectives of each contact are list here but a more detailed draft protocol is attached to this application.

Time 1: face-to-face or telephone interview to capture biographies and conceptions of reflection (self, in HE, in society)

Time 2: telephone or email interviews to gather input regarding perceptions of reflective activities experienced thus far in the course; role of tutor feedback; role of dialogue/relationship

Time 3: telephone or email interviews to gather developing perceptions of reflective activities embedded in TMA activities and how tutors' feedback may be working alongside these. Also this contact will aim to capture thoughts about the reflective components of final TMAs and ECAs.

Time 4: telephone or email interviews to identify conceptions of reflection (self, in HE, in society).

6. Research Theme: Students agree to be contacted (Conditions of Registration) in order to help the University 'plan and improve our services'. Explain how your research meets this criteria:

Reflective learning tasks and reflective work related to personal development planning is becoming increasing popular in course designs and is upheld, in terms of enhancing employability, as a strategic theme for the University. Investigating students' conceptions of reflection could offer insight into students' approaches to reflective tasks. Findings from this report may have implication for course teams and practitioners in facilitating reflection among learner groups. Moreover, this research will aim to contribute to the existing body of knowledge related to reflection thinking.

7. Is there any overlap with any previous or current research? (Please tick)

Yes

No

If yes, please explain.

8. Will this research be repeated? (Please tick)

Yes No

If yes, how often?

9. Data collection methods - please indicate your proposed research method(s):
(Please tick all that apply)

<input type="checkbox"/> Paper	<input type="checkbox"/> Focus Group
<input checked="" type="checkbox"/> Online	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Telephone	Please specify other:
<input checked="" type="checkbox"/> Personal interview	

10. Please explain how the research will be disseminated internally to OU researchers and staff and detail any plans for external publication/dissemination of your findings:

This study will feed into the PhD thesis, which will be kept on file with the OU Library. Also, Phd theses are available from any UK university through ETHOS.
Findings from this study may also be included in a journal article.

Section Three: Sample

Samples are usually drawn by the Student Survey and Statistics Team (SSST). Once you have specified the criteria the SSST and SRPP will check that the criteria are within university guidelines. Samples are drawn using information from the CIRCE database.

If you need advice about specifying the sample please contact us via the IET-SRPP mailbox in the first instance – IET-SRPP@open.ac.uk.

The request to your sample students to participate in the research needs to come from your internal supervisor; this is to satisfy data protection regulations. If students choose to respond to the invitation to participate they should be informed that their response and any follow up will be analysed by you, as part of your Open University studies.

To provide you with the most appropriate sample please consider and specify the following:

- For module specific samples please specify the module, year and presentation codes.
- For general and module specific samples of the OU population these are some of the fields you can specify:

Age Group (either a band or anyone born after...)	Gender	Level of study
Educational qualifications on entry to the OU	Presentation Code/s	Credit transfer
Module code/s – specify passed, current etc	Qualification Code/s	Motivation for study
Registered to study on a particular module	Student status	Number of modules passed
Geographical areas, such as Region or postcode	Disability	
OU staff who are registered OU students – please specify if you wish any exclusions		

For module specific samples please use this box:

Module/s e.g. AA100	Presentation/s e.g. 2010J	Sample Number requested e.g. 300	Aimed for response rate e.g. 150 or 50%
DD101	2011B	50 (to start with)	10 or 20%
U122	2011E	50 (to start with)	10 or 20%
B121	2011E	50 (to start with)	10 or 20%
Other specifications e.g. type of contact details; previous educational qualifications.			

For all other samples please complete this box:

Sample specification e.g. Random sample level 1 modules	Sample number requested e.g. 300	Aimed for response rate. e.g. 150 or 50%
Other specifications, e.g. type of contact details; previous educational qualifications.		
***These are the 'other specifications' for the module specific samples listed above. The template wouldn't let		

me type in the frame above.

For DD101 and U122 I would like to have the sample selected from MK and NN postcodes to aid the possibility of face-to-face interviews.

B121 can be from anywhere but please can they not be from my own tutor group? (My AL PI number is 01558783). This will most likely mean they are outside the MK/NN postcodes since I teach locally.

Also, could I have address, phone number, email, preferred email, age as of course start date (i.e. 1/2/11 for DD101 and 1/5/11 for U122 and B121), previous educational qualifications, number of OU courses taken, achieved, gender, ethnic background.

Section Four: Format Design and processing

This section **is only** necessary if you need the SSST to help administer your survey.

Please contact Jane Wilson for information about services the Survey Office charge for and the timescales involved.

When will the final questions be supplied to the SSST Office?

Survey Type: Postal Online Both

Survey Mailing:

Target mailing date: Reminder required: Yes: No: Close of Survey date:

Is the close of survey date approximate or definite? Approx: Definite:

Data Processing:

Data from online and paper questionnaires can be returned as SAS, Excel or SPSS files. Reports are normally produced to a standard format. Please contact jet-surveys@open.ac.uk if you require further information OR additional analysis.

If you have open comments (paper questionnaire) and you need them to be typed please ask Jane Wilson if the SSST can help with this.

Finance:

Please contact Jane Wilson for information on cost of survey service.

Please indicate funding arrangements:

Baseline: Internal: External:

Baseline = payment will be made in advance of work being carried out

Internal = payment will be made by an OU Department

External = funded by research grant

Section Five: Supporting Documentation

Documentation

Please do not forget to attach the required supporting documentation with your application. Indicate below which items of supporting documentation you have sent as attachments with this Application:

<input checked="" type="checkbox"/> Copy of survey instrument/s	<input checked="" type="checkbox"/> Note/email from Supervisor supporting this research and sample request
<input checked="" type="checkbox"/> Copy of covering letter/s or invitation	<input checked="" type="checkbox"/> Copy of consent form (if applicable)

<input checked="" type="checkbox"/> I can confirm that a Data Protection Questionnaire has been submitted to the University's Planning Officer (Legislation and Information) -- Data-Protection@open.ac.uk
--

Please submit to: IET-SRPP@open.ac.uk (Please remember to 'save' the form first to attach to email)

Appendix 10: Approval from the SRPP for Study 2

SRPP 2010/131 - Panel decision - Windows Internet Explorer

https://legacy.open.ac.uk/jowa/?as=Item&a=OpenSt=IP4M.Nz&id=R6AAA4EFP30Fx%2F%20728VW50dot6W0cW6Rm3PUSyLxz5dQVAAA30Q2AACZ%2Fv0mTew%2F1d14B3HAAE0y6%2bAAAJ

Reply Reply to All Forward

SRPP 2010/131 - Panel decision

You replied on 3/14/2011 4:13 PM.

IET-SRPP

Sent: Friday, December 03, 2010 9:34 AM
To: B.A.Alden
Cc: J.T.E.Richardson; L.Price

Dear Bethany

With reference to your recent Student Research Project Panel application 'Distance learners' conceptions of reflection in higher education [phase 2: longitudinal case study], I am pleased to report that Panel approval has been given. There is an important matter to note though as due to data protection regulations student details cannot be passed to another student. Therefore, the invitation to participate can only go out from one of your supervisors – they introduce you, explain how important your research is and encourage participation (plus all the usual information which should be included). The sample is also given direct to a supervisor.

This approval only covers your Time 1 and Time 2 interviews. When you have prepared your Time 3 and Time 4 questions please just send them in to our mailbox (no new application is needed – please just quote your application number) and I will organise a review for you.

We always inform applicants that Panel approval does not imply either ethical or sample approval. In this instance, it would be helpful if you could send us a revised copy of the invitation – Steph will pick up the details from that and supply your sample to the correct supervisor. If you have any questions then please don't hesitate to get in touch.

With best regards

Jane

Jane Baines
Student Research Project Panel Coordinator
Student Statistics and Survey Team
Jennie Lee Building, Level 1 North
Ext: 53831
Hours: Mon, Tue, Thur, Fri am only

<http://statistics.open.ac.uk/research/index.cfm?id=7082>

Done Unknown Zone (Mixed) 100%

Appendix 11: Invitation letter for Study 2



The Open University

Institute of Educational
Technology
The Open University
Walton Hall
Milton Keynes
United Kingdom
MK7 6AA
Tel +44 (0) 1908 274 066

Invitation to participate in a research project

Hello! My name is Bethany and I am a full time research student with the Open University. My research is looking at what DD101 students think about reflective activities in higher education courses.

You have been randomly selected to participate in this study. This letter outlines the research process. There is a consent form attached as well. If you would like to help me with this research, please sign the consent form and return it to me in the pre-addressed envelope by **Tuesday, 15 February**.

The research process: This is a case study of Open University students and their experience as they move through DD101. I will contact you on four occasions during your course for an informal interview. You will be given the interview questions in advance so you have plenty of time to consider your responses.

First contact: A telephone or face-to-face interview (depending on your location) during the first month of the course. If you live near Milton Keynes, you will be invited to attend an interview on the Walton Hall campus. If this is inconvenient for any reason, we can carry out the first interview over the telephone.

Second contact: A telephone or email interview after you submit your first assignment.

Third contact: A telephone or email interview before you complete your final assignment.

Final contact: A telephone or face-to-face interview (depending on your location) after you submit your ECA.

Interviews will last approximately 20-30 minutes and will focus on your experiences on the course and in dealing with reflective activities. There are no right or wrong answers; I am interested in collecting your honest opinions.

Participating in this research will have no effect on your University studies and any information collected from you will be kept anonymous in the written report. However, your willingness to participate in this study would help me immensely in carrying out this research. Findings from this research may work to help improve our understanding of students' conceptions of reflection and how these ways of thinking might develop throughout a distance learning course. Therefore, your involvement could contribute to a greater purpose.

If you have any questions or concerns about participating in this project, you can contact my supervisor: Professor John Richardson at J.T.Richardson@open.ac.uk.

Thank you for considering this project and for providing a signed consent form. I think your input would be extremely valuable. I look forward to hearing from you and to hopefully meeting you in the next few weeks.

Best wishes,

Bethany Alden

Institute of Educational Technology

Appendix 12: Consent form used in Study 2

Student Consent Form

Title of Project: Distance learners' conceptions of reflection in higher education: a longitudinal case study

If you are willing to take part in this research project please tick the box, complete the details below and return the signed form in the envelope provided. At any time during the research you are free to withdraw and to request the destruction of any data that have been gathered from you, up to the point at which data are aggregated for analysis.

Your participation or non-participation will not affect your access to tutorial support or the results of your assessments. What you say during the case study will not be shared with your tutor but your tutor should be made aware of your participation in this study.

The results of any research project involving Open University students constitute personal data under the Data Protection Act. They will be kept secure and not released to any third party. All data will be destroyed once the project is complete.

- I am willing to take part in this research, and I give my permission for the data to be collected through recorded face-to-face interviews, recorded telephone interviews and/or email correspondence and to be used in an anonymous form in any written reports, presentations and published papers relating to this study.

Signing this form indicates that you understand the purpose of the research, as explained in the covering letter, and accept the conditions for handling the data you provide.

Name: Post code:
(please print)

Student PI:

Tutor's name (if known):

Signed:

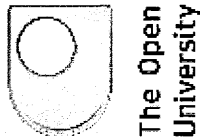
Date:

Please return completed form to (using the envelope provided):

Bethany Alden, Research Student
c/o The Survey Office
Institute of Educational Technology
The Open University
Walton Hall
Milton Keynes
MK7 6AA

If you would like to discuss this research in more detail prior to signing this form, please contact:
Professor John Richardson at J.T.E.Richardson@open.ac.uk.

Appendix 13: Application to the HPMEC for Study 2



HPMEC reference number

#846

HUMAN PARTICIPANTS AND MATERIALS ETHICS COMMITTEE (HPMEC) PROFORMA

To apply for HPMEC review of your research ethics protocol, please complete and email this proforma to: Research-Rec-Review@open.ac.uk.

If you have any queries about completing the proforma please look at the Research Ethics website: www.open.ac.uk/research/ethics/, in particular the FAQs.

The submission deadline for HPMEC is every Thursday at 5.30pm and applications will be assessed the next day. Once an application has been passed for review you should receive a response within 10 working days.

For all other general research ethics queries, please email Research-Ethics@open.ac.uk or ☎ 01908 654858.

Please complete all the sections below – deleting the inserted instructions.

Project identification and rationale

Title of project

Distance learners' conceptions of reflection in higher education: 3 longitudinal case studies

Abstract

This is the second phase of a PhD research project that aims to measure conceptual change regarding distance learners' notions of reflection. The study will involve students on three different Open University courses: U122, DD101 and B121. Data will be collected during 4 different interviews with participants, each occurring at key points in the course timetables. Analysis will seek to answer one of the primary research questions of whether students' conceptions of reflection change over time.

Project personnel and collaborators

Investigators

Give names and institutional attachments of all persons involved in the collection and handling of individual data. Name one person as Principal Investigator (PI). Research students should ask their primary supervisor to endorse their application by email to Research-Rec-Review@open.ac.uk, quoting the HPMEC reference number assigned to them. Research students should normally name themselves as Principal Investigator.

Principal Investigator/ (or Research Student):	Bethany Alden
Other researcher(s):	Professor John Richardson and Dr. Linda Price
Primary Supervisor (if applicable)	

Research protocol

Literature review

Frameworks for reflective learning have developed over the past 40 years as researchers and practitioners have sought to enhance the learning journey (see, for example, Habermas, 1974; Van Manen, 1977; Schön, 1987; Grimmer et al., 1990; Clare, 2007). Models such as Kolb's (1984) *experiential learning model* and Brookfield's (1987) *critical thinking model* include reflection as a necessary stage in the process of transforming experience into knowledge. Other models intimate that reflective activity happens at higher stages of competency (Perry, 1970; Butler, 1996). Indeed, some students will have encountered reflective activities and theories in their workplace as part of personal development planning or on previous courses in meeting a particular learning outcome (Alden, 2009). But, how do Open University students who, largely speaking, have varied employment and educational backgrounds, relate to the notion of reflection?

This study employs a phenomenological approach that aims to identify the ways in which Open University students conceptualise reflection in terms of learning. Using a line of questioning based on Säljö's (1979) study on conceptions of learning, the first phase of this research will involve an open-ended questionnaire to collect data and to develop categories of description for the ways in which distance learners conceptualise reflection. Three longitudinal case studies will be carried out in the second phase of this study in order to address how or if these conceptions change as students progress into higher level distance learning courses.

Methodology

Each member of the sample will receive a letter of invitation and a consent form to participate in a case study for the duration of their OU course (attached). These letters would be distributed with the assistance of a third party since the researcher is unable to have access to student details without prior consent.

Once informed consent has been obtained, the participant would receive an electronic letter to pass onto their course tutor. This letter would introduce the research project to the respective AL to avoid any confusion that may arise later (e.g. if the student mentioned the research in a tutorial).

Each participant will be contacted on four occasions during the case studies. The objectives of each contact are listed here but a more detailed draft protocol is attached to this application.

Time 1: face-to-face or telephone interview to capture biographies and conceptions of reflection (self, in HE, in society)

Time 2: telephone or email interviews to gather input regarding perceptions of reflective activities experienced thus far in the course; role of tutor feedback; role of dialogue/relationship

Time 3: telephone or email interviews to gather developing perceptions of reflective activities embedded in TMA activities and how tutors' feedback may be working alongside these. Also this contact will aim to capture thoughts about the reflective components of final TMAs and ECAs.

Time 4: telephone or email interviews to identify conceptions of reflection (self, in HE, in society).

Participants

60 students from each of the following groups (hoped-for participation rate = 20 per group):

- DD101-11B
- U122-11E
- B121-11E

Recruitment procedures

Each member of the sample will receive a letter of invitation and a consent form to participate in a case study for the duration of their OU course (attached). These letters would be distributed

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with the assistance of a third party since the researcher is unable to have access to student details without prior consent.

Once informed consent has been obtained, the participant would receive an electronic letter to pass onto their course tutor. This letter would introduce the research project to the respective AI to avoid any confusion that may arise later (e.g. if the student mentioned the research in a tutorial).

Consent

This would be sought during the recruitment process. The consent form is attached to this email. Participants are informed they can withdraw at any stage until the data has been aggregated for the final report. Names will be anonymised.

Location(s) of data collection

In most instances data will be collected via email or (recorded) telephone interviews. This is the preferred means of data collection for reasons, such as time and cost, but also because these are commonly perceived ways of convenient, low-intrusion correspondence. However, during 'Time 1' (the first point of contact), the participants will be offered an opportunity for a face-to-face interview if possible. This has been done to add credibility and weight to the study, as well as to establish a strong rapport with the participant. These in-person interviews could take place in the participants' homes or a public location.

Schedule

Time 1

- DD101: 1-5 February 2010
- B121: 1-5 May 2011
- U122: 1-5 May 2011

Time 2

- DD101: 22-26 March 2011 (after TMA01 feedback/before TMA02 cut-off)
- B121: 23-27 May 2011 (after activity 2.1 [learning cycle], after tutorial 1)
- U122: 6-10 June 2011 (after TMA01 feedback)

Time 3

- DD101: 1-5 August 2011 (after feedback from TMA05 and before cut-off for TMA06)
- B121: 8-12 August 2011 (after feedback from TMA01 and before ECA)
- U122: 15-19 August 2011 (after feedback from TMA03 and before ECA)

Time 4

- DD101: 10-14 October 2011 (one week after ECA cut-off)
- B121: 26-30 September 2011 (one week after ECA cut-off)
- U122: 12-16 September 2011 (one week after ECA cut-off)

Key Ethics considerations

Published ethics and legal guidelines to be followed

The researcher will be working under the BPS and BERA guidelines for ethical research and reporting.

Data Protection

The data protection liaison officer has been made aware of this project and approval has been sought. Data will be destroyed on completion of the PhD or earlier if a participant withdraws from the study.

Recompense to participants

Travel expenses to/from the interview for 'Time 1' would be reimbursed.

Deception

The research will be done in a transparent way.

Risk of harm to participants

There are no foreseen risks. However, interviewing in participants' homes and/or public places may hold unforeseen risks.

Debriefing

Participants will be able to access the completed thesis through the OU library.

Project Management

Research organisation and Funding

My PhD studentship is funded by ESRC. I believe the money is managed through the OU Research School.

Other project-related risks

- Informed consent will be sought.
- A third party will be used to work with student data until the point at which informed consent is obtained.
- Data protection and ethical guidelines will be followed.
- The course tutors will be made aware of the students' participation on the course.
- Endorsement by the course team chairs has been granted.
- SRPP approval has been granted.
- Unforeseen risks relating to in-person interviews are difficult to assess. However, the researcher has experience with personal tuition (in people's homes) and in dealing with challenging situations (in prisons).

Benefits and knowledge transfer

Findings from this study may have pedagogical implications for distance learning providers and distance tutors in terms of how reflective learning components are embedded in the curriculum and how facilitative strategies can promote learning through reflection. Also, reflection, as part of personal development planning, is considered an essential factor in enhancing employability (Watts and Butcher, 2008), which is a pertinent theme in higher education institutions. Finally, the findings of this study will contribute to the existing body of knowledge related to reflection and to all students' conceptions of learning.

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Declaration

I declare that the research will conform to the above protocol and that any significant changes or new ethics issues will be raised with the HPMEC before they are implemented.

Name: Bethany Alden
Unit/Faculty: CREET/IET
Telephone: 07955352120
Ext: 32677
email: B.A.Alden@open.ac.uk
Date: 14/12/10

Once your research has been completed you will need to submit a HPMEC final report. You will be prompted for this by HPMEC on the date you enter below:

Proposed date for final report: October 2012

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Appendix 14: Response from the HPMEC for Study 2



The Open University

From Dr Duncan Banks
Chair, The Open University Human Participants and
Materials Research Ethics Committee

Email d.banks@open.ac.uk
Extension 59198

To Bethany Alden, CREET/IET

Subject Distance learners' conceptions of reflection in higher
education: 3 longitudinal case studies

Ref HPMEC/2010/#846/1
Date 21 January 2010

Memorandum

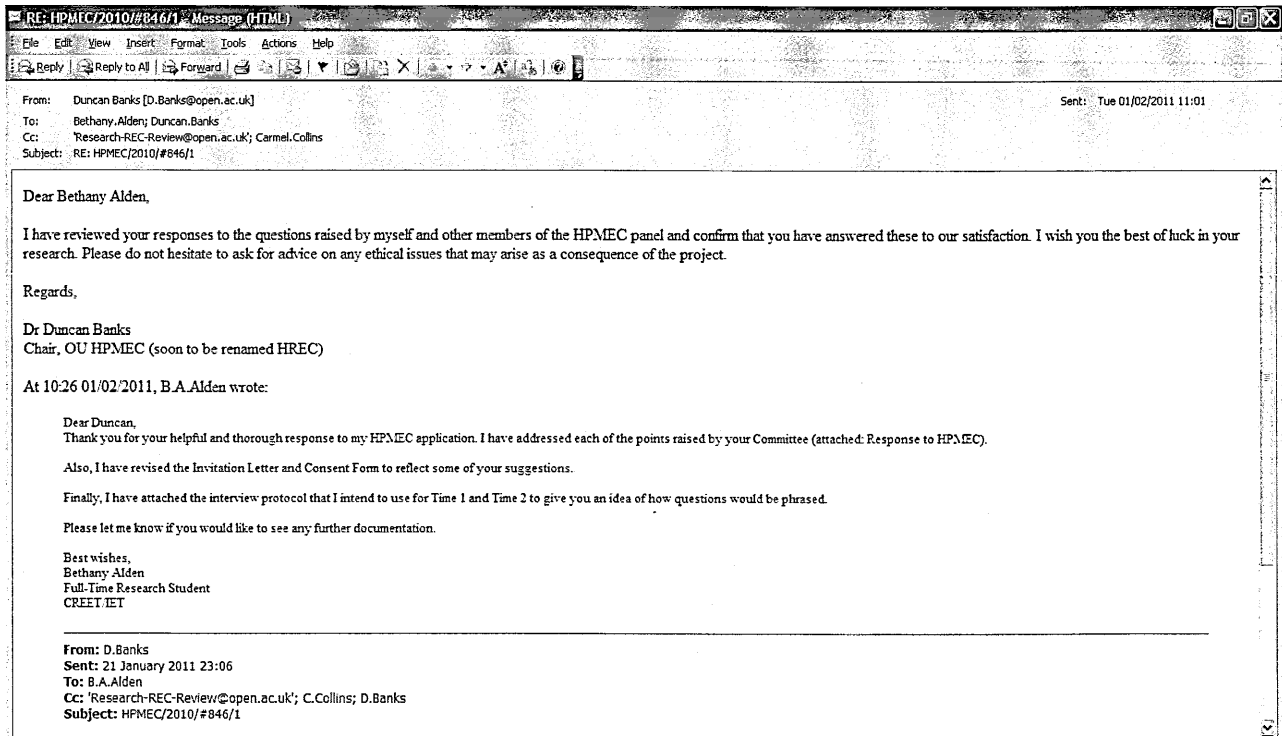
This memorandum is to confirm that the research protocol for the above-named research project, as submitted to the review panel on 17th December 2010, is approved by the Open University Human Participants and Materials Ethics Committee subject to addressing the following comments from the reviewers;

1. Who is the third party that will be contacting students and will they have enhanced CRB clearance?
2. Why is it necessary for individual student participants to be made known to Course Tutors (surely that knowledge in itself could lend bias to the study)?
3. How are the telephone recordings going to be stored and encrypted?
4. Why is it necessary to visit students in their homes for this research to be successful? Whilst the researcher may be comfortable doing it, the reviewers do not believe that this should be offered as an option.
5. BERA should be stated as British Educational Research Association and BPS as British Psychological Society and thereafter as the acronyms.
6. In the abstract it might be useful to give some indication of what the first stage was so that the readers can better situate the second stage.
7. Ethical guidelines: It would be useful to see how the researcher plans to phrase the questions in ways which do not appear to require respondents to be critical of their tutor.

The Open University is incorporated by Royal Charter (number RC 000391), an exempt charity in England & Wales and a charity registered in Scotland (number SC 038302)

HPMEC_2010-#846-Alden-1

Appendix 15: Final approval from HPMEC for Study 2



Appendix 16: Excerpt from a transcript of a face-to-face interview from Study 2

- B: Have you encountered reflective tasks on other courses before?
- E: Learning journals and reflection in the counselling courses so I've become familiar doing that, doing those ones.
- B: And, in the workplace? Any reflective and personal development type work?
- E: Umm, no. Not particularly. I think anything I had done was just self-motivated. Um, but, no. No support. I've found the Open University to be a very supportive environment to work in. And, up until this point...so um, I was pretty much...sort of a need...on previous roles.
- B: Do you think you're naturally reflective?
- E: I didn't think I was until I started counselling and when I actually thought about it consciously, I thought well, maybe, yes I am. But that taught me how to use reflection and what a good tool it can be if you're doing it properly, it does help. So dealing with people and handling stressful situations. It encourages you to take a bit of a step back and distance yourself from things, which can help amazingly well to give you something to ... so yeah, I think it is a good skill to use.
- B: You just answered this broadly speaking but can you think of a specific situation where you used reflection or maybe solved a problem by reflecting on it or helped someone else do that...
- E: I think just basically where I was in my life when I started doing the counselling skills then I was made redundant about 2 weeks after I started my first course, I've had some difficult issues to deal with personally so I kinda of, it was a really really difficult time but I felt the counselling was actually helping. The courses weren't there to give us counselling, you know, we had to do role-playing and learn about skills and how you would help someone else so it wasn't for us to get any counselling or advice. Going through it I did learn how to take a step back and look at it and I dealt with my redundancy better than I'd have otherwise done and I know other people who have been made redundant they've talked to you very personally, I think there have been very personal things within the decision that was made, for various managerial reasons. I think it helped with it better, it's just one of those things, isn't it? And actually it was probably one of the best things that could have happened to me. I wasn't particularly happy with the period of time beforehand. I had already started thinking about doing something else and I ... my backside a little sooner than I was prepared myself to do so it helped me to see the big picture, so

yeah, it was very timely for me. So that skills development, that skill, I kinda wasn't very sure that I had before. I was quite reactive but it has taught me that to be a little less, or maybe a bit more relaxed about.

B: None of these have right or wrong answers. I really just want your own opinion. But you think reflection is important in higher education?

E: Yes.

B: Why?

E: Not having gone through full time higher education myself, I could put myself into someone's situation, you know, socially and all the pressures you might be under but I certainly think that if you are in a particular situation where maybe you're not quite sure whether you're doing the right thing, whether you're stressed out, or you're stressed with the studies you're not getting on with the people you're studying with, or whatever, you might be able to take a step back and look at it and I suppose break it down a bit more, which is what I suppose you are doing when you are reflecting and piece it back together. It might be that you find it useful for people to do but it's something you have to learn and I'm not sure whether um, experience helps with that learning. If I'd have doing my counselling course 10 years ago whether I'd have felt it's been as beneficial as I did at the time. I don't whether it's my circumstances that knitted with it or whether it was me as a person. So, I guess it is individual. I know some people are have found it quite tiresome really. They didn't want to do, they didn't want to put any effort into it. I actually used that practice to sort of look back at things, and not just things that had happened, things that were going on in the world, as well as things going on in my life and um, I tried to deal with that sort of, and helped deal with that, see what I mean. So, I'm not sure if it is an individual thing, preference, or whether, sort of, on the whole it's a good idea. I suppose there's no harm in trying to encourage people to do it.

B: Why do you think some students are more reflective than others? Maybe ... engage with reflective tasks in a deeper way.

E: I think it's probably down to personalities. Some people will never think they need to reflect on things because they think they're always right. [laughing] Well, it's true isn't it? It doesn't matter what you're saying to them, they're never going to change their mind, or they are adamant they are not going to change their mind so they aren't open to things like that. Whether you're open to suggestions, and it's the same in the workplace, isn't it? You get the people that want to do things in a set way and they aren't interested in people's ideas about how maybe you could actually save yourself time and do things quicker or maybe try doing it slightly differently. They don't want to consider any of it, of those options. They just want

to do it how they want to do it and that's that. So, on reflection, maybe it is down to personality. [laughing]

B: Do you think. I think you said this already but do you think people could learn to be reflective?

E: Yes, I think I learnt how to do it. Um, when I went into college, I did my NVQ ... at work and it was workbased. I did my assessment work. I gathered all the evidence and information and then I met up with my tutor once a month or once every 6 weeks. We went through the work that I'd done and then he would mark it I think twice during the period it got sent off to me, the units, to be checked. And, going into college once a week talking to the tutor and dealing with other people enabled me to sort of talk broadly about what and also I'm question why are we doing that... and I think it's not to learn how to do it that way we just need to know why we need to try and do it that way. Um so I think doing that, learning how to do learning journal and, I've never done that before, I'm not a diary keeper. Um, I used to when I was younger but I always found them quite depressing with you looked back and saw that you hadn't achieved anything. So that iddn't last long. But actually learning how to formulate a learning journal and how to make the most of it I think is the basis for me in learning the skills to be reflective and being more objective about reflection whereas I think sometimes you can just do it with yourself and you're thinking maybe about an argument you've had with somebody, very much look at it subjectively because you're still looking at it from your point of view but when you're doing it the other way, you're looking about everything objectively and you can say, yeah maybe I overreact on that, I still think my point was right but maybe I did overreact.

B: This is a very broad question. Do you think that general in society, it is important to be a reflective person?

E: I think it's important that some people are being reflective because it's, that's I would I was going to say, that's the bridge between the people that are happy to look at different ways of doing things and people that aren't. Otherwise you get the two extremes and there's nothing in the middle. So, yeah, I guess, as a whole, I don't know. But, certainly, I think it's important for there to be some reflective types of people within society. And to have, that some of them have a role where they can share that with other people.

Appendix 17: Example of an email interview from Study 2

RE: DD101 Case Study - Windows Internet Explorer

<https://legacy.open.ac.uk/owa/?as=PreFormAction&as=Reply&st=IPM.Note&id=RgAAAASHP93Fv%2FkQ728VW50drcEw6oW6SRv9PuStYvLxc5jdQYAAA3Q0QzAAC2MqFvriOrnT6w%2Fg44AHPAAEo9y7AAA3>

Send [Icons] Options... HTML

To: s

Cc:

Subject: RE: DD101 Case Study

Times New Roman 12 B I U [Icons]

To: Bethany Alden
Subject: RE: DD101 Case Study

Hi Bethany,

I think this has highlighted something else where I need to get the right balance. not making things very concise when I should not be. I'll take this on board.

Here are my expanded thoughts.

What was 'constructive' about the comments?
Some of the in line comments given on my last TMA were:
'Glad to see an introduction'
'What might this tell us about people's identities?'
'Good to see that you have included a definition of discourse in order to set up the piece'
'Useful starting point to the essay as regeneration is the key to this discourse'
I took these as constructive as for me it meant I was using the right format and heading in the right direction on my essays.
It also meant I needed to explore a bit more on certain things.

How exactly will the self-reflection part of the TMA help you in preparing the next TMA?
The reflection on bits I found difficult about this assignment part was the most influential.
I took an A4 sheet of paper, put my self-reflection on it and put it up on the wall.
So as to make sure I would act on it.
Last time it was to spend more time on writing the TMA.
I am doing the same again for my current thoughts as it brought up a different thing.
This time its to spend more time investigating.

Regards

RE: DD101 Case Study - Windows Internet Explorer

<https://legacy.open.ac.uk/owa/?as=PreFormAction&as=Reply&st=IPM.Note&id=RgAAAABTF20Fv%2FvQ729VW50drcEw6oW6SRv9PuStYvLxc5jdQYAAA3Q0QzAAC2MqFvriOrnT6w%2Fg44AHPAAEo9y7AAA3>

Send [Icons] Options... HTML

To:

Cc:

Subject: RE: DD101 Case Study

Tahoma 10 B I U [Icons]

From: b.a.alden@open.ac.uk
Date: Tue, 31 May 2011 17:43:29 +0100
Subject: RE: DD101 Case Study

Thank you! If you have a few minutes, could you expand on a few points?

-What was 'constructive' about the comments?
-How exactly will the self-reflection part of the TMA help you in preparing the next TMA?

I'll be in touch in August with the next set of questions!

Best wishes,
Bethany

Sent: 28 May 2011 12:05
To: Bethany Alden
Subject: RE: DD101 Case Study

Hi Bethany,

These are views,

- So far, you have received feedback on several TMAs. What did you think about this? The feedback was excellent, it had a lot of constructive comments.
- What were your thoughts about doing the 'self-reflection' bit at the end of the TMAs? I wasn't too enthusiastic to begin with as I wasn't certain of the benefits', but now I think it helps
- What has been helpful in your learning so far on this course? The online self study resources and the online course activities.

Done [Icons] Internet

Appendix 18: Protocol for the open-ended online questionnaire for Study 3 [This was used to prepare the online questionnaire, which appeared one question at a time to the participants.]

Milestone 1 [H812 students]

Method: open-ended survey distributed via email

Objective: capturing biographies and conceptions of reflection (self, in HE, in society)

- 26-30 September 2011 [course start date: 3 October]

Biography

- Education: Can you describe your educational experience prior to enrolling on ___?
- Work: Can you outline your employment background (including your current job)?
- Home: Can you describe how you spend your time outside of work/study? (family/social/leisure commitments?)

Course

- What other OU courses have you done (if not included in previous description)?
- What motivated you to enrol on H812?
- What is your next step? (after H812)

Exposure/experience with reflection

- Have you encountered reflective tasks on other courses?
- Have you encountered reflective tasks in the workplace?

Reflection in terms of self

- Do you think you are a naturally reflective person?
 - Why do you say this?
- Can you recall and describe a situation in which you reflected on something?

Reflection in terms of HE

- To what extent is reflection important in HE?
- Why are some students more reflective than others?
- Can people learn to be more reflective? Explain.

Reflection in terms of society

- Would you say it is important to be a reflective person in general? (why?)

Milestone 2 [H812 students]

Method: open-ended survey distributed by email

Objective: To gather input regarding perceptions of reflective activities experienced thus far in the course; role of tutor feedback; role of dialogue/relationship

- 8-11 November 2011 [TMA01 cut-off date is 4 November]

Questions:

- You recently submitted your first TMA. What did you think about this assignment?
- What were your thoughts about completing an assignment that had to do with reflecting on your own learning experience?
- How did you approach/carry out the TMA work? (preparation, thinking, writing, etc.)
- In terms of your own experiences of teaching and learning, explain the extent to which your ideas of reflection have changed.
- What do you expect to gain from the tutor's feedback on your TMA?
- What has been helpful in your learning so far on this course?
- Have the other students played a role in your learning experience? In what ways?

Appendix 19: Application to the SRPP for Study 3

Office Use Only – V15 – 06/02/2011	
Application No:	
Date received:	
Pending:	
Approved/Not approved	



The Open University

Student Research Project Panel Application Form Student Researchers

Please note that:

- An application must be submitted and approved before the start of the proposed research
- The dates of the working group meetings and deadlines for applications are available on the SRPP website <http://iet.intranet.open.ac.uk/research/index.cfm?id=7082>

For submission and further help please contact: JET-SRPP@open.ac.uk

Section One: Applicant Details

1. Applicant Details:

Name:	Bethany Alden		
Email:	B.A.Alden@open.ac.uk	Telephone:	07955352120
Faculty/Unit:	CREET/MET		
Name: OU Academic Supervisor	Professor John Richardson and Dr. Linda Price		
Email: Supervisor	j.t.e.richardson@open.ac.uk ; l.price@open.ac.uk		

2. Research details:

Title of Research:	[PhD] Distance learners' conceptions of reflection in higher education [phase 3: cross-sectional study]
Target Start Date (survey, focus group, interview):	19/09/11 (Estimate date if you do not have a definite date)
Target End Date (as above):	30/11/11

3. Consultation with other OU staff about the research.

Please indicate whether the research involves the following and whom you have contacted. If your research involves specific modules we would expect you to have discussed the research with the module team.

Unit:	Contact name:
Faculty Associate Dean or Module Team	Mary Lea (Course Chair of H812)
Marketing	
Student Services – Regions	
Student Services – other areas	
IET Student Statistics and Survey Team	Jackie Dagger (regarding enrolment numbers for H812)
Other (please specify)	

Section Two: About your research

4. Brief aims of the research:

- To develop *categories of description* based on how post-graduate students conceptualise reflection and think of themselves as reflective learners.
- To offer findings that serve as a comparison (or parallel) study to the longitudinal study that currently being conducted with Level 1 learners.
- To demonstrate a range of methods intended to triangulate findings for my PhD thesis.

5. Please give a brief description of your methodology (maximum 250 words):

Two open-ended survey instruments will be distributed via email to a sample group of H812 learners from the 11J presentation. The first survey (Time 1) will ideally be distributed to this group a week before they begin the module. The second survey (Time 2) will be distributed the week commencing 8 November (immediately following the submission of their first TMA).

It has been suggested that the sample be drawn from only those students who are also Open University Associate Lecturers. The rationale is that this group would be more responsive to participating in a project by a fellow staff person/student. Also, this group would be less surprised at being contacted prior to the course start date.

The survey protocol will follow a similar line of questioning as has been used in the longitudinal study (see attached protocol). A phenomenographic approach will be used, meaning the questions are asked in a way that will hopefully elicit a second-order perspective on the learners' notions of reflection.

The responses from Time 1 will be analysed by looking for categories of descriptions which will hopefully emerge from the data. From these categories, it may be possible to identify different conceptions of reflection. These findings could be used alongside the findings from phase 1 (postal survey of a random sample of OU students) and phase 2 (a longitudinal study of Level 1 OU students) to offer a more rounded view of these conceptions and to see if factors such as *level of study, educational experience or employment background* are factors in thinking about reflection.

The responses from Time 2 will be analysed by looking at ways in which the initial (Time 1) conceptions have developed as a result of reframing their notions in a context of academic study.

6. Research Theme: Students agree to be contacted (Conditions of Registration) in order to help the University 'plan and improve our services'. Explain how your research meets this criterion:

Findings from this phase of research will contribute to a PhD thesis on distance learners' conceptions of reflection in higher education. The findings may have implications for practitioners and curriculum designers in understanding how learners conceptualise reflection and think of themselves as reflective learners. The notion of personal development planning is integral to employability enhancing strategies and process of reflection underpins this activity. Therefore, there may be conclusions for higher education institutions as well. Overall, this thesis will contribute to the existing and developing body of knowledge on reflection and reflective practices.

7. Is there any overlap with any previous or current research? (Please tick)

Yes

No

If yes, please explain.

There is overlap in terms of the dates in which phase 2 and phase 3 (as proposed) would be carried out. However, the sample groups would not overlap.

8. Will this research be repeated? (Please tick)

Yes No

<p>If yes, how often?</p>

9. Data collection methods - please indicate your proposed research method(s):
(Please tick all that apply)

<input type="checkbox"/> Paper	<input type="checkbox"/> Focus Group
<input checked="" type="checkbox"/> Online (open-ended email survey)	<input type="checkbox"/> Other
<input type="checkbox"/> Telephone	Please specify other:
<input type="checkbox"/> Personal interview	

10. Please explain how the research will be disseminated internally to OU researchers and staff and detail any plans for external publication/dissemination of your findings:

<p>This study will feed into the PhD thesis, which will be kept on file with the OU Library. Also, these are available from any UK university through ETHOS. Findings from this study could also be included in a journal article.</p>
--

Section Three: Sample

Samples are usually drawn by the Student Survey and Statistics Team (SSST). Once you have specified the criteria the SSST and SRPP will check that the criteria are within university guidelines. Samples are drawn using information from the CIRCE database.

If you need advice about specifying the sample please contact us via the IET-SRPP mailbox in the first instance – IET-SRPP@open.ac.uk.

The request to your sample students to participate in the research needs to come from your internal supervisor; this is to satisfy data protection regulations. If students choose to respond to the invitation to participate they should be informed that their response and any follow up will be analysed by you, as part of your Open University studies.

To provide you with the most appropriate sample please consider and specify the following:

- For module specific samples please specify the module, year and presentation codes.
- For general and module specific samples of the OU population these are some of the fields you can specify:

Age Group (either a band or anyone born after...)	Gender	Level of study
Educational qualifications on entry to the OU	Presentation Code/s	Credit transfer
Module code/s – specify passed, current etc	Qualification Code/s	Motivation for study
Registered to study on a particular module	Student status	Number of modules passed
Geographical areas, such as Region or postcode	Disability	
OU staff who are registered OU students – please specify if you wish any exclusions		

For module specific samples please use this box:

Module/s e.g. AA100	Presentation/s e.g. 2010J	Sample Number requested e.g. 300	Aimed for response rate e.g. 150 or 50%
H812	2011J	40 (OU Associate Lecturers only)	20 or 50%
<p>Other specifications e.g. type of contact details; previous educational qualifications.</p> <ul style="list-style-type: none"> • OU Associate Lecturers only • Age as of 1 October 2011 • Gender • Education qualifications on entry to the OU • Module code/s (passed and current) • Number of modules passed • Motivation for study • OU staff registered as OU students • Available to be surveyed 			

--

For all other samples please complete this box:

Sample specification e.g. Random sample level 1 modules	Sample number requested e.g. 300	Aimed for response rate. e.g. 150 or 50%
Other specifications, e.g. type of contact details; previous educational qualifications.		

Section Four: Format Design and processing

This section **is only** necessary if you need the SSST to help administer your survey.

Please contact Jane Wilson for information about services the Survey Office charge for and the timescales involved.

When will the final questions be supplied to the SSST Office?

Attached

Survey Type:

Postal

Online

Both

Survey Mailing:

Target mailing date:

Reminder required:

Yes:

No:

Close of Survey date:

**15 October
2011**

Is the close of survey date approximate or definite?

Approx:

Definite:

Data Processing:

Data from online and paper questionnaires can be returned as SAS, Excel or SPSS files. Reports are normally produced to a standard format. Please contact jet-surveys@open.ac.uk if you require further information OR additional analysis.

If you have open comments (paper questionnaire) and you need them to be typed please ask Jane Wilson if the SSST can help with this.

Finance:

Please contact Jane Wilson for information on cost of survey service.

Please indicate funding arrangements:

Baseline:

Internal:

External:

Baseline = payment will be made in advance of work being carried out

Internal = payment will be made by an OU Department

External = funded by research grant

Section Five: Supporting Documentation

Documentation

Please do not forget to attach the required supporting documentation with your application. Indicate below which items of supporting documentation you have sent as attachments with this Application:

<input checked="" type="checkbox"/> Copy of survey instrument/s (draft questions for interviews, copy survey, focus group details etc)	<input type="checkbox"/> Note/email from Supervisor supporting this research and sample request
<input checked="" type="checkbox"/> Copy of covering letter/s or invitation	<input checked="" type="checkbox"/> Copy of consent form (if applicable)

<input checked="" type="checkbox"/> I can confirm that a Data Protection Questionnaire has been submitted to the University's Planning Officer (Legislation and Information) – Data-Protection@open.ac.uk

Please submit to: IET-SRPP@open.ac.uk (Please remember to 'save' the form first to attach to email)

Appendix 20: Approval from the SRPP for Study 3

The screenshot shows an email titled "SRPP 2011/085 - Panel decision" in a Windows Internet Explorer browser window. The browser's address bar shows a URL from open.ac.uk. The email header includes the sender "IET-SRPP" and the date "Thursday, September 08, 2011 11:05 AM". The recipient is listed as "J.T.E.Richardson; L.Price; E.Street". The main body of the email is addressed to "Bethany" and discusses the approval of her SRPP application. It includes two bullet points: one regarding a sample flag and another regarding an invitation to research. The email concludes with contact information for Jane Baines, the Student Research Project Panel Coordinator.

SRPP 2011/085 - Panel decision

You replied on 9/8/2011 2:29 PM.

IET-SRPP

Sent: Thursday, September 08, 2011 11:05 AM
To: B.A.Alden
Cc: J.T.E.Richardson; L.Price; E.Street

Dear Bethany

With reference to your recent SRPP application 'Distance learners' conceptions of reflection in higher education [phase 3. cross-sectional study], I am pleased to report that Panel approval has been given. There are only two comments to make:

- **Sample** - there is only one flag that identifies staff when creating samples and unfortunately it is not possible to filter for ALs so you will need to screen with a question if you wish to use this criteria.
- **Invitation** – it is normal practise where students are involved in research for the invitation to come from their supervisor. This shows that the piece of research is legitimate and is important to the University. Can you revise your invitation and submit a new version please.

As you know we always advise applicants that Panel approval does not imply either ethical or sample approval. Steph will provide your sample (to your supervisor) in line with the timescale you have outlined and liaise with John in line with data protection guidelines.

If you have any questions please do not hesitate to ask otherwise we will wait for your revised invitation.

With best regards

Jane

Jane Baines
Student Research Project Panel Coordinator
Student Statistics and Survey Team
Jemma Lee Building, Level 4 North
Walton Hall, Ext. 93631
Hours: Mon, Tue, Thur, Fri am only

SRPP Intranet page
[View this intranet page on the SRPP intranet site](#)

Appendix 21: Application to the Data Protection Office for Study 3



The Open University

DATA PROTECTION ACT 1998

Data Protection Questionnaire for Students

The Open University is registered with the UK Information Commissioner. We have provided a general description of the processing of personal data being carried out in the University and we must ensure that any new projects or uses of data are covered by our registration.

The purpose of this form is to inform the OU's Data Protection Coordinator about new projects or databases which use or record personal data.

If you need to process personal information as part of your studies you must get the agreement of your tutor or supervisor that the processing is necessary and complete this form. Your tutor or supervisor can tell you about the Data Protection Act's requirements and implications, including the appropriate level of security arrangements you need to make in relation to a particular set of personal data. The member of staff will also be responsible, in consultation with the Data Protection Coordinator, for dealing with subject access requests relating to personal data held by students.

Guidelines on the use of personal data for research purposes can be found on page 4.

Please complete all sections of this form and return to the **Data Protection Coordinator, Room 002, North Spur, Walton Hall.**

Definitions

Personal Data - Information relating to identifiable living individuals, including expressions of opinion.

Processing - Any action involving data, including obtaining, recording, analysing and destroying.

Data Subject - An individual about whom information is processed

Subject Access - The right of an individual to receive or see the information that an organisation is holding about them.

1. About You

Name:	Bethany Alden
PI:	A2070800
Current Course:	Full-time PhD
Faculty:	IET

--

2. **Please provide a brief title of your project/database/data file**

Distance learners' conceptions of reflection in higher education: a cross-sectional study

3. **Processing Description**

- | | | | |
|-----|-------------------------------------|-----|-------------------------------------|
| (a) | Is the data for a research project? | Yes | <input checked="" type="checkbox"/> |
| | | No | <input type="checkbox"/> |

If no, please describe what you are using the data for

NB If you are using personal data for a purpose other than one which is authorised by your tutor or supervisor, the University takes no responsibility and you must rely on the exemption for domestic purposes or arrange your own notification with the Information Commissioner's Office.

- | | | | |
|-----|------------------------------------|------------|-------------------------------------|
| (b) | Is the data (tick as appropriate): | Manual | <input type="checkbox"/> |
| | | Electronic | <input checked="" type="checkbox"/> |

4. **About the Categories of Individual**

Please briefly describe the individuals to whom the data relate.

Students on the H812 – 11J module who are also Open University Associate Lecturers.

5. **About the Data**

What information do you collect or hold about individuals? e.g. name, contact details, age, opinions, recordings etc.

I will hold the name, PI, email address, age, educational background, and previous courses taken data of consenting participants.

6. About Recipients (to whom data are disclosed)

It is expected that any results will not be made available in a form which identifies individuals. If you intend to disclose data which identifies individuals to anyone outside of the Open University please give details:

	Please tick
Authorised employees and agents of the OU only	<input checked="" type="checkbox"/>
Other (please specify)	<input type="checkbox"/>

7. About any Transfers Overseas

If personal data is transferred outside the European Economic Area (European Union member states plus Norway, Liechtenstein and Iceland) please provide details of countries below:

Office Use Only	
Subject Access	Yes/No
Purpose	

GUIDELINES FOR OPEN UNIVERSITY STUDENTS ON THE USE OF PERSONAL DATA FOR RESEARCH PURPOSES

Students are not generally expected to process personal data as part of their studies, but if it is necessary to do so, (perhaps for the purpose of a research project), they must obtain the agreement of their tutor or supervisor, that the processing is necessary. The processing must also take place under the direction of the tutor or supervisor authorising it. If the processing is to come within the terms of the University's notification with the Office of the Information Commissioner the University's Data Protection Co-ordinator must be informed (by the completion of a Data Protection Questionnaire available from following intranet site at: <http://intranet.open.ac.uk/planning/dp/08.shtml>).

Students and staff must also be aware of and comply with the data protection principles when dealing with personal data. These can be found in the Data Protection Code of Practice at: <http://www.open.ac.uk/university-documents/data-protection-code.html>

If you do need to process personal data, you will be covered by the University's notification as long as you have followed the advice above. Otherwise, it will be your own responsibility

Students whose research contains a commercial element will not be covered by the University's notification, and should telephone the Notification Department of the Office of Information Commissioner (01625 545740).

The Data Protection Act and Research

The 1998 Data Protection Act (Section 33) exempts personal data used for research purposes (including statistical or historical purposes) from certain of the data protection rules. Personal data means data which relate to a living identifiable individual. If the purpose of the research processing is not measures or decisions targeted at particular individuals and does not cause substantial distress or damage to an individual, it is exempt from:-

- The 2nd data protection principle. This means that once data has been obtained fairly and lawfully, subsequent use for research purposes will not breach the second principle (which requires compatibility of purpose).
- The 5th data protection principle, meaning that personal data may be held indefinitely.
- The individuals right of access to the personal data provided the results do not identify individuals.

What is Personal Data

Personal data is any information can be used to identify a living individual. Personal data includes names, addresses, email addresses, personal identifiers, photographs etc.

Whether you are collecting personal data via a questionnaire, telephone, email or face-to-face please make sure that you comply with the following guidelines:

- Inform the people who you are (I'm David Jones, a student with the Open University)
- the reason why you are collecting the data (as part of my studies I am researching xxx)
- assure them that the data will only be used for research purposes
- that it will form part of an anonymised report
- that it will not be passed on to any third party

If, after informing them of the above, the person is happy to answer your questions then they have given their consent to the purpose(s) for which you are collecting the data.

Consent

Informing people of the purpose for which you are collecting their data and obtaining consent is very important in order to comply with the Data Protection Act 1998, as individuals must not be deceived or misled as to why the information is needed.

The Data Protection Act 1998 regulates the processing of personal data (information relating to

living individuals). The definition of data has been widened to include certain manual records and the definition of processing to include anything done with data from obtaining through to destroying.

The Act exempts personal data used for research purposes from certain of the Data Protection principles, but there is no blanket exemption. Research must meet one of the conditions specified in the Act and those relevant are:

- (i) the individual has consented to the use of the data for research. It should be noted that in particular that the processing of sensitive personal data (such as ethnic origin, physical or mental health) is subject to stricter controls and requires the explicit i.e. fully informed consent of the individual for research use;
- (ii) the processing is necessary in pursuit of the University's legitimate interest. This does not apply however if the processing is prejudicial to the rights and freedoms or legitimate interests of the individual. In this case the individual retains the right to object to the processing.

Anonymizing Data

The Data Protection Act specifically states that no processing of research data is allowed if the identity of a data subject is given away without consent, or if the data are used to support decisions in respect of an individual, or if there is likely to be substantial damage or distress.

Wherever possible research data should be anonymised. The Information Commissioner encourages that where possible information relating to an individual which is not necessary for the particular processing undertaken, should be stripped from the personal information being processed. It does not amount to true anonymisation but is in line with the requirements of the Data Protection principles. These are that personal data must be:

- (1) fairly and lawfully processed and only if certain conditions are met;
- (2) processed for limited purposes;
- (3) adequate, relevant and not excessive;
- (4) accurate;
- (5) not kept for longer than necessary;
- (6) processed in accordance with the rights of individuals;
- (7) kept secure;
- (8) not transferred to countries outside the European Economic Area without adequate protection.

Retention of data

The Act allows data that has been obtained solely for research purposes to be kept indefinitely. If you plan to keep original questionnaires and other personal data then it must never be disclosed to a third party and must be kept securely to avoid accidental disclosure

Right of Subject Access

Personal data processed for research purposes are exempt from the rules regarding subject access requests as long as the published research does not identify individuals. Discussing or divulging personal data between colleagues on a project does not mean that research purposes are exceeded.

Security

Once you have collected the data you have a duty to keep it in a secure manner in order to prevent accidental disclosure, as it should only be disclosed on a need to know basis. This means questionnaires, floppy's or CD-ROMs should be locked away in a drawer and not left out on a desk. Don't allow others to read personal data displayed on your computer screen, turn the screen away or minimize the window.

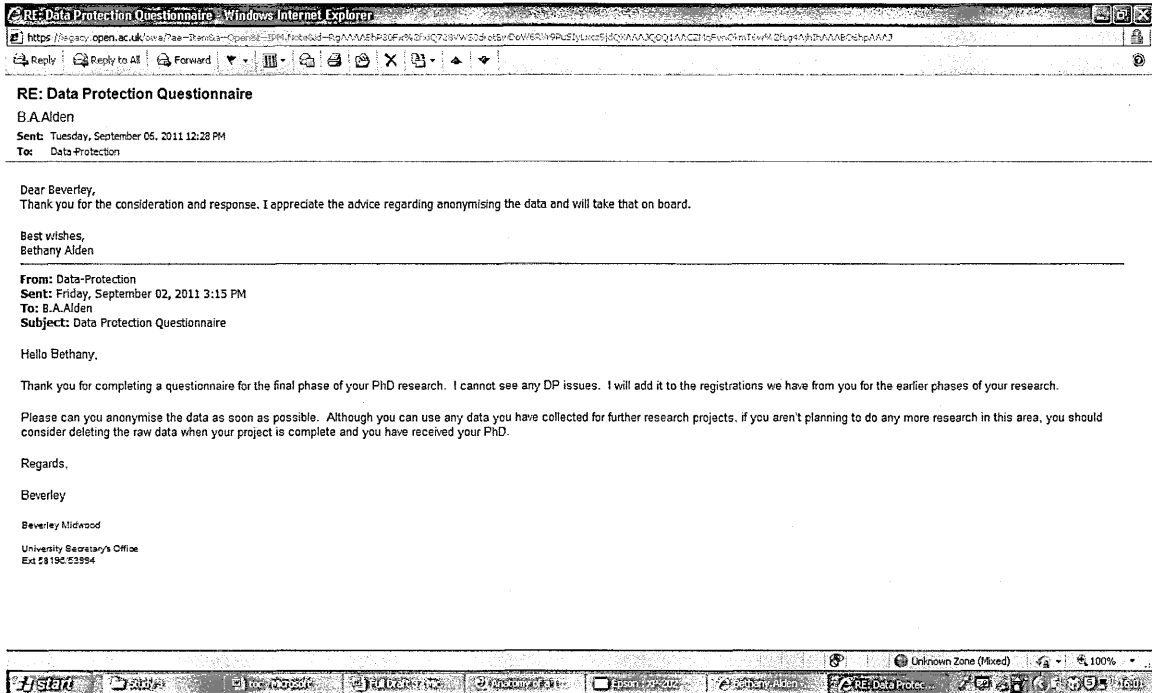
Using the Data for other Research Projects

The Act states that research (including statistical or historical purposes) may legitimately involve further processing of personal data beyond the originally stated purposes. This is because data collected for one purpose in the course of an experiment or survey might later be seen to have other applications.

If you have any queries regarding the Data Protection Act 1998 and your research project please contact the Data Protection Office on 01908 653994 or send an email to dataprotection@open.ac.uk.

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Appendix 22: Response from the Data Protection Officer for Study 3



Appendix 23: Invitation letter used in Study 3



The Open University

Institute of Educational
Technology
The Open University
Walton Hall
Milton Keynes
United Kingdom
MK7 6AA
Tel +44 (0) 1908 274 066

Invitation to participate in a research project for students on H812

Hello! My name is Bethany and I am a full time research student with the Open University. My research is looking at what H812 students think about reflective activities in higher education courses.

You have been selected to participate in this study. This letter outlines the research process. There is a consent form attached as well. If you would like to help me with this research, please sign the consent form and return it to me in the pre-addressed envelope by Wednesday, 21 September.

The research process: This is a case study of Open University students and their experiences as they move through the first few weeks of H812. I will contact you by email on two occasions during the first 6 weeks of your module. This method will give you time to consider your responses. The questions will be open-ended so you will also have space to express your thoughts and ideas.

First contact: An open-ended email survey the week before you start the module (26-30 September).

Second contact: An open-ended email survey the week after you submit your first TMA (8-12 November).

Surveys could take approximately 20-30 minutes to complete and will focus on your experiences on the course and in dealing with reflective activities. There are no right or wrong answers; I am interested in collecting your honest opinions.

Participating in this research will have no effect on your University studies and any information collected from you will be kept anonymous in the written report. However, your willingness to participate in this study would help me immensely in carrying out this research. Findings from this research may work to help improve our understanding of students' conceptions of reflection and how these ways of thinking might develop throughout a distance learning course. Therefore, your involvement could contribute to a greater purpose.

If you have any questions or concerns about participating in this project, you can contact my supervisor: Professor John Richardson at J.T.E.Richardson@open.ac.uk.

Thank you for considering this project and for providing a signed consent form. I think your input would be extremely valuable. I look forward to hearing from you and to hopefully meeting you (via email) in the next few weeks.

Best wishes,

Bethany Alden

Institute of Educational Technology

Appendix 24: Consent form used in Study 3

Student Consent Form

Title of Project:

Distance learners' conceptions of reflection in higher education: a cross-sectional case study

If you are willing to take part in this research project please tick the box below, complete your details below and please return the signed form in the envelope provided. At any time during the research you are free to withdraw and to request the destruction of any data that have been gathered from you.

Your participation or non-participation will not affect your access to tutorial support or the results of your assessments. What you say during the case study will not be shared with your tutor but your tutor should be made aware of your participation in this study.

The results of any research project involving Open University students constitute personal data under the Data Protection Act. They will be kept secure and not released to any third party. All data will be destroyed once the project is complete.

- I am willing to take part in this research, and I give my permission for the data to be collected through email correspondence and to be used in an anonymous form in any written reports, presentations and published papers relating to this study.

Signing this form indicates that you understand the purpose of the research, as explained in the covering letter, and accept the conditions for handling the data you provide.

Name:
(please print)

Are you an Associate Lecturer for the Open University? (yes/no)

Student PI:

H812 tutor's name (if known):

Signed:

Date:

Please return completed form to (using the envelope provided):

Bethany Alden, Research Student
c/o The Survey Office
Institute of Educational Technology
The Open University
Walton Hall
Milton Keynes
MK7 6AA

If you would like to discuss this research in more detail prior to signing this form, please contact:
Professor John Richardson at J.T.E.Richardson@open.ac.uk.

Appendix 25: Support letter from research supervisor used for Study 3

Letter of Support from Professor John Richardson

Dear [Student]

Re: Invitation to participate in a research project of H812 students

Bethany Alden is a full-time PhD student with the Institute of Educational Technology at the Open University. She has a particular interest in the way students think about reflection and of themselves as reflective learners. As part of her research, she would like you to participate in 2 email interviews over the first 8 weeks of your H812 module.

Participating in this study is completely voluntary and your responses would be confidential.

I hope you will be willing to take part in this important research study. Your responses will provide valuable information that will help future students at the Open University.

Thank you very much for your help.

Yours sincerely

Professor John T. E. Richardson
Professor of Learning and Student Assessment
Institute of Educational Technology
The Open University

Appendix 26: List of researcher's published work (in reverse chronological order)

Alden, B., Richardson, J. T. E. and Price, L. (2012) 'Reflection and personal development in asynchronous learning spaces: tertiary distance tutors' conceptions', [unpublished manuscript; working on revisions for *British Journal of Educational Technology*]

Alden, B. (2011) Book Review of Case, S. and Haines, K. (2009) *Understanding Youth Offending: Risk factor research, policy and practice*, *Youth and Policy*, no. 107, pp. 108-111.

Alden, B. (2011) 'Distance learners' conceptions of reflection in higher education', *Psychology of Education Review*, vol. 35, no. 1, pp. 3-7.

Alden, B. (2009) 'Addressing employability: identifying personal development planning activities in course designs', Centre for Outcomes Based Education, The Open University.

Alden, B. (2009) *Reflective Learning: Adding Value to the Openings Experience?*, Master of Research (MRes) Dissertation, Milton Keynes, Open University Library.

Alden, B. (2006) 'Career aspirations of inmates: identifying and overcoming barriers to achieving employment targets', Isle of Wight, HMP Parkhurst/Probation Research Education Trust.

Milton Keynes



The Open University

Distance learners' conceptions of reflection in higher education

and of themselves as reflective learners

Bethany Alden
PhD Student
Institute of Educational Technology
The Open University

Primary research questions

1. What are Open University students' conceptions of reflection?
2. What are their conceptions of themselves as reflective learners?
Open-ended questionnaire
3. Do these conceptions change as Open University students progress through their courses?

3 longitudinal case studies

Conceptions of reflection

A student's approach to
learning
depends on his or her
conception of learning.

(Marton, 1975, 1976)

Conceptions of reflection

What is reflection?



The questionnaire

1. How do you go about reflecting on your own learning (e.g. what procedures or methods do you use)?
2. What areas of reflective work do you find difficult?
3. When is reflection easy for you?
4. Why are some students more reflective than others?
5. To what extent do you feel reflection is necessary in higher education?
6. What do you actually mean by 'reflection'?

I know what you're probably
thinking...

Open-ended questionnaires?

Are you
re?

Watkins and Regmi (1992) analysed written responses
from participants: conceptions of learning

Van Rossum and Taylor (1987) used open-ended
questionnaires: conceptions of learning and good teaching

Assumption: sample will be able to express themselves
in writing

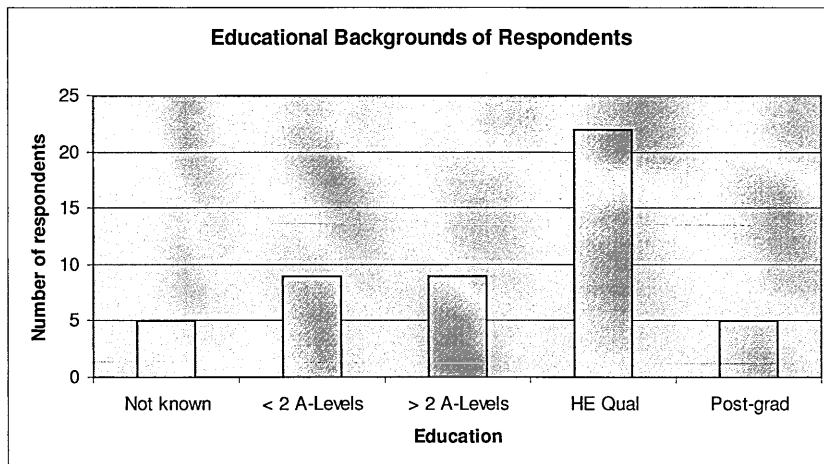
Assumption: respondents will consider the questions in
the order they are presented

The response

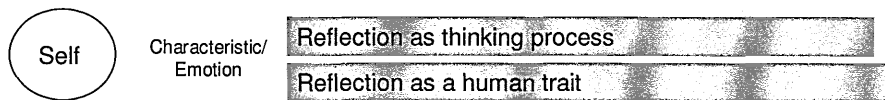
50 respondents (\approx 17 per cent response rate)

- 33 Female (66%)
- 17 Male (34%)
- Age range: 18 to 74 years
- Mean/median age: 43, 45 respectively

Educational backgrounds of respondents



What is reflection?



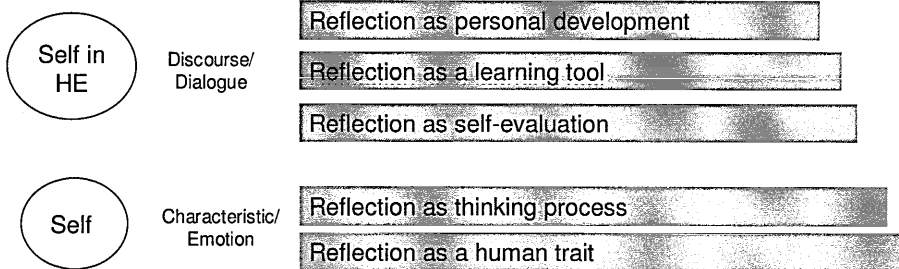
What is reflection?

'Self-reflection is the ability to be aware of one's own thoughts and feelings and impulses and to be able to adapt behaviour and decision accordingly...'

'Thinking about and around something – an idea, a memory, a problem, an issue.'

'Looking at what happened, who was involved, how you felt...'

What is reflection?



What is reflection?

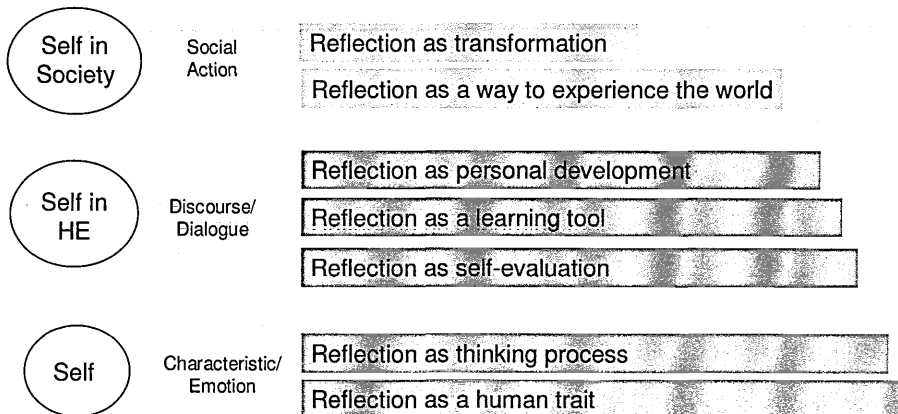
‘It enables a person to identify their strengths and potential weaknesses.’

‘Consideration of whether my learning has been truly effective—can I use the subject matter.’

‘Reflection assists motivation (in HE).’

‘A mechanism for facilitating change and improvement.’

What is reflection?



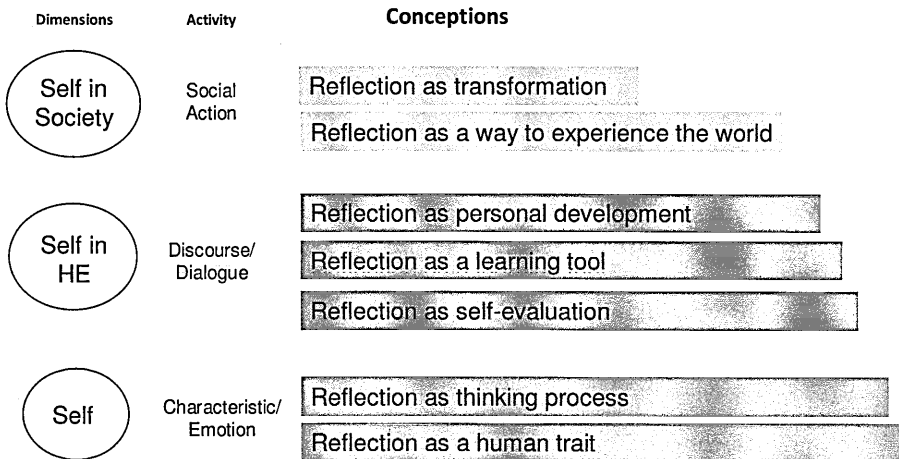
What is reflection?

'The real learning happens when I am in a position to experience/do/see the learnt theory in action.'

'Awareness is the first step, but it's important that action follows.'

'It can change your life.'

What is reflection?



Additional conceptions/findings for consideration

Reflection seemed to be a separate activity to 'learning'.

- Happens afterward

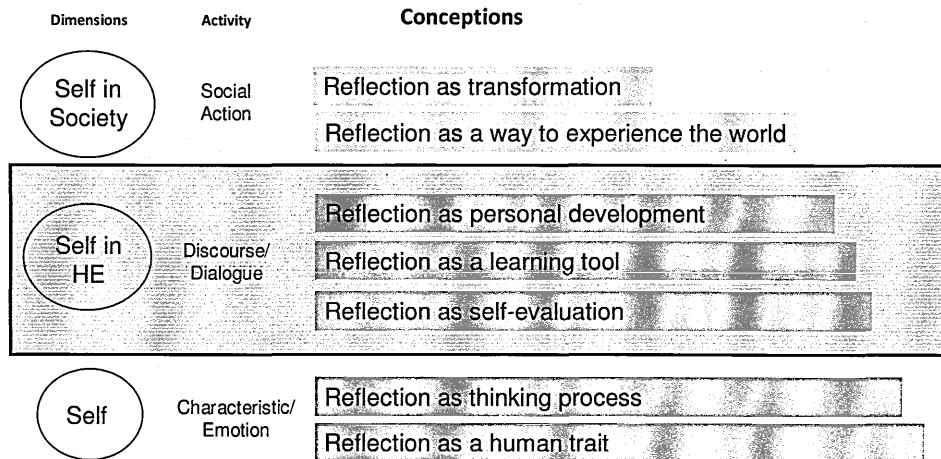
There are conditions in which reflection happens more effectively/easily.

- Relaxed, quiet, dedicated time
- Times of day
- When it isn't forced

Reflection can be taught/trained.

- Facilitated through practice, dialogue and tutors

What is reflection?



‘When I was faced with the concept of reflection for the first time, I was completely baffled. I spoke to my teenage son who had been used to reflective work at school and gave me examples. Then I realised I was doing it but had never given it a name [...] Some students are more reflective than others because they have engaged in reflection before. Possibly some students are more reflective due to personality but I think reflection can be taught. If the concept is explained in ways that different personalities can understand.’

Next steps...

- 3 longitudinal case studies
 - Test conceptions of reflection framework
 - Investigate conceptual change

...and reflect!



The Open University

Distance learners' conceptions of reflection in higher education

and of themselves as reflective learners

B.A.Alden@open.ac.uk

Bethany Alden
PhD Student
Institute of Educational Technology
The Open University

